Teoretičeskaâ i prikladnaâ nauka

Theoretical & Applied Science

International Scientific Journal
Theoretical & Applied Science

International Scientific Journal

Theoretical & Applied Science

International Scientific Journal

Theoretical & Applied Science

Clarivate Analytics **doi** **crossref**

Impact Factor ICV = 6.630

Impact Factor ISI   = 0.829
based on International Citation Report (ICR)

The percentage of rejected articles:

29%	71%
Accepted	Rejected

QR – Issue   QR – Article

Oleg Yurievich Sabinin
Peter the Great St. PetersburgPolytechnic University
PhD in Computer Science

Julie Vladimirovna Shabalina
Peter the Great St. Petersburg Polytechnic University
Master of Computer Science student

Irina Vladimirovna Tarasova
Peter the Great St. Petersburg Polytechnic University
Lecturer

SECTION 4. Computer science, computer engineering and automation.

EXTRACTING METHOD OF AUTOMATIC TEXT SUMMARIZATION ON THE BASIS OF NEURAL NETWORKS

Abstract: *The purpose of the article is to describe and to analyze the new extract method of automatic text summarization on the basis of neural networks. The neural network is trained to determine key text sentences on the basis of property vector and to decide, whether the sentence should be included in summary or not.*
Key words: *text summarization, neural networks, machine learning.*
Language: *Russian*
Citation: Sabinin, O. Y., Shabalina, J. V., & Tarasova, I. V. (2019). Extracting method of automatic text summarization on the basis of neural networks. *ISJ Theoretical & Applied Science, 06 (74),* 601-607.
Soi: http://s-o-i.org/1.1/TAS-06-74-73   *Doi*: crossref https://dx.doi.org/10.15863/TAS.2019.06.74.73

ИЗВЛЕКАЮЩИЙ МЕТОД АВТОМАТИЧЕСКОГО АННОТИРОВАНИЯ ТЕКСТОВ НА ОСНОВЕ АППАРАТА НЕЙРОННЫХ СЕТЕЙ

Аннотация: *Целью данной статьи является разработка и анализ извлекающего метода автоматического аннотирования текстов на основе аппарата нейронных сетей. Задачей нейронной сети является определение ключевых предложений текста на основе свойств предложения для принятия решения о включении предложения в аннотацию.*
Ключевые слова: *аннотирование текста, нейронные сети, машинное обучение.*

Введение.

Постановка проблемы

Задачи аннотирования текстов приобретают в последнее время всё большую актуальность, как для сети Интернет, но и для других хранилищ информации, например, библиотек или баз знаний различных организаций.

Аннотирование текстов помогает выделить ключевые части текста и сократить объёмы просматриваемой информации.

Огромное количество и большой объем материалов затрудняет быстрое получение аннотаций по текстам, так как формирование кратких ёмких сводок вручную требует значительных затрат времени и человеческих ресурсов.

В связи со сказанным, задача реализации эффективных методов автоматического аннотирования текстов приобретает всё большую важность.

Анализ последних исследований и публикаций

С самого начала активного использования электронно-вычислительных машин первого поколения, то есть с середины пятидесятых годов прошлого века, стали предприниматься попытки решения задач обработки текста на естественном языке. Одной из первых задач по обработке

Clarivate Analytics indexed

естественно-языковых текстов при помощи ЭВМ стало автоматическое аннотирование.

С тех пор было проведено множество исследований по разработке автоматизированных методов и моделей аннотирования [1,2]. Решением проблемы занимались такие отечественные исследователи как Н.В. Лукашевич, Р.Г. Пиотровский, П.Г. Осминин, С.А. Тревгода, В.А. Яцко и др. Из зарубежных исследователей стоит обратить внимание на H.P. Luhn, H.P. Edmundson, R. Mihalcea, J. Kupiec, E. Lloret, G. Salton и др.

В настоящее время можно выделить два основных подхода к автоматическому аннотированию:

• экстракция – извлекающие методы, основанные на извлечении из первичных документов наиболее информативных фрагментов [3];

• абстракция – генерирующие методы, предусматривающие создание нового текста, обобщающего первичные документы [4].

Извлекающие методы работают путём определения наиболее важных фрагментов текста (предложения, абзацы). При этом данные фрагменты не обрабатывают, а извлекают в таком порядке и виде в каком они приведены в тексте. Основные сложности, связанные с данным подходом, заключаются в определении ключевых предложений текста, и затем связи этих предложений в единый, удобочитаемый текст.

Извлекающие методы можно разделить на две большие группы:

• поверхностные методы, которые не прибегают к сложному лингвистическому анализу,

• глубокие методы.

К **поверхностным методам** относятся, например:

• методы, которые для выбора предложений используют статистические характеристики [5, 6];

• методы, основанные на представлении документа в виде графа, вершинами которого являются предложения или слова из текста [7];

• методы, использующие деревья решений, опорные векторы и нейронные сети [8];

• методы на основе скрытых марковских моделей, в которых при анализе предложения учитывается, входит ли предыдущее предложение в аннотацию [9].

К **глубоким методам** относятся, например, методы с использованием латентно-семантического анализа, которые анализируют взаимосвязь между предложениями текста и терминами, содержащимися в них, выявляют тематики, присутствующие в тексте, и в аннотацию выбирается определенное количество предложений от каждой тематики [10].

Генерирующие методы в отличие от извлекающих методов, направлены на создание нового материала, явно непредставленного в тексте исходного документа. Другими словами, они интерпретируют и исследуют текст с помощью методов обработки естественного языка, чтобы создавать новые структурные единицы текста, которые передают самую важную информацию из исходного документа. При использовании генерирующих методов текст аннотации строится на правилах, предполагающих наличие лингвистической базы знаний.

Для генерирующих методов можно выделить несколько направлений:

• использование шаблонов,

• сжатие предложений,

• полноценная абстракция.

Подходы на основе шаблонов используют заранее подготовленные шаблоны для представления документа. Лингвистические паттерны или правила извлечения используются для заполнения пропусков в этом шаблоне.

Сжимающие методы выполняют извлечение наиболее важных предложений из текста, но либо удаляют из них лишнюю информацию, либо объединяют несколько предложений, пытаясь при этом сохранить связность и смысл текста.

Существующие работы на данную тему предлагают различные способы решения этой задачи, например, в работе [11] исходный документ представляется в виде вложенного дерева, которое состоит из двух видов структур: дерева документа и дерева предложения. Это дерево строится на основе теории риторической структуры, разработанной в 1980-е годы американскими лингвистами Уильямом Манном и Сандрой Томпсон. Эта теория предлагает описание структуры дискурса (текста) в виде сетей дискурсивных единиц, соединенных семантическими отношениями [12]. Теория риторической структуры используется для построения алгоритма аннотирования текста также в работе [13].

Для полноценной абстракции наиболее перспективно выглядит модель кодировщик-декодировщик, которая основывается на использовании рекуррентных нейронных сетей.

Выделение нерешенных ранее частей общей проблемы

Несмотря на множество проведенных исследований, проблема разработки формальных методов и моделей для автоматического аннотирования еще не решена, ввиду того, что задача формализации естественного языка достаточно трудоемка, а сам язык является неоднозначным, неограниченным и эволютивным.

Вышеупомянутые характеристики естественного языка играют особенно большую роль при исследовании материалов на русском языке, так как именно для русского языка характерен свободный порядок слов, морфологическая сложность, подвижное разноместное ударение и высокая степень сегментной редукции [14].

На текущий момент из методов автоматического аннотирования текстов на русском языке наиболее распространены различные статистические и графовые методы, являющиеся представителями экстрагирующего подхода. Аннотации, полученные с помощью экстрагирующих подходов, зачастую характеризуются недостаточно высоким качеством текста, бессвязностью. Абстрагирующие же подходы потенциально способны обеспечить лучшее качество текста аннотации, но они чрезвычайно трудны для практической реализации и находятся на уровне исследовательских разработок.

Поскольку большинство текстов обладают достаточно выраженной структурой, ключевые части документа можно представить путем выбора предложений на основе их свойств и характеристик. В работе [15] был предложен схожий подход и рассмотрены такие методы машинного обучения с учителем для решения задач автоматического аннотирования, как наивный байесовский классификатор, метод опорных векторов. Исследователем были получены обнадеживающие результаты, поэтому в данной статье было решено использовать вышеупомянутый экстрактивный подход для автоматического аннотирования текстов на русском языке, только в качестве классификатора, в отличие от [15], были выбраны искусственные нейронные сети.

Цель статьи

Разработка метода автоматического аннотирования текстов на русском языке на основе экстракции из текста наиболее значимых элементов при помощи аппарата нейронных сетей.

Изложение основного материала

Предлагаемый метод предполагает, что исходный документ представляет собой набор предложений, а сами предложения рассматриваются как набор свойств и характеристик. Среди этого набора выбираются те предложения, которые нейронная сеть сочтёт более релевантными. Результатом является некоторое подмножество предложений исходного текста.

Изначально необходимо выполнить следующее:
• определить рассматриваемые свойства и характеристики предложений, значения которых

будут являться входными данными для нейронной сети;
• создать размеченный тестовый корпус текстов для последующего обучения нейронной сети;
• произвести непосредственно само обучение сети.

Определение рассматриваемых свойств и характеристик предложений.

Каждое предложение аннотируемого текста представляется в виде вектора, состоящего из 6 характеристик $[f_1, f_2, ..., f_6,]$:
• отношение порядкового номера абзаца, к которому принадлежит предложение, к общему числу абзацев исходного документа (f_1);
• отношение порядкового номера предложения в абзаце к общем числу предложений в абзаце (f_2);
• отношение количества символов рассматриваемого предложения к количеству символов самого длинного предложения текста (f_3);
• отношение количества ключевых слов в предложении к общему количеству тематических слов предложения (f_4);
• отношение количества совпадающих тематических слов данного предложения и предыдущего к общему количеству тематических слов рассматриваемых предложений (f_5);
• отношение количества совпадающих тематических слов данного предложения и предыдущего к общему количеству тематических слов двух рассматриваемых предложений (f_5);
• отношение количества совпадающих тематических слов данного предложения и последующего к общему количеству тематических слов двух рассматриваемых предложений (f_6).

Свойства f_1-f_2 основываются на местоположении предложения в документе или в его абзаце. Ожидается, что эти параметры поспособствуют выбору ключевых предложений, так как аннотации, состоящие из первых предложений абзацев, превосходят аннотации, составленные с помощью других методов статьи [16], а предложения, расположенные в начале и конце абзацев, имеют высокие шансы попасть в итоговый текст [17].

Свойство f_3 поможет избавиться от слишком коротких вводных предложений, которые вряд ли попадут в аннотацию [18].

Свойство f_4 зависит от количества ключевых и тематических слов в предложении. Тематические слова получаются следующим образом: из документа производится выборка всех существительных, прилагательных и глаголов, которые в последствии сводятся к их начальной форме. Для получившегося набора слов высчитывается их встречаемость в тексте.

Ключевыми словами считаются 25% тематических слов, но не больше 10, что соответствует объему оперативной памяти человеках [19]. Ожидается, что с помощью этого свойства увеличится вероятность выбора ключевых предложений, поскольку термины, которые часто встречаются в документе, вероятно, связаны с его темой [5]. Для выделения тематических слов был использован Томита-парсер компании Яндекс, имеющий встроенную поддержку русского языка, доступную документацию и используемый в таких популярных сервисах как Яндекс.Новости и Яндекс.Работа.

Свойства f_5-f_6 основываются на симметричном реферировании, то есть на определении количества связей между предложениями [20].

Рассмотренные свойства могут быть изменены или дополнены. Выбор рассматриваемых свойств предложений определяет, какие предложения попадут в итоговую аннотацию и влияет на работу нейронной сети.

Обучение нейронной сети

Обучение нейронной сети проводится для изучения типов предложений, которые должны быть включены в аннотацию. Обучение проводится на тестовом корпусе текстов, где каждое предложение отмечено как входящее в аннотацию или же нет.

Нейронная сеть ищет закономерности, присущие предложениям, которые должны быть включены в аннотацию. Используется нейронная сеть прямого распространения с тремя слоями, которая, как было доказано, является универсальным функциональным аппроксиматором [21]. Сеть может обнаруживать паттерны и аппроксимировать функцию любых данных с точностью до 100%, если в наборе данных нет противоречий.

Создание нейронной сети проводилось в NeurophStudio. Входной слой разрабатываемой нейронной сети состоит из шести нейронов, где каждый нейрон соответствует одному из свойств предложения, пяти нейронов скрытого слоя и одного нейрона выходного слоя. В качестве активационной функции используется сигмоида, обучение сети проводится методом обратного распространения ошибки.

Для создания тестового корпуса было использовано 62 статьи на различные тематики, найденные в сети Интернет. Каждый текст состоял от 27 до 102 предложений, в среднем – из 49. Всего было проанализировано 3076 предложений. 565 предложений было помечено, как ключевые, в среднем 9 на текст. Нейронная сеть была успешно обучена за 23 итерации.

Итоговая среднеквадратичная ошибка для тестового корпуса составила 0.16733. Точность нейронной сети составила 88,76% по сравнению с ручной выборкой для тестового корпуса. Для корпуса из 10 новых текстов точность составила 82,31%.

Оценка эффективности системы

Задача оценки эффективности автоматического аннотирования текстов также является чрезвычайно важной и сложной. Не существует общего алгоритма оценки аннотации, исходя из конечного набора признаков и правил, поэтому современные подходы к оцениванию результатов автоматического аннотирования основываются на сравнении полученных автоматически аннотаций с модельными, вручную созданными аннотациями.

Для сравнения автоматически полученных аннотаций с полученными вручную аннотациями обычно используют набор метрик ROUGE (Recall-Oriented Understudy for Gisting Evaluation) [22].

Все метрики этого набора основываются на идее максимального покрытия автоматическими аннотациями ручных и наоборот. Для вычисления покрытия используются N-граммы. N-грамма - это последовательность из N элементов, в данном случае слов.

Метрика ROUGE-N основывается на вычислении совпадающих N-грамм автоматической аннотации и модельной, где N – это длина используемых цепочек слов.

Оценка реализованной программной системы производилась с помощью метрик ROUGE-1 и ROUGE-2, основывающихся на анализе последовательностей из одного и двух слов соответственно.

Например, для предложения «мама мыла раму» можно выделить такие униграммы ($N = 1$), как: мама, мыла, раму. Для этого же предложения можно извлечь следующие биграммы ($N = 2$): мама мыла, мыла раму.

Само по себе число совпадающих N-грамм автоматической и модельной аннотаций не является оценкой эффективности результата автоматического аннотирования.

Для оценки эффективности результата используются характеристики:
- ROUGE Precision;
- ROUGE Recall;
- F-мера.

Характеристика Rouge Precision (точность) – оценка того, насколько хорошо модельные аннотации покрывают автоматические аннотации. Она рассчитывается по формуле:

$$\text{Precision} = \frac{C_N}{M_N}, \qquad (1)$$

где C_N - количество совпадающих N –грамм;
M_N - общее число N-грамм модельной аннотации.

Характеристика Rouge Recall (полнота) – оценка того, насколько хорошо автоматические аннотации покрывают модельные. Она рассчитывается по формуле:

$$Recall = \frac{C_N}{A_N}, \qquad (2)$$

где C_N - количество совпадающих N –грамм;
A_N - общее число N-грамм автоматической аннотации.

Очевидно, что чем выше точность и полнота, тем лучше. Но на практике максимальная точность и полнота не достижимы, поэтому для объединения информации о точности и полноте вычисляется F-мера:

$$F = \frac{2 * Precision * Recall}{Precision + Recall}, \qquad (3)$$

где F – среднее гармоническое от точности и полноты.

F-мера выступает в качестве итогового значения метрики, отражающего качество полученных аннотаций.

К примеру, ручная аннотация представлена предложением «мама мыла раму», а автоматическая – «мама мыла наше окно», значения метрик ROUGE-1 и ROUGE-2, вычисленные по формулам (1) - (3), можно увидеть в табл. 1.

Таблица 1. Пример вычисления метрик ROUGE-1 и ROUGE-2

Метрика	Precision	Recall	F-мера
ROUGE-1	2/3 ≈ 0,67	2/4 =0,5	0,57
ROUGE-2	1/2 = 0,5	1/3 ≈ 0,33	0,4

Для создания тестового корпуса для оценки эффективности реализованной системы было использовано 10 статей на различные тематики, найденные в сети Интернет. Выбранные тексты включали от 18 до 94 предложений, в среднем – 35. Для каждого текста вручную были написаны модельные аннотации. Всего было проанализировано 363 предложения, 102 из них было помечено, как предложения, входящие в итоговые аннотации, в среднем 10 на текст.

Эффективность реализованной системы была оценена на тестовом наборе документов путём сравнения модельных и автоматических аннотаций с помощью метрик ROUGE-1 и ROUGE-2. Максимально возможным значением характеристик является 1.

Результаты оценивания эффективности можно увидеть в табл. 2.

Таблица 2. Результаты оценивания эффективности реализованной системы

Метрика	Precision	Recall	F-мера
ROUGE-1	0,61	0,32	0,42
ROUGE-2	0,23	0,12	0,16

В соответствие с тем, что F-мера является итоговым показателем метрик, необходимо провести анализ именно этого результата.

Исходя из того, что F-мера метрики ROUGE-1 относительно близка к 1, можно сделать вывод, что автоматические и ручные аннотации были достаточно близки по набору слов. Показания F-меры метрики ROUGE-2 несколько хуже. Полученные результаты вполне оправданны в силу сложности обучения компьютера пониманию естественного языка.

Чтобы осуществить полноценный анализ эффективности системы и сформулировать выводы относительно её применимости, было проведено сравнение показателей метрик ROUGE-1 и ROUGE-2, полученных в данной работе, с показателями данных метрик уже существующих инструментов. Для сравнения были выбраны системы автоматического аннотирования текстов, показавшие наилучшие результаты на сегодняшний день: [15], [23], [24].

Результаты работы системы, рассматриваемой в данной работе, представлены в последней строке табл. 3.

Таблица 3. Сравнение показателей реализованной системы с показателями уже существующих систем

Автор, год	ROUGE-1	ROUGE-2
Nallapati, 2017	0,39	0,16
See, 2017	0,39	0,17
Wong K., 2008	0,42	0,12

Предлагаемая система, 2019	0,42	0,16

Как видно из табл. 3 реализованная система превзошла уже существующие, показав наивысший результат для метрики ROUGE-1 и практически наилучший для метрики ROUGE-2, что говорит о том, что наша система предоставляет более качественные автоматические аннотации, нежели другие системы. Полученные результаты позволяют утвердить применимость разработанного метода для аннотирования текстов на русском языке, а также продолжать дальнейшие исследования. Впоследствии возможно усложнение топологии нейронной сети, а также изменение или дополнение рассматриваемых характеристик предложений для улучшения качества аннотаций. Выбранные для анализа предложений характеристики, а также сформированные вручную обучающая и тестовая выборки имеют большое влияние на работу нейронной сети, а, следовательно, и всей системы в целом. Сеть обучается в соответствие со стилем читателя и в соответствие с предложениями, которые именно этот читатель считает подходящими для аннотации. Можно рассматривать данную особенность как преимущество данного подхода, так как любой человек может обучить нейронную сеть в соответствие со своими личными предпочтениями.

Выводы и предложения

Точность результатов предложенного метода автоматического аннотирования текстов на тестовой выборке составила 88,76%. Результаты оказались вполне удовлетворительными, что позволяет проводить дальнейшие исследования. Выбранные для анализа предложений свойства, а также выбранные независимым читателем ключевые предложения для тестового корпуса текстов имеют большое влияние на работу нейронной сети. Сеть обучается в соответствие со стилем читателя и в соответствие с предложениями, которые именно этот читатель считает ключевыми. Можно рассматривать данную особенность как преимущество данного подхода, так как любой человек может обучить нейронную сеть в соответствие со своими личными предпочтениями.

References:

1. Shkurina, M. V., & Sabinin, O. Y. (2018). An overview and analysis of automatic text summarization methods. *ISJ Theoretical & Applied Science, 12 (68),* 282-286.
2. Shkurina, M. V., & Sabinin, O. Y. (2019). Comparative analysis of extractive text summarization methods for texts in Russian language. *ISJ Theoretical & Applied Science, 06 (74)*, 164-169.
3. Radev, D. R., Hovy, E., & McKeown, K. (2002). Introduction to the Special Issue on *Summarization Computational Linguistics. 28(4),* 399–408.
4. Osminin, P. G. (2016). Postroenie modeli referirovanija i annotirovanija nauchno-tehnicheskih textov, orientirovannih na avtomaticheskij perevod (Doctoral dissertation, Cheljabinsk).
5. Luhn, H. P. (1958). The Automatic Creation of Literature Abstracts. *IBM Journal of Research and Development. 2(2)*, 159–165.
6. Aksenova, T. S., & Sabinin, O. Y. (2011). *Sistema avtomaticheskogo referirovanija naucho-tehnicheskih textov na osnove Oracle Data Mining. Nauchnije issledovanija i innovacionnaja dejatelnost'*: materiali nauchno-pract. konf. (pp.61-68). SPb.: Izd-vo Politechn. Univer.
7. Erkan, G., & Radev, D. R. (2004). LexRank: Graph-based Lexical Centrality as Salience in Text Summarization. *Journal of Artificial Intelligence Research. 22,* 457–479.
8. Sabinin, O. Y., & Shabalina, J. V. (2018). Method of automatic text summarization of texts in russian on the basis of the neural networks. *East European Science Journal, 4 (32), part 1,* 56-59.
9. Conroy, J. M., & O'leary, D. P. (2001). *Text summarization via hidden Markov models* Proceedings of the 24th annual international ACM SIGIR conference on Research and development in information retrieval - SIGIR '01. (pp.406-407). New York, New York, USA: ACM Press.
10. Ozsoy, M. G., Alpaslan, F. N., & Cicekli, I. (2011). Text summarization using Latent

Clarivate Analytics *indexed*

Semantic Analysis. *Journal of Information Science. 37(4)*, 405–417.

11. Kikuchi, Y., et al. (2014). *Single Document Summarization based on Nested Tree Structure* Proceedings of the 52nd Annual Meeting of the Association for Computational Linguistics (Volume 2: Short Papers). (pp.315-320). Stroudsburg, PA, USA: Association for Computational Linguistics.

12. Mann, W., Matthiessen, C., & Thompson, C. A. (1989). *Rhetorical structure theory and text analysis.* University of Southern California.

13. Sabinin, O. Y., & Trevgoda, S. A. (2008). Sistemi avtomaticheskogo referirovanija texta. *Pribori i sistemi. Upravlenije, control, diagnostika. 1*, 23-26.

14. Bolshakova, E. I., et al. (2011). *Avtomaticheskaja obrabotka textov na estesstvennom jazike i komputernaja lingvistika.* (p.272, p.3). Moscow: MIEM.

15. Wong, K. F., Wu, M., & Li, W. (2008, August). *Extractive summarization using supervised and semi-supervised learning.* In Proceedings of the 22nd International Conference on Computational Linguistics-Volume 1 (pp. 985-992). Association for Computational Linguistics.

16. Brandow, R., Mitze, K., & Rau, L. F. (1995). Automatic condensation of electronic publications by sentence selection. *Information Processing & Management, 31(5),* 675-685.

17. Baxendale, P. B. (1958). Machine-made index for technical literature—an experiment. *IBM Journal of Research and Development, 2(4)*, 354-361.

18. Kupiec, J., Pedersen, J., & Chen, F. (1995, July). *A trainable document summarizer.* In Proceedings of the 18th annual international ACM SIGIR conference on Research and development in information retrieval (pp. 68-73). ACM.

19. Vanjushkin, A. S., & Graschenko, L. A. (2016). *Metodi i algoritmi izvlechenija kljuchevih slov.* Novie informacionnie tehnologii v avtomatizirovannih sistemah, 19.

20. Stupin, V. S. (2004). *Sistema avtomaticheskogo referirovanija metodom simmetrichnogo referirovanija.* In Kompiuternaja lingvistika i intellectualnije tehnologii, 579-591.

21. Galizdra, V. I., & Babaev, S. B. (2011). *Nejronnije seti i approksimacija dannih.* Nauchnije i obrazovatelnije problem grazdanskoj zaschiti, 3.

22. Lin, C. Y. (2004). ROUGE: A Package for Automatic Evaluation of summaries Conference: In Proceedings of the Workshop on Text Summarization Branches Out (WAS 2004).

23. Nallapati, R., Zhai, F., & Zhou, B. (2017). SummaRuNNer: A Recurrent Neural Network Based Sequence Model for Extractive Summarization of Documents//AAAI, 3075-3081.

24. See, A., Liu, P. J., & Manning, C. D. (2017). *Get to the point: Summarization with pointer-generator networks* //arXiv preprint arXiv:1704.04368

Kamola Abduvosit qizi Odiljonova
Andijan State University
2nd year student of the
Faculty of Philology
Kamola_Odiljonova@mail.ru

SECTION 29. Literature.

THE GENRE OF GAZAL IN SIROJIDDIN SAYID'S WORKS: TRADITION AND RENEWAL

Abstract: *The article analyzes works of the modern Uzbek poetry representative – Sirojiddin Sayyid, written in the genre of ghazal, based on the classical literary traditions. The article features his unique style, novel approach to traditionalism, and artistic ingenuity of the poet.*

Key words: *tradition, innovation, quartet, munojot, ruba'i, ghazal, matlaa, maqtaa, fard, mukhammas, thematic composition, frame elements, mystical ideas, arud meters, barmoq meter.*

Language: *English*

Citation: Odiljonova, K. A. (2019). The genre of Gazal In Sirojiddin Sayid's works: tradition and renewal. *ISJ Theoretical & Applied Science, 06 (74)*, 608-612.

Soi: http://s-o-i.org/1.1/TAS-06-74-74   *Doi*: crossref https://dx.doi.org/10.15863/TAS.2019.06.74.74

Introduction.

The Uzbek poetry of the current period continues to develop based on new principles and ideas. Nowadays, along with the poems written in modern poetic styles, Uzbek poets present samples of works made in accordance with the traditions of classical literature. Sirojiddin Sayyid is one of those poets, who works today in such classical genres as ghazal, ruba'i, fard, mukhammas, quartet. Among them there are the quartets, ruba'is, ghazals, muhammases and fards included into his poem series and collections, such as "The Amazement of the "Hamsa" ("Хамса" ҳайратлари"), "A Hundred Oh-s, Zahiriddin Muhammad Babur..." ("Юз оҳ, Заҳириддин Муҳаммад Бобур..."), "The Practice of Ghazal" ("Ғазал машқи"), "The Notebook of Ghazal" ("Ғазал дафтари"), "A Bowl from Khayyam, a Goblet from Rumi" ("Хайёмдан бир коса, Румийдан бир жом"), "Night and Dawn" ("Тун била тонг"), "Forty Hadithes" ("Қирқ ҳадис").

Materials and Methods.

Thematic content of Sirojiddin Sayyid's poetry is extensive. It contains of poems about love on romantic-intimate themes, poems based on mystical and philosophical ideas of Sufism, laudatory dedications, as well as poems on historical, social and philosophical topics.

While in ghazals and mukhammases he mainly develops the romantic, intimate, social and philosophical themes, in his ruba'is, quartets and fards, he tries to provide a simple interpretation of the spiritual (uhroviy) meaning. Poems with spiritual (uhroviy) meaning, which is one of the main topics in our modern Uzbek poetry, are those that based on understanding the world and its transient nature, Sufism philosophy and ideas of Islam.

It is known that ghazal is composed of the rhyming rhythmic couplets (bayts) written in the same meter. Both lines in the first bayt (matlaa) are rhymed together (a-a), and the second lines of all the rest bayts follow that exact rhyme (b-a, c-a, d-a). In ghazals except of the qaafiyaa (rhyme), it is possible to use radif (a rhyming word or expression, which comes after qaafiyaa). They have special names: ghazals with qaafiyaa are "muqaffo ghazals", and those with radif are "muraddaf ghazals". In the muraddaf ghazals, the qaafiyaa (rhyme) comes before the radif. The poet's pseudonym (takhallus) comes in the final bayt of ghazal – maqtaa [1, p. 287].

In Sirojiddin Sayid works there are about forty ghazals and seven of them are muqaffo ghazals, while all the rest are muraddaf ghazals. Ghazals, written by the poet, allowed him to uphold the modern art of ghazal-writing at a new level. He continued exploring traditional romantic and mystical themes in his ghazals, and, while developing the ideas of his poetic predecessors on the spiritual topics, attempted to present new interpretations of those topics with the help of fine, beautiful forms (devices). In addition,

among the poet's work there are some narrative ghazals, in which: "... a feeling is expressed through the miraculous narration of a story" [9, p.394].

In the tradition of the classical poetry, it is not customary to name a ghazal and to give it a title. There are different ways of referring to the ghazal: mostly using its matla, the first verse, the radif, or sometimes the first words in the matla [9, p.394]. The ghazals of Sirojiddin Sayyid possess the same qualities, so some of their titles come from their first line "Heart today, my entire body is a heart today" ("Дил букун, бошдин оёғим дил букун"), radif "Be" ("Бўл"), and sometimes from the first words in the matla "Your hair within the night" ("Сочларинг тун ичра"). At the same time, the poet names some of his ghazals with the specific headlines, such as "Ancient Ghazal" ("Кўҳна ғазал"), "Confession" ("Изҳор"), "In the Commercial Property" ("Тижорат мулкида"), "My most beloved" ("Жону дилим"), "Commentaries for my soul (feeling), while wandering in the city" ("Шаҳр аро шарҳи дилим"), "Soqiyona" ("Соқиёна"[1])

In the textual (external) structure of the lyrical work, the main and subordinate (frame elements) texts can be distinguished. While dividing to the misras (a half of a bayt) and bands (a stanza) is related to "the main text", the title, mentioning the genre, epigraph, dedication, mentioning the date and the place the poem was written in make "the frame elements". [10, P.220].

In the majority of his ghazals from all frame elements, the poet uses the title, epigraph, mentioning the genre and the date. Mentioning the genre is reflected through the titles of subchapters in his poetry collections, such as "The Practice of Ghazal" ("Ғазал машқи"), "Notebook of Ghazal" ("Ғазал дафтари"). The titles of the sections tell us that in this part of the collection the poet included the lyrical works written in the genre of ghazal. The title, when there is one, presents the information about the theme and idea of the ghazal. In the ghazals without a title, their first lines carry that information.

For example, the headline "Dreaming happiness" ("Уйқулик бахт") of one of the poet's ghazals indicaties that in this ghazal the description of the happiness found in a dream (while asleep) is a leading topic. Indeed, in the process of reading the ghazal, we can see how using subtle witticisms the poet describes the lyrical hero, who depicted the girl of his dream while sleeping – in his dream. In this ghazal there is an epigraph – the following bayt from the works of the Shah Babur:

На хуш бўлғайки бир кун уйқулик
    бахтимни уйғотсам,

Кечалар тори мўйидек белига
    чирмашиб ётсам [5, P.464].

(How good it would be, if some day, I wake my sleeping happiness up,

If the nights I spend twining round her waist, that is slender as a hair.)

The epigraph reveals that Sirojiddin Sayyid wrote his ghazal dated by 1998 (date mentioned) under the influence of Bobur's ghazal, which starts with the mentioned bayt:

Жоми бахтим эрди доим
    гоҳ қурум, гоҳ қуйқалиқ,
Нозанин кўрдим у кун,
Бир нозанинким уйқулиқ
Қошу мижгонлар қабоқлардан
    хабар олмас эди,
Уйқусида айлагим келди
    анга бир хуш қилиқ [5, P.465].

(The bowl of my happiness always had some:
Small amount as incrustation or a lot as the soup's body.
I met a beautiful maiden the other day
One beautiful maiden who was asleep,
Her eyebrows and eyelashes
Did not touch her eyelids.
I wished to get into her dreams
To do something pleasant for her).

That ghazal is the narrative ghazal. Through the describing the lyrical hero's feeling, it tells us a fragment of the story about the lyrical hero, precisely, about how he met a sleeping beautiful maiden, describes her beauty, tells that the hero fell in love with her, asked God to grant him her love and then woke up realizing that all that was just a dream.

Sirojiddin Sayyid marked his ghazals with the date written in the end of his works. Judging from the dates mentioned we conclude that poet wrote ghazals from 1985 to 2013.

In the tradition of classical literature, the pseudonym (takhallus) of the poet is placed in the maqtaa (the last bayt) of ghazal or in the bayt preceding it. However, there are not any takhalluses in Sirojiddin Sayyid's works. In our view, this phenomenon can be explained by the fact that there is no need for pseudonyms at the end of ghazals in the modern-day ghazal-writing.

Among Sirojiddin Sayyid's works, there are laudatory dedicational ghazals, such as "Mir Alisher" ("Мир Алишер"), "Ghazal of Eid" ("Ҳайит ғазали"), "While there is Navoi ..." ("То Навоий бор..."), as well as those in a pure romantic theme, such as "There is Tiny, Subtle Mole..." ("Инжа, нозик хол

---

[1] "Soqiy" is considered to be a person who helps with vine (a metaphor to refer to spiritual knowledge and feeling of getting close to God) in Sufizm. This ghazal is an address to the person, who can pour the exact vine, the poet is asking about.

тушибдир...") and "The Old Tashbeh" ("Эски ташбеҳ").

Ghazal, which starts with "Инжа, нозик хол тушибдир...", is in a ramali mussammani mahzuf meter (-V-- -V-- -V-- -V-), and its lyrical hero is in love. Through the description of his beloved's beauty, using fine poetic devices it represents feelings of the hero:

Инжа, нозик хол тушибдур инжа бу лаб остида,
Тушмиш ул андиша айлаб ўнг эмас, чап остида.

Ушбу холнинг ҳолатидин сен менинг ҳолимни кўр:
Қалб аро минг битта доғу минг биттаси қалб остида.

Қошу мижгонлардин ул холнинг қатор жаллоди бор,
Охир ўлгумдир, ёронлар, бу қатор саф остида [5, P.482].

("There is a tiny, subtle mole fallen under the tiny lip
It falls carefully not under the right, but under the left lip.

Now look at my state causes by the presence of the mole
Thousand spots fell into my heart, and the thousand and one falls under my heart.

That mole has a row of murderers, consists of her eyebrows and eyelashes
It seems, I will finally die, my friends, killed by that drawn up row").

Having seen a mole under not the left but the right lip of his beloved, the lyrical hero fell in love with her, and as a result, a thousand and one spots (heart sores) appeared in his heart (the one – under his heart), and that deprives him of peace. Not only the black mole, but also black eyebrows and eyelashes of the beloved are murderers hunting the lyrical hero's heart down, so he is worried if he is destined to die in the hands of those killers. In the maqtaa of that ghazal, which consists of four bayts, the poet states: "Falling in love with that mole (the beloved - synecdoche), I became notorious, now I wish I could win her heart so I would not become a topic for gossip for my entire life".

In the ghazal named "Old Resemblance" ("Эски ташбеҳ"), Sirojiddin Sayyid describes a very beautiful content creating the word game with "qirq" – "forty" and "qamysh"- reed. It is well known that the reed is liken to the complaints of the lover about the cruelty of his beloved. The poet skillfully uses the same simile:

Нола қилди най бўлиб қирқ йил қамиш,
Оҳларимдан, ёр, келиб қирққил қамиш.

Қирқ қамишдай қийма-қийма қирқ йилим,
Бир қамишимдир,ажаб, қирқ қилқамиш [5, P.481].

(Becoming a pipe, the reed complained (sang a sad song) for forty years
About my oh-s, beloved, come and you, reed, get cut.

My forty years are as forty reeds cut into pieces.
What a surprise my one reed is equal to forty cut reeds).

This is a narrative ghazal, and in its maqtaa, it says that the reed used to complaint (sang the sad song) during forty years, since it became a reed pipe. In the following bayts of the ghazal, the life of the lyrical hero is compared to forty reeds. If from the soul of the lover forty lilacs fall down to the ground, another forty types of plants – forty types of reed will grow. In the bayt preceding the maqtaa, the poet recommends his beloved to take those forty heart reeds, lying on her way and make a roof for her house from them. While the reed is used in a metaphorical meaning, making a roof from it means a proposal to accept the lyrical hero as a head for her family, as her husband. In the second line of the matlaa, the poet beautifully reveals two different meanings using homonyms "қирққил қамиш" (cut the reed) and "қирқ қилқамиш" (forty reeds).

In the mystical (following Sufism style) ghazals by Sirojiddin Sayyid, we can observe simple interpretation of the Sufism in the Oriental literature. His ghazal with the name "Soqiyona" is one of them. This ghazal consists of five bayts and written in the meter of ramali musammani mahzuf. It starts with the reference to the love of Farhod and Shirin, Layli and Mejnun, that became a talmeh (hint – poetic device) long ago:

Менга Фарҳод бирла Мажнун изтиробидин қуйинг,
Лайлию Ширин узар гулнинг гулобидин қуйинг [5, P.464].

(Pour me of Farhod and Mejnun's suffer
Pour me a gulob (a drink made from water of rose)
Of those who pick up such flowers as Layli and Shirin).

It is well known, that Farhad, Mejnun, Layli and Shirin are images taken from the poems (dostons) of Alisher Navoi reflecting the ideas about the perfect person and divine love. The poet starts his muraddaf ghazal (ghazal with radif in the end of every line), asking to pour for him a vine of love, belonging to Farhad, Mejnun, Layli and Shirin. In the following bayts of the ghazal, he gradually develops his idea asking to pour him "the pain of all lovers had ever had" ("барча ошиқ аҳли тортган азобни"), "the music of the nightingale played at dawn on rubob (musical imstument)" ("Андалиб тонг чоғида чалган рубобни"), "from the dreams and from the vines" ("Ҳам хаёлидан ҳам саробидан"). Finally, in the maqtaa, the poet asks for a love which is interrelated with the love to his Homeland, and that allows him to add a beautiful social meaning to the final part of his ghazal.

Сиз фаранги май ҳавосин қилмангиз, эй дўстлар,
Қуйсангиз менга бу дам Сурхон шаробидан қуйинг.

(You do not admire and dream about French vine, my friends,
Pour me right now a vine from Surhon river.)

Among the creations of Sirojiddin Sayyid, there are satirical ghazals, too.

Аҳли дил бўлма, замоннинг танбури ё сози бўл!
Бир улусга бўл бўлису ё бир туманга қози бўл!

(Do not be a human of a soul, but be a tanbur of the time and its soz[2].
Be a head for a nation, or a judge for some district.)

From the very beginning of that ghazal with radif to its end, the poet, using the bitter irony, criticizes such flaws of the society as adulation, deceitfulnes and selfishness:

Ақча кирган уйларингдан янграгай шеъру суруд,
Танга бўлгил ё динор ё ул кўкиш қоғози бўл! [5, P.459].

(In the houses, where (aqcha) money enters, poems and songs (joy) are heard.
Be a tanga, or dinar or that green paper[3] be!)

In Sirojiddin Sayyid's works, there are plenty of ghazals written on spiritual topics about the transience of the world and life:

Бу дунё эскилардан қолган эски бир ривоятдир.
Умр недир бу дунёда? Бу беш кунлик саёҳатдир.

Фасл гар айни гулшандир, тафаккур хорзорида
Жисм недир? Гаҳи обод, гаҳи барбод иморатдир[5, P.451].

(The world is an old tale inherited from the past generations
What is life in this world? It is the five-day journey.

The seasons may be spring blossoming, but in the autumn of mind
What is a (human's) body? It is an occasionally prosperous, occasionally ruined building.)

The poet explains that life is not endless, the body is a building taken for rent, and that it is essential for people to live trying to do good deeds.
The ghazal named "Confession" stands out of other works by Sirojidin Sayyid thanks to its meaning and style:

Ҳар қандай шеъру ғазал девон бўлолмагай,
Ёинки ҳар эсган шамол тўфон бўлолмагай.

(Not every poem and ghazal turned to make a divan,
Samely, not every wind could turn into the storm.)

The matlaa of that ghazal which consists of eight bayts, starts with the idea, that not every poem could make a divan, as well as not every wind could be a storm. In the following lines of the ghazal, the poet moves to the topic of the Motherland.

На хуш эрур Истанбулу Эрон Қоҳира,
Сурхон бўлолмагай бири, Қўқон бўлолмагай.

(Yes, good places are Istanbul, Iran and Cairo,
However, none of them could become Surhan and Kokand.)

The truth reveled to the lyrical hero is that regardless of being amazing such cities and places as Istanbul and Iran cannot be equal to his motherland, to his home city. In the following lines of ghazal, the

---

[2] The words "tanbur" and "soz" stand for the national musical instruments
[3] The words used here express the meaning of "money". "Aqcha" and "Tanga" are a turk words for "money". Tenge is a currency in

Kazakhstan; "Dinar" (Arabic word) is a currency for several Arabic countries; "green paper" – USD.

poet shares a philosophical idea of life he was able to obtain:

Ҳар элатнинг ўз суянган кўшиғи бор, вале

 "Ўзбегим"дай қасидаю достон бўлолмагай.

(Every nation has its own song, they are leaning on (are proud of)

However, none of them could become a qasida or doston[4] like "Uzbegim" did).

Асрлардан юзиб келур назм карвони, лек

Мир Алишердек сарбон бўлолмагай.

(For centuries the caravan of epic (narrative poetry) lasts,

However, they could not become such a leader as Mir Alisher.)

In the maqtaa of that ghazal, the poet is giving credits to all what Alisher Navoi and Erkin Vohidov did for their motherland and concludes:

Матоҳ қилсалар юз Сирожиддин Саййид шеъридан,

Устоз Эркин Воҳидга бир чопон бўлолмагай[5, P.461].

(If they make a fabric from a hundred of Sirojiddin Sayind's works,

They all will not be able to make an oriental robe (chopon) for a master Erkin Vohid).

The poet confesses that despite of all his achievements, everything he managed doing and writing for his motherland is nothing in comparison with the deeds of the great poets mentioned in his poem. Being hard to himself, he states that he is not satisfied with all he could do for his motherland and this encourages readers to think of necessity of more careful serving motherland.

Conclusion.

While working in the genre of ghazals, Sirojiddin Sayyid continued traditions of the ghazal-writing and at the same time he created a new approach to the traditional poetic images of our classic literature, enriching them with a new meaning. As a result, the archaic forms and topics found their ways to the hearts of the modern generation to serve for enhancement of today's morale and human relations.

References:

1. Is`hoqov, J. (2011). *So'z san'ati so'zligi.* [The dictionary of poetic devices]. (p.320). Toshkent:Uzbekiston.
2. Karimov, H. (2007). *Istiqlol davri adabiyoti.* [Literature on the Period of Independence]. (p.407). Toshkent.
3. Sirozhiddin, S. (2015). *Hayyomdan bir kosa, Rumiydan bir zhom* [A bowl from Hayyam, a goblet from Rumi]. (p.248). Tashkent: Gafur Gulom nomidagi nashriyot matbaa izhodiy uyi.
4. Sirozhiddin, S. (2018). *Asarlar. 1 zhild. She'rlar. Dostonlar.* [Works. 1 volume. Poems. Dostons]. (p.470). Toshkent: Sharq.
5. Sirozhiddin, S. (2018). *Asarlar. 11 zhild. She'rlar. Doston.* [Works. 2 volume. Poems. Doston]. (p.555). Toshkent: Sharq.
6. Sirozhiddin, S. (2017). *Onamning kulchalari.* [The pies made by my mom]. (p.224) Tashkent: Sharq.
7. Sirozhiddin, S. (2016). *"Hamsa" hayratlari.* [The Amazement of the "Hamsa]. (p.112). Tashkent: Sharq.
8. Sirozhiddin, S. (2011). *Yuz oh, Zahiriddin Muhammad Bobur...* [A Hundred Oh-s, Zahiriddin Muhammad Babur ...]. (p.160). Toshkent: O`ZBEKISTON.
9. Quronov, D., Mamajonov, Z., & Sheraliyeva, M. (2010). *Adabiyotshunoslik lug'ati.* [The Literary Science Dictionary]. (p.408). Tashkent: Akademnashr.
10. Quronov, D. (2018). *Adabiyot nazariyasi asoslari.* [The Basics of the Theory of Literature]. (p.480). Tashkent: Akademnashr.

---

[4] "Qasida" (ode) and "doston" (epic poems) are genres of Oriental classical literature

QR – Issue   QR – Article

S. U. Zhanatauov
Noncommercial joint-stock company Kazakh national agrarian university
Corresponding Member of International Academy of Theoretical and Applied Sciences (USA),
Professor, Candidate of physics and mathematical sciences,   Department «Information technologies and automatiization», Kazakhstan
sapagtu@mail.ru

SECTION 2. Applied mathematics. Mathematical modeling.

COEFFICIENTS OF REGRESSION, CONTAINING MATHEMATICALLY INTRODUCED AND COGNITIVELY EXTRACTABLED KNOWLEDGE

Abstract: The article developed a variant of the Inverse Model of Multiple Linear Regression Analysis (OM MLRA with given regression coefficients $=(\beta_1,...,\beta_{n-1})^T, Z^+_2=Z^+_1\beta, Z^+_{mn}=[Z^+_1 | Z^+_2]$, containing mathematically int of produced and cognitively extracted knowledge With the use of equalities from Inverse Model the Principal Component Analysis (IM PCA) solved a New Inverse Generalized Problem of Multiple Linear Regression Analysis (IGM MLRA) of statistical modeling of n-1 correlated z-variables, 1 z–variable: $Z^+_{mn}=[Z^+_1 | Z^+_2], Z^+_2=Z^+_1\beta$, satisfying all equations and relations in DM MLRA: $(Z^+_1,Z^+_2)=>(R^{-1}_{11},R_{12},\beta)$. Simulated (β,C^+_{11})-–samples $Z^+_{mn}=[Z^+_1 | Z^+_2]$, $Z^+_2=Z^+_1\beta$, in the presence of a partition, and the extraction of knowledge - without partitioning the set of z –variables. The input parameters of the IGP of MLRA are the vector $\beta=(\beta_1,...,\beta_{n-1})^T$ and the matrix of eigenvectors C^+_{11}. The numerical algorithms were tested using the example of modeling a multidimensional (β,C^+_{11})-sample of z –variables (with n=6). The designated vector $\beta=(\beta_1...,\beta_6)^T$ regression coefficients was used. A description of the reverse process of extracting the knowledge entered using cognitive modeling will be published in another article.

Key words: mathematically introduced, cognitively extracted knowledge.

Language: Russian

Citation: Zhanatauov, S. U. (2019). Coefficients of regression, containing mathematically introduced and cognitively extractabled knowledge. *ISJ Theoretical & Applied Science, 06 (74),* 613-622.

Soi: http://s-o-i.org/1.1/TAS-06-74-75   *Doi*: crossref https://dx.doi.org/10.15863/TAS.2019.06.74.75

КОЭФФИЦИЕНТЫ РЕГРЕССИИ, СОДЕРЖАЩИЕ МАТЕМАТИЧЕСКИ ВВЕДЕННЫЕ И КОГНИТИВНО ИЗВЛЕКАЕМЫЕ ЗНАНИЯ

Аннотация: В статье разработан вариант Обратной Модели Множественного Линейного Регрессионного Анализа (ОМ МЛРА с заданными значениями коэффициентов регрессии $\beta=(\beta_1,...,\beta_{n-1})^T, Z^+_2=Z^+_1\beta, Z^+_{mn}=[Z^+_1 | Z^+_2]$, содержащих математически введенные и когнитивно извлекаемые знания. С применением равенств из Обратной Модели Главных Компонент (ОМ ГК) решена новая Обратная Обобщенная Задача Множественного Линейного Регрессионного Анализа (ООЗ МЛРА) статистического моделирования значений n-1 коррелированных z–переменных,1 z–переменной: $Z^+_{mn}=[Z^+_1 | Z^+_2], Z^+_2=Z^+_1\beta$, удовлетворяющих всем уравнениям и соотношениям ПМ МЛРА:$(Z^+_1,Z^+_2)=>(R^{-1}_{11},R_{12},\beta)$. Моделируются (β,C^+_{11})–выборки $Z^+_{mn}=[Z^+_1 | Z^+_2], Z^+_2=Z^+_1\beta$, при наличии разбиения, а извлечение знаний – без разбиения множества z–переменных. Входными параметрами ООЗ МЛРА являются вектор $\beta=(\beta_1,...,\beta_{n-1})^T$ и матрица собственных векторов C^+_{11}. Численные алгоритмы апробированы на примере моделирования многомерной (β,C^+_{11})-выборки z–переменных (при n=6). Использован назначенный вектор $\beta=(\beta_1...,\beta_6)^T$ регрессионных коэффициентов. Описание обратного процесса извлечения введенных знаний с применением когнитивного моделирования будет опубликовано в другой статье.

Ключевые слова: математически введенные знания, когнитивно извлекаемые знания.

Clarivate Analytics indexed

Введение

ОМ МЛРА предложена в [1] и применена в [2]. В Обратной Модели Множественного Линейного Анализа предполагается существование уравнения регрессии вида $z_n=\beta_1z_1+\beta_2z_2 + \ldots+\beta_{n-1}z_{n-1}$, где, в отличие от Прямой Задачи Множественного Линейного Регрессионного Анализа (ПМ МЛРА) известны значения $\beta_1,\ldots,\beta_{n-1}$ вектора $\beta=(\beta_1,\ldots,\beta_{n-1})^T$ регрессионных коэффициентов. Известную ПМ МЛРА[3] обозначим так: $Z_{mn}=[Z_1 \rfloor Z_2]=>(R^{-1}_{11}, R_{12}, \beta)$. В ПМ МЛРА [3] решена ПЗ МЛРА, ее решение β единственно и равно $\beta=R^{-1}_{11}R_{12}$. Ранг матрицы R_{11} равен n-1. Для каждого значения z_n из реальной выборки и оценки ее значения из ПМ МЛА разность этих величин не равна нулю.

Мы считаем неудовлетворительным свойством единственность решение $\beta_R=R^{-1}_{11}R_{12}$. В ОМ МЛРА [1] значения компонент $\beta_1,\ldots,\beta_{n-1}$ вектора $\beta=(\beta_1,\ldots,\beta_{n-1})^T$ могут быть заменены на желаемых значения, а для них – смоделированы новые матрицы $Z_{mn}=[Z_1 \rfloor Z_2]$ значений n z–переменных $z_1,z_2,\ldots,z_n$, также точно удовлетворяют формуле

$z_n=\beta_1z_1+\beta_2z_2 + \ldots+\beta_{n-1}z_{n-1}$.

Вектор $\beta=(\beta_1,\ldots,\beta_{n-1})^T$ в ОМ МЛРА содержит математически введенные в его компоненты знания типа: единичное приращение регрессора z_1 дает приращение β_1 к значению независимой переменной z_n.

Необходимо дополнительно ввести в эти значения компонент вектора $\beta=(\beta_1,\ldots,\beta_{n-1})^T$ когнитивно извлекаемые знания. Это возможно, в частности, через матрицы R_{11}, R_{12}, математически определяющие вектор $\beta=(\beta_1,\ldots,\beta_{n-1})^T$.

Введем математические индикаторы наличия желаемых знаний в матрицу собственных векторов C_{11} корреляционной матрицы R_{11}, а последующее извлечение введенных знаний проведем с применением соответствующей когнитивной модели, использующей математическую модель главных компонент [4-6]. Возможности соответствующих когнитивных моделей показаны в публикациях [4-6]. Здесь ниже изложим новую Обратную обобщенную Модель Множественной Линейной Регрессии, предназначенную для моделирования заданных значений коэффициентов регрессии. вектор $\beta=(\beta_1,\ldots,\beta_{n-1})^T$ коэффициентов регрессии содержат математически - через индикаторы наличия знаний [7] и когнитивно извлекаемые знания [4-6]. Преимущество ОМ МЛРА в том, что модельные значения n z–переменных точно удовлетворяют формуле $z_n=\beta_1z_1+\beta_2z_2 +\ldots+\beta_{n-1}z_{n-1}$. Аддитивное случайное приращение α_i, i=1,…,m, к значениям z_{in} (присущее ПМ МЛРА) в ОМ МЛРА

придает вектору-решению $(z_{i1}, z_{i2},\ldots,z_{i(n-1)}, z_{in-1})^T$ нашей модельной выборки свойство ошибки предсказанного значения. Значениями этих ошибок в ОМ МЛРА можно управлять, что невозможно в ПМ МЛРА. Следовательно теоретическое решение ПМ МЛРА является одним из бесконечного множества теоретических решений ОМ МЛР - регрессионную модель вида $z_n=\beta_1z_1+\beta_2z_2+\ldots+\beta_{n-1}z_{n-1}+\alpha$, где $z_1,z_2,\ldots,z_{n-1}$-набор объясняющих (независимых) переменных («регрессоров»), z_n-переменная отклика (зависимая переменная), $\beta_1,\ldots,\beta_{n-1}$-регрессионные коэффициенты, α-свободный член. Эта модель отражает взаимосвязь между двумя или более *объясняющими* переменными и одной переменной *отклика* путем подгонки вышеприведенного линейного уравнения к стандартизованным значениям z-переменных $z_{ij}=(x^0_{ij}-x^{cp}_j)/s_j$. Законы распределения одномерных случайных величин $\xi_1,\xi_2,\ldots,\xi_n$, соответствующих z-переменным $z_1,z_2,\ldots,z_n$ не известны. Здесь x^0_{ij}-i-ое значение j-го признака реального объекта, $x^{cp}_j=(x^0_{1j}+\ldots+x^0_{mj})/m$ – среднее арифметическое, $s^2_j=(x^2_{1j}+\ldots+ x^2_{mj})/m$-стандартное отклонение, $x_{ij}=x^0_{ij}-x^{cp}_j$ - отклонение от среднего значения x^{cp}_j. Стандартизованные значения z_n изменяются относительно значений $z_1,z_2,\ldots,z_{n-1}$ с одинаковыми стандартными отклонениями, равными 1.

В соответствии с этим разбиением z-переменных m значений всех n z-переменных образует 2 подматрицы Z_1,Z_2 матрицы $Z_{mn}=[Z_1 \rfloor Z_2]$ для m-на-n матрицы Z_{mn}. Элементы столбцов (с номерами j=1,…,n) матрицы Z_{mn} центрированы выборочными средними и нормированы стандартными отклонениями: $z_{ij}=(x^0_{ij}-x^{cp}_j)/s_j$. Элементы $z_{ij}=(x^0_{ij}-x^{cp}_j)/s_j$ матрицы стандартизованных отклонений не имеют размерности, и все ее столбцы имеют одинаковые дисперсии, равные единице. Это – одно из удобств для наших задач. Шаги при моделировании значений $z_{ij}=(x^0_{ij}-x^{cp}_j)/s_j$ n z-переменных отделены от шагов при вычислении выборочных средних x^{cp}_j и дисперсий s_j^2 для реальных данных x^0_{ij} i=1,…,m, j=1,…,n. Векторы выборочных средних и дисперсий должны определяться из матрицы реальных данных $X^0_{mn}=\{x^0_{ij}\}$. Моделирование значений z-переменных проводится отдельно, а при преобразовании их в x^0- переменные $x^0_{ij}=z_{ij}s_j+x^{cp}_j$, i=1,…,m, j=1,…,n, можно использовать любые векторы выборочных средних и стандартных отклонений (дисперсий). При этом в полученной модельной матрице $Z_{mn}=[Z_1 \rfloor Z_2],Z_2=Z_1\beta$ можно переставлять местами строки – эти действия не влияют на значения элементов корреляционных матриц, вычисляемых ниже.

Такие матрицы $Z_{mn}=[Z_1 \rfloor Z_2]$, будет иметь заданные целевые значения коэффициентов

регрессии $ß_1,…,ß_{n-1}$, таких что $Z_2=Z_1\boldsymbol{\beta}$. Тогда возможно проектирование рядов векторов значений коэффициентов регрессии $\boldsymbol{\beta}=(ß_1,…,ß_{n-1})^T$ и соответствующих им рядов матриц $\{Z_{mn}=[Z_1\rfloor Z_2]\}$ с заданными алгебраическими и когнитивными свойствами.

Суть нашего подхода может быть сведена не только к анализу выборочных коэффициентов корреляции и коэффициентов регрессии. А может и должна содержать другие извлекаемые знания, кроме знаний, интерпретируемых из равенства $Z_2=Z_1\boldsymbol{\beta}$. Здесь впервые рассматриваются элементы матрицы собственных векторов для моделирования, влияющих на вектор $\boldsymbol{\beta}=R^{-1}_{11}R_{12}$ подматриц. Решаются 3 ОСЗ: ОСЗ1 , ОСЗ 2 ОСЗ для ООМ МЛРА. Эти 3 задачи решаются, если в матрицу C_{11} собственных векторов математически введены - через индикаторы наличия знаний, значения весомых «весов».

Наши «обогащенные» знаниями коэффициенты регрессии $ß_1,…,ß_{n-1}$ имеют практически важные смысл и интерпретацию: «если банк увеличит на 1 тысячу тенге свои кредитные вложения, то банк потерпит убыток в 347,87 тенге, а если банк увеличит на 1 тысячу тенге свои вложения в ценные бумаги, то банк потерпит убыток в 225,42 тенге. т. е. банку в это время нельзя заниматься традиционными операциями» [1]. Теперь можно будет измерить степень неопределенности (риска) изменения z-переменной с весомым «весом».

Закон распределения значений 1-мерных z-переменных бывает неопределенным., что достигается применением обратной модели главных компонент (ОМ ГК) [2,3], для 1-мерных z-переменных из R-, Λ-, $\boldsymbol{\beta}$ -выборок не определены законы распределений, они модельно и гистограммно адекватны реальным многомерным таблицам «объект-свойства» [8-11].

Модели и задачи

Исходной гипотезой для рассматриваемой ниже является существование уравнения регрессии вида $z_n=\beta_1z_1+\beta_2z_2 + …+\beta_{n-1}z_{n-1}$ $(Z_2=Z_1\boldsymbol{\beta})$ Трудным местом ПЗ МЛРА $Z_{mn}=[Z_1\rfloor Z_2]=>(R^{-1}_{11},$ $R_{12}, \boldsymbol{\beta})$, является вычисление обратной матрицы для симметрической корреляционной матрицы «регрессоров» R_{11}, которая может быть неполного ранга – тогда не существует для нее обратной матрицы. Если она «плохо обусловлена», то уменьшение числа обусловленности матрицы показывает насколько матрица близка к матрице неполного ранга (для квадратных матриц - к вырожденности). В работах [2-9] число обусловленности корреляционной матрицы измеряется значениями некоторых f-параметров

из набора f-параметров $f_1(\Lambda_{(n-1)(n-1)})=\lambda_1+…+\lambda_{n-1})=$ $n-1$, $f_2(\Lambda_{n-1n-1})=(\lambda^2_1+…+\lambda^2_{n-1})$, $f_3(\Lambda_{n-1n-1})=\lambda_1/\lambda_{n-1}$, $f_4(\Lambda_{(n-1)(n-1)})=(\lambda_1+…+\lambda_\ell)/n-1<1$, $f_5(\Lambda_{(n-1)(n-1)})=$ $\lambda_1\times\lambda_2\times\lambda_3\times…\times\lambda_{n-1}$, $f_6(\Lambda_{(n-1)(n-1)})=\lambda_1/\lambda_2+…+\lambda_{n-2}/\lambda_{n-1})$. Значение f-параметра $f_3(\Lambda_{(n-1)(n-1)})=\lambda_1/\lambda_{n-1}$ - 1измеряет значение числа обусловленности, а остальные - близость (удаленность) от вырожденности корреляционной матрицы R_{nn}. Для нахождения значений f-параметров необходимо решить прямую спектральную задачу (ПСЗ):$R_{11}=>(C_{11},\Lambda_{11})$, где квадратная ортонормированная матрица C_{11} - матрица собственных векторов $c_j=(c_{1j},c_{2j}…c_{n-1,j})^T,j=1,…,n-1$. Они образуют ортогональную матрицу $C_{11}=[\mathbf{c_1}|\mathbf{c_2}|…|\mathbf{c_{n-1}}]$, согласованную с матрицей собственных чисел (со спектром) $\Lambda_{11}=diag(\lambda_1,\lambda_2,…,\lambda_{n-1})$, $\lambda_1>…>\lambda_{n-1}>0$, таким образом, что выполняются равенства $R_{11}C_{11}=C_{11}\Lambda_{11},C^T_{11}C_{11}=C_{11}C^T_{11}=I_{(n-1)(n-1)}$, где $diag(R_{11})=(1,…,1),tr(R_{11})=1+…+1=tr(\Lambda_{11})=$ $\lambda_1+…+\lambda_{n-1}=n-1$. Матрицы C_{11} и Λ_{11} вычисляются одновременно по известной корреляционной матрице R_{11}. Матрица R_{11} вычисляется по стандартизованной выборке $Z_{m(n-1)}$: $R_{11}=(1/m)Z^T_1Z_1$. Элементы спектра $\Lambda_{11}=diag(\lambda_1,…,\lambda_{n-1})$, $n>2$, являются [4] вышеприведенными измерителями как степени вырожденности, так и других свойств.

В работе [9] решена ОЗ МЛРА, а в статье [0] применена новая модель - ОМ МЛР. Ее решения $(R^{(\ell)}_{11},R^{(\ell)}_{12},Z^{(t)}_1, Z^{(\ell,t)}_2)$, где корреляционные матрицы $R^{(\ell)}_{11}$ моделируются в модели вида: $(n,\varphi_{11})=>(R^{(\ell)}_{11})$, подматрицы $R^{(\ell)}_{12}$ вычисляются: $R^{(\ell)}_{12}=R^{(\ell)}_{11}ß$, подматрицы $Z^{(\ell,t)}_1$ являются решением ОЗ АГК: $R^{(\ell)}_{11}=> (C^{(\ell)}_{11},\Lambda^{(\ell)}_{11},Y^{(t)}_{m(n-1)},$ $Z^{(\ell,t)}_{m(n-1)})$, подматрица $Z^{(\ell,t)}_2$-решением Оптимизационной задачи №5, $t=1,…к_t<\infty$, $\ell=1,…,k_\ell<\infty$.

Выборки $Z^{(t)}_1,Z^{(\ell,t)}_2$ ОМ ГК удовлетворяют соотношениям: $(1\backslash m)Z^{(t)T}_1Z^{(t)}_1=R^{(\ell)}_{11},(1\backslash m)Z^{(t)T}_1$ $Z^{(\ell,t)}_2=R^{(\ell)}_{12}$, $(1\backslash m)Z^{(\ell,t)T}_2Z^{(\ell,t)}_2=R_{22}=1$. Матрицы $C^{(\ell)}_{11},\Lambda^{(\ell)}_{11}, Y^{(t)}_{m(n-1)}, Z^{(\ell,t)}_{m(n-1)})$ из решаемых задач используются для достижения требуемых равенств, а также удовлетворяют соотношениям ОМ ГК, доказанным в Теореме о Λ–выборках [9].

Обратная обобщенная модель множественной линейной регрессии

Необходимо иметь данные, демонстрирующие всевозможные динамики рассматриваемых нами агрегированных показателей. Динамики этих показателей покажут оптимистические или неблагоприятные тенденции в периоды времени, наличие которых мы будем определять по значениям показателей, по коэффициентам корреляции, по значениям

Clarivate Analytics *indexed*

коэффициентов регрессии $\beta_1,\ldots,\beta_{n-1}$, по коэффициентам эластичности переменной z_n по объясняющей переменной z_j с номером j, где j может принимать одно из значений $1,2\ldots,n-1$.

В данной работе управляемым (входным) параметром модели, генерирующей модельные данные, являются значения коэффициентов регрессии $\beta_1,\ldots,\beta_{n-1}$ при переменных $z_1,z_2,\ldots,z_{n-1}$ в уравнении регрессии. В общеизвестной ПМ МЛРА $Z_{mn}=[Z_1\rfloor Z_2]=>(R^{-1}_{11},R_{12},\beta)$ входным объектом является реальная стандартизованная многомерная выборка $Z_{mn}=[Z_1\rfloor Z_2]$, а выходным-вектор коэффициентов регрессии $\beta=(\beta_1,\ldots,\beta_{n-1})$. В нашей новой ООМ МЛРА входные и выходные объекты меняются местами: входным объектом является вектор $\beta=(\beta_1,\ldots,\beta_{n-1})$ и пара матриц $(C^+_{11},\Lambda^+_{11})$, а входными объектами - $R^+_{11},R^+_{12},Z^{(t)}_1\rfloor Z^{(t)}_2$, $t=1,\ldots,\kappa_t<\infty$.

Как показано ниже для единственного вектора коэффициентов регрессии $\beta=(\beta_1,\ldots,\beta_{n-1})$ существует бесконечное множество стандартизованных многомерных выборок $Z_{mn}=[Z_1\rfloor Z_2]$, являющиеся многомерными Λ_{11}-выборками со свойствами, доказанными в теореме о Λ–выборках [9]. Обратная обобщенная модель множественной линейной регрессии (ООМ МЛРА) имеет схематическое изображение вида: $\beta=>[R^{(\ell)}_{11},R^{(\ell)}_{12}Z^{(\ell,t)}_1\rfloor Z^{(\ell,t)}_2]$, $t=1,\ldots,\kappa_t<\infty$, $\ell=1,\ldots,\kappa_\ell<\infty$.

Обратная обобщенная задача множественного линейного регрессионного анализа

Пусть нам даны перечень наименований и число n-1 независимых переменных, т.е. задано число «регрессоров» $z_{i1},\ldots,z_{i,n-1}$ и заданы значения коэффициентов регрессии $\beta_1,\ldots,\beta_{n-1}$, функционально определяющих значения зависимой переменной z_n: $z_n=\mathbf{z}\beta$, $\mathbf{z}=(z_{i1},\ldots,z_{i,n-1})$, $\boldsymbol{\beta}=R^{-1}_{11}R_{12}$.

Требуется моделировать значения выборочных коэффициентов корреляции между n-1 независимыми z-переменными из подматрицы R_{11} коэффициентов корреляций только независимых переменных («регрессоров»). Требуется моделировать значения выборочных коэффициентов корреляции $r_{1n},\ldots,r_{n-1,n}$ между зависимой z-переменной z_n и независимыми z-переменными $z_1,\ldots,z_{n-1}$, объединенных в вектор-столбец $R_{12}=(r_{1n},\ldots,r_{n-1,n})^T$.

Требуется моделировать многомерную m*n-выборку $Z_{mn}=[Z_1|Z_2]$ значений n z–переменных, удовлетворяющих равенствам из ПМ МЛРА $Z_{mn}=[Z_1\rfloor Z_2]=>(R^{-1}_{11},R_{12},\beta):(1\backslash m)Z_1^T Z_1=R_{11}$, $Z_{mn}=[Z_1|Z_2]=\{(z_{i1},\ldots,z_{i,n-1}|z_{in})\}$, $(1\backslash m)Z_1^T Z_1=R_{11}$, $(1\backslash m)Z_1^T Z_2=R_{12}$, $z_n=\mathbf{z}R^{-1}_{11}R_{12}=\mathbf{z}\beta$, $\mathbf{z}=(z_1,\ldots,z_{n-1})$,

$\beta=R^{-1}_{11}R_{12}$. При этом матрица R_{11} n-1 независимых z–переменных имеет заданные матрицы собственных векторов C_{11}, собственных чисел Λ_{11}:

$R_{11}C_{11}=C_{11}\Lambda_{11}R^{-1}_{11}R_{12}=C_{11}\Lambda^{-1}_{11}C^T_{11}R_{12}$, где матрицы R_{11}, R_{12}, R^T_{12} образуют (n-1)×(n-1)-,(n-1)×1-,1× (n-1)-разбиения корреляционной матрицы R_{nn}. Матрица C_{11} преобразуется в матрицу собственных векторов C^+_{11}, обязательно содержащую заданное множество индикаторов присутствия знаний. Извлечение знаний должно проводиться по когнитивной модели, основанной на математической модели Хотеллинга-Жанатауова.

Входным объектом обратной задачи множественной линейной регрессии (ОЗ МЛРА) является вектор $\beta_R=(\beta_1,\ldots,\beta_{n-1})$, а в решаемой здесь Обобщенной ОЗ МЛРА (ООЗ МЛРА) вторым входным объектом является матрица собственных векторов C^+_{11} с весомыми по абсолютной величине компонентами c_{kj}, таких что $|c_{kj}|\geq c_j$, $j=1,\ldots,n-1$, из n компонент j-го собственного вектора $\mathbf{c_j}=(c_{1j},c_{2j}\ldots c_{nj})^T$, $j=\in\{1,\ldots,n\}$. Критерий «весомости»-пороговое значение c_j, - задается в соответствии с градациями в шкале Чэддока. Число интервалов градаций равно 5, разных значений $c_{j+1}\neq c_j$ может быть 5 или пороговое значение c_j может быть одинаковым для всех j.

Решение подзадачи 1 состоит из 2 шагов. Шаг 1:$(n,\varphi_{11})=>(\Lambda_{11})$. Шаг 1: $)=>(\Lambda_{11}=>(C_{11},\Lambda_{11})$.

Далее фиксируем начальные матрицы собственных векторов C_{11}, собственных чисел Λ_{11} и решаем задачу формирования индикаторов присутствия знаний (индикаторные элементы) в матрице C_{11}. В результате решения задачи формирования индикаторов присутствия знаний и решения будут смоделированы 2 матрицы C^+_{11},Λ^+_{11}.

Далее моделируем $(C^+_{11},\Lambda^+_{11})$-выборку $Z^{(t)}_1$ значений z–переменных $(z_1,\ldots z_{n-1})$, образующих подматрицу $Z^{(t)}_{m(n-1)}$ матрицы $Z^{(t)}_{mn}=[Z^{(t)}_1|Z^{(t)}_2]$. Этим мы реализуем схему варианта ОМ ГК: $(C^+_{11},\Lambda^+_{11})=>(R^+_{11},\Lambda_{11},Y^{(t)}_{m(n-1)},Z^{(t)}_{m(n-1)}),t=1,\ldots,\kappa_t<\infty$. Но рам нужно в дополнение смоделировать значения z–переменной z_{in} из подматрицы $Z^{(t)}_2$ матрицы $Z_{mn}=[Z_1|Z_2]=\{(z_{i1},\ldots,z_{i,n-1}|z_{in})\}$. Тогда матрица R^+_{nn} будет такой, что будут выполняться соотношения $\beta_R=R^{(+)-1}_{11}R^+_{12}$, $(1\backslash m)Z_1^T Z_1=R^+_{11}$, $(1\backslash m)Z_1^T Z_2=R^+_{12}$. Здесь матрица R^+_{11} определена по формуле, а подматрица R^+_{12} и подматрица $_2$ неизвестны. Значения их элементов будут смоделированы ниже после решения Оптимизационной Задачи.

Выходным объектом ООЗ МЛРА, т.е. решением, является многомерная выборка $Z_{mn}=[Z_1|Z_2]=\{(z_{i1},\ldots,z_{i,n-1}|z_{in})\}$, матрица R_{nn} такая, что выполняются соотношения $\beta_R=R^{-1}_{11}R_{12}$, $(1\backslash m)Z_1^T Z_1=R_{11}$, $(1\backslash m)Z_1^T Z_2=R_{12}$. В соответствии с

Clarivate Analytics *indexed*

вертикальным разбиением матрицы $Z_{mn}=[Z_1|Z_2]$, где Z_1 – m-на-(n-1) матрица, Z_2 - m-на-1 матрица, матрица R_{nn} разбита на 4 блока: подматрицы R_{11}, R_{12} $R_{21}=R^T_{12}$, и элемент $r_{nn}=1$.

Схематически данную ОЗ МЛРА изобразим пока так: $(m,n,\varphi_{11},\boldsymbol{\beta})=>(R_{11},R_{12},Z_1,Z_2)$. В процессе ее решения схема будет конкретизироваться.

Подзадачу 1 для ОЗ МЛРА обозначим так: $(n,\varphi_{11})=>(R_{11})$. Так как $R_{11}C_{11}=C_{11}\Lambda_{11}$, то имеем $R_{11}=C_{11}\Lambda_{11}C^T_{11}$. Располагая двумя входными объектами-числами (n,φ_{11}) можно смоделировать бесконечно много спектров Λ_{11}. Для моделирования спектра $\Lambda_{11}=\Lambda_{(n-1)(n-1)}=\text{diag}(\lambda_1,\ldots,\lambda_{n-1})$, элементы которого по регулируемым величинам f-параметров должны удовлетворять нас и соответствовать выбранному значению φ_{11}, мы воспользуемся математической моделью спектра неизвестной корреляционной матрицы [ ]. Имея спектр Λ_{11} мы далее решаем ОСЗ 1: $\Lambda_{11}=>(R^{(\ell)}_{11},C^{(\ell)}_{11})$, $\ell=1,\ldots,k_\ell=1000<\infty$.

Выберем одну пару матриц $(\Lambda_{11},C^{(\ell)}_{11})$. Эта матрица $C^{(\ell)}_{11}$ (Таблица 1) определяет корреляционную матрицу $R_{11}=C^{(\ell)}_{11}\Lambda_{11}C^{(\ell)T}_{11}$, нас не удовлетворяющую, так как в элементы матрицы $C^{(\ell)}_{11}$ мы не внедрили желаемые индикаторы присутствия знаний (индикаторные элементы). Иначе говоря, не «обогатили» матрицу $C^{(\ell)}_{11}$ знаниями, выявляемые при когнитивном моделировании [3-6]. Назначим значения элементов этих матриц начальными значениями в Оптимизационной Задаче – важной задаче в ООМ МЛРА. Откроем надстройку «Поиск решения» в ЭТ Excel, поставим курсор компьютерной мыши (computer mouse) на целевую ячейку с адресной формулой $\lambda_1,\ldots,\lambda_{n-1}=n-1$ и нажмем на кнопку "Выполнить". Происходит запуск процедуры Solver. В результате работы процедуры Solver имеем новую желаемую матрицу C^+_{11}, удовлетворяющую всем условиям из формулировки ООЗ МЛРА.

Для внедрения индикаторов решаем Оптимизационную Задачу, в результате формируются индикаторы присутствия знаний, они видны среди элементов матрицы C^+_{11}, (Таблица 3). Решениями Оптимизационной Задачи являются 2 матрицы C^+_{11},Λ^+_{11}, но используем только одну матрицу C^+_{11}. Она - матрица C^+_{11}, содержит индикаторы присутствия знаний, которые были внедрены в нее при решении Оптимизационной Задачи.

Решаемая ниже обратная спектральная задача (назовем ее ОСЗ для ООМ МЛРА) является другой обрат из ной спектральной задачей, отличной от ОСЗ 1 [13]: $\Lambda_{11}=>(C^{(\ell)}_{11},R^{(\ell)}_{11})$, $\ell=1,\ldots,k_\ell<\infty$, и от ПСЗ: $R_{11}=>(C_{11},\Lambda_{11})$. Схематично обозначим ОСЗ для ООМ МЛРА так:$(C_{11},\Lambda_{11})=>(C^+_{11},\Lambda^+_{11},R^+_{11})$. Наша ОСЗ для ООМ МЛРА

не решается путем модификации алгоритма решения ОСЗ 1 из [13]. ОСЗ для ООМ МЛРА является новой задачей и являлся недостающим звеном в спектральных задачах с симметрической матрицей. Наша ООЗ МЛРА является обратной к ПСЗ: $R_{(n-1)(n-1)}=>(C_{(n-1)(n-1)},\Lambda_{(n-1)(n-1)})$ в ином аспекте – в матрице C^+_{11} содержатся математические индикаторы наличия желаемых знаний. Этого нет в Прямой Задаче *диагонализации* известной выборочной корреляционной матрицы R_{11}, решаемой для известной симметрической матрицы $R_{11}=R^T_{11}$.

Преимущества модельных матрицы C^+_{11} собственных векторов и $(\boldsymbol{\beta},C^+_{11})$–выборок ООМ МЛРА

В статье [7] сформулирована и решена новая Обратная Спектральная Задача №2 (ОСЗ для ООМ МЛРА при размерности n-1). В статье [7] рассматривалась ОСЗ2 для корреляционной матрицы R_{nn}, имеющей полный ранг, равный n. В нашей новой задаче корреляционная матрица R_{nn} имеет неполный ранг. Ее ранг равен n-1, ибо линейная связь вида $z_n=\mathbf{z}\beta$ уменьшает ранг матрицы $R_{nn}=(1\backslash m)Z^T_{mn}Z_{mn}$ на 1.

В отличие от статьи [7] здесь мы рассматриваем ОСЗ2 для моделирования матрицы собственных векторов C^+_{11} с неизвестной подматрицей R^+_{11} неизвестной полной корреляционной матрицы R^+_{nn}. Если к подматрице R^+_{11} добавить подматрицы $R^+_{12},R^{+T}_{12},R^+_{22}=(1)$, то получили бы матрицу R^+_{nn}. Но подматрицы R_{12}, R^T_{12}, $R_{22}=(1)$ всегда определены, если известна подматрица R_{11}. Матрица R^+_{nn} восстановима, ибо подматрица $R^+_{22}=(1)$ имеет размерность1-на-1 и имеет единственный элемент, равный 1, а по условию задачи подматрица R^+_{12} вычисляется через подматриц R^+_{11}, так как имеем равенство $R^+_{11}\boldsymbol{\beta}=R^+_{12}$.

Наличие известных значений элементов вектора $\boldsymbol{\beta}$ и известных значений элементов матрицы R^+_{11}, имеющей свою матрицу C^+_{11} с заданными пользователем по тем или иным причинам индикаторами присутствия «значимых» знаний, которые были «внедрены» в нее перед решением Оптимизационной Задачи для ООМ МЛРА, является явным преимуществом. Этими свойствами ООМ МЛРА желательно наделить и другие многомерные модели ПМСА.

Решение Оптимизационной Задачи обеспечивает нам нахождение искомых 2 подматриц Z_1,Z_2 таких, что $Z_2=Z_1\boldsymbol{\beta}$.

Но мы должны вложить в начальную матрицу $C_{11}=[\mathbf{c}_1|\mathbf{c}_2|\ldots|\mathbf{c}_{n-1}]$ «цифровые знания», применяя решение ОСЗ 2 [14]. Полученную после решения ОСЗ2 для ООМ МЛРА «обогащенную»

матрицу C^{+}_{11} применяем и моделируем соответствующие 2 подматрицы Z^{+}_1, Z^{+}_2 такие, что $Z^{+}_2 = Z^{+}_1 \text{ß}$. Тогда модельная выборка $Z^{+}_{mn} = [Z^{+}_1 | Z^{+}_2]$ будучи подвергнута процессу извлечения из нее знаний с применением математической модели главных компонент [4-6], с применением когнитивного моделирования для у- и z-переменных [4-6], с корректным решением смысловых задач [15], позволит извлечь из матрицы C^{+}_{11} «цифровые знания». Описание обратного процесса извлечения введенных знаний проводится с применением когнитивного моделирования будет опубликовано в другой статье.

Наша модельная выборка $Z^{+}_{mn} = [Z^{+}_1 | Z^{+}_2]$ адекватна (модельно и гистограммно [7-9]) и мы сможем как моделировать, так и извлекать «цифровые знания» в плохо формализуемых событиях, ситуациях [7-9]. Заметим, что извлекать «цифровые знания» мы можем только в рамках математической модели главных компонент [4-6], математической модели МЛРА [1-3].

Обратная Спектральная Задача для ООМ МЛРА

Пусть верна гипотеза: n z-переменных условно разделены на 2 части первые n-1 z-переменных содержат существенные знания и достаточно сильно влияют на одну z-переменную z_n согласно линейной модели вида $z_n = \beta_1 z_1 + \beta_2 z_2 + \ldots + \beta_{n-1} z_{n-1}$, где известны значения регрессионных коэффициентов $\text{ß}_1, \ldots, \text{ß}_{n-1}$.

В векторном виде эта линейная модель имеет вид $Z_2 = Z_1 \text{ß}$, где вектор регрессионных коэффициентов $\text{ß} = (\beta_1, \ldots, \beta_{n-1})^T$, m значений всех n z-переменных образует 2 подматрицы Z_1, Z_2 размерностей m-на-(n-1) и m-на-1. Объединение m значений всех z-переменных в одно множество из m значений n z-переменных имеет форму m-на-n матрицы $Z_{mn} = [Z_1 \rfloor Z_2]$. В 1МЛРА заданы значения регрессионных коэффициентов $\text{ß}_1, \ldots, \text{ß}_{n-1}$.

Требуется найти модельные m значений всех n z-переменных образующих 2 подматрицы Z_1, Z_2 для m-на-n матрицы Z_{mn}. При условии, что вектор ß, удовлетворяет стандартному условию $\beta = R^{-1}_{11} R_{12}$. Здесь, как известно, подматрицы $R_{11}, R_{12}, R^T_{12}, R_{22}$ определяются по формулам $(1\backslash m) Z_1^T Z_1 = R_{11}$, $(1\backslash m) Z_1^T Z_2 = R_{12}$, $(1\backslash m) Z_2^T Z_2 = R_{22} = (1)$ и являются разбиениями корреляционной матрицы $R_{nn} = (1\backslash m) Z^T_{mn} Z_{mn}$, соответствующих разбиению $Z_{mn} = [Z_1 | Z_2] = \{(z_{i1}, \ldots, z_{i,n-1} | z_{in})\}$.

Формулировка ОЗ МЛРА для матрицы собственных векторов C^{+}_{11}

Модельная подматрица R^{+}_{11} не известна и должна иметь заданную матрицу собственных векторов C^{+}_{11}. В начальную матрицу C_{11} мы должны ввести неизменяемые весомые значения c^{+}_{kj} такие, что они по абсолютной величине «весомы»: $|c^{+}_{kj}| > c_j$. Они являются выделенными компонентами [14] собственных векторов $[c_1 | \ldots | c_{n-1}]$. Они могут быть произвольными, но удовлетворяющими соотношениям $|c^{+}_{kj}| > c_j$. Должна быть задана начальная пара матриц (C_{11}, Λ_{11}) собственных векторов C_{11} и собственных чисел $\Lambda_{11} = \text{diag}(\lambda_1, \ldots, \lambda_{n-1})$, $\lambda_1 + \ldots + \lambda_{n-1} = n-1$, $\lambda_1 \geq \ldots \geq \lambda_{n-1}$. Наличие этой пары обеспечивается решением ОСЗ 1 [13]: $\Lambda_{11} => (C_{11}, R_{11})$. Здесь мы не указываем номер $\ell = 1, \ldots, k_\ell < \propto$. Все n-1 собственные векторы $c_j = (c_{1j}, c_{2j} \ldots c_{n-1,j})^T$, расположенные по n-1 столбцам матрицы $C_{11} = [c_1 | c_2] \ldots | c_{n-1}]$, согласованы со своим спектром $\Lambda_{11} = \text{diag}(\lambda_1, \ldots \lambda_{n-1})$ таким образом, что выполняются равенства: $R_{11} = C_{11} \Lambda_{11} C^T_{11}$, $R_{11} C_{11} = C_{11} \Lambda_{11}$, $C^\tau_{11} C_{11} = C_{11} C^\tau_{11} = I_{nn}$, $\text{diag}(R_{11}) = (1, \ldots, 1)$, $\text{tr}(R_{11}) = 1 + \ldots + 1 = \text{tr}(\Lambda_{11}) = \lambda_1 + \ldots + \lambda_{n-1} = n-1$, $\lambda_1 \geq \ldots \geq \lambda_{n-1} \geq 0$. И эту пару матриц мы должны преобразовать в другую пару матриц $(C^{+}_{11}, \Lambda^{+}_{11})$.

Это достигается при решении ОСЗ 2, изложение ее доступно в статье [14]. Отличие текста описания ОСЗ 2 в [14] от описания ОСЗ 2 в настоящей статье состоит в размерности матрицы – здесь размерность матрицы C^{+}_{11} равна n-1, в статье [14] используется размерность n матрицы C^{+}_{nn}.

Вне ОЗ МЛРА реализуется этап задания пары индексов (k,j) и новые значения заданных нами выделенным компонентам $c_{kj} = c^{+}_{kj}$, $j = 1, \ldots, n-1$, $k \in \{1, \ldots, n-1\}$. В постановке задачи ОСЗ для ООМ МЛРА невозможно конкретизировать этот пункт.

После решения ОСЗ 2 для ООМ МЛРА **в** матрице C^{+}_{11} изменяются все ее элементы, кроме выше выделенных компонент со знаком плюс (+). Матрица C^{+}_{11} содержит заданные индикаторы присутствия знаний - «весомые» значения $|c_{kj}| > c_j$. Как объект будущей когнитивной модели матрица C^{+}_{11} является индикатором присутствия знаний. Она является матрицей коэффициентов комбинационных связей [12]. Обоснование большей значимости матрицы «коэффициентов комбинационных связей» [12] C^{+}_{11} при когнитивном моделировании с применением математической модели главных компонент приведено в статье [12].

Будем использовать матрицу собственных векто ров C^{+}_{11}. Для каждого j-ого собственно вектора $c_j = (c_{1j}, c_{2j} \ldots c_{n-1,j})^T$, $j = 1, \ldots, n-1$. выберем пары номеров (k,j) разных компонент c_{kj} таких, что они по абсолютной величине «весомы»: $|c_{kj}| > c_j$.

Clarivate Analytics indexed

Пары номеров $\{(k,j)\}$ образуют «конфигурацию», соответствующую индексам (k,j) элементов c_{kj} j-ых собственных векторов $\mathbf{c_j}=(c_{1j},c_{2j}\ldots,c_{n-1-1,j})^T$, $j=1,\ldots,n-1$. Примеры выделенных по разным критериям пар номеров (k,j) разных компонент элементов c_{kj} приведены в статьях [7,14,15]. Все выделенные элементы находятся в матрице C^+_{11}.Полученные модельные стандартизованные значения z^+_n изменяются относительно значений $z^+_1, z^+_2,\ldots, z^+_{n-1}$ по формуле $z^+_n=\beta_1 z^+_1+\beta_2 z^+_2 +\ldots+\beta_{n-1} z^+_{n-1}$,. В соответствии с разбиением $(z_{i1},\ldots,z_{i,n-1}|z_{in})$ z-переменных m значений всех n z-переменных образуют 2 подматрицы Z^+_1, Z^+_2 матрицы для m-на-n матрицы $Z^+_{mn}=[Z^+_1 \rfloor Z^+_2]$.

Для полной корреляционной матрицы R_{nn}, не используемой в 1МЛРА, имеются свои ортогонормированная матрица собственных векторов C_{nn} (решение ПСЗ), согласованная со своим спектром $\Lambda_{nn}=diag(\lambda_1,\ldots\lambda_n)$ таким образом, что выполняются равенства $R_{nn}C_{nn}=C_{nn}\Lambda_{nn}$, $C^T_{nn}C_{nn}=C_{nn}C^T_{nn}=I_{nn}$, $dag(R_{nn})=(1,\ldots,1)$, $tr(R_{nn})=1+1++1=tr(\Lambda_{nn})=\lambda_1+\ldots+\lambda_n=n$, $\lambda_1\geq\ldots\geq\lambda_n\geq0$. Эта матрица R_{nn} необходима для решения прямой задачи – ПЗ МЛРА. Решение ПЗ МЛРА даст те же матричные объекты, что и в ОЗ МЛРА.

Пусть в матрице собственных векторов C^+_{11} для каждого j-ого собственно вектора $\mathbf{c^+_j}=(c^+_{1j},c^+_{2j}\ldots^+c_{n-1,j})^T$, $j=1,\ldots, n-1$ назначены пары номеров (k,j) разных компонент c_{kj} таких, что они по абсолютной величине «весомы»: $|c^+_{kj}|>c_j$. Тогда задача ОСЗ МЛРА формулируется так.

Задача (ОСЗ МЛРА):для пары матриц (C_{11},Λ_{11}) с назначенными значениями элементов матрицы C_{11} $c_{kj}=c^+_{kj}$ требуется найти новую пару матриц $(C^+_{11},\Lambda^+_{11})$,таких что матрицы C^+_{11} и Λ^+_{11} должны удовлетворять равенствам: $C^{+T}_{11}C^+_{11}=C^+_{11}C^{+T}_{11}=I_{(n-1)(n-1)}$, $C^+_{11}\Lambda^+_{11}C^{+T}_{11}=R^+_{11}$, $\lambda^+_1+\ldots+\lambda^+_{n-1}=n-1$, $\mathbf{c^+_j}\Lambda^+_{11}\mathbf{c^{+T}_j}=1$, $\mathbf{c^+_i}\Lambda^+_{11}\mathbf{c^{+T}_j}=r_{ij}$, $r^+_{ji}=r^+_{ij}$, $j=1,\ldots,n-1$. где вновь определяемая корреляционная матрица $R^+_{11}= C^+_{11}\Lambda^+_{11}C^{+T}_{11}$, имеет новые матрицы собственных векторов C^+_{11} и собственных чисел $\Lambda^+_{11}=diag(\lambda^+_1,\ldots,\lambda^+_{n-1})$, $\lambda^+_1+\ldots+\lambda^+_{n-1}=n-1$, $\lambda^+_1\geq\ldots\geq\lambda^+_{n-1}$.

При этом матрица C^+_{11} имеет те же заданные значения c^+_{kj} компонентов c^+_{kj}, $j=1,\ldots,n-1$, $k\in\{1,\ldots,n-1\}$ у n-1 собственных векторов $\mathbf{c^+_j}=(c^+_{1j},c^+_{2j}\ldots c^+_{n-1,j})^T$, расположенных по столбцам матрицы $C^+_{11}= [\mathbf{c^+_1}|\mathbf{c^+_2}|\ldots|\mathbf{c^+_{n-1}}]$.

В результате решения ОСЗ для ООМ МЛРА вычисляются 2 матрицы: ортогональная матрица C^+_{11} собственных векторов $\mathbf{c^+_j}=(c^+_{1j},c^+_{2j}\ldots c^+_{n-1,j})^T$, расположенных по её столбцам: $C^+_{11}=[\mathbf{c^+_1}|\mathbf{c^+_2}|\ldots|\mathbf{c^+_{n-1}}]$ и согласованная со спектром $\Lambda^+_{(n-1)(n-1)}=diag(\lambda^+_1,\ldots\lambda^+_{n-1})$ таким образом, что выполняются соотношения $R^+_{11}C^+_{11}=C^+_{11}\Lambda^+_{11}$, $C^{+T}_{11}C^+_{11}=C_{11}C^T_{11}=I_{nn}$, $diag(R^+_{11})=(1,\ldots,1)$,

$tr(R^+_{11})=1+\ldots+1=tr(\Lambda_{11})=$ $\lambda_1+\ldots+\lambda_{n-1}=n-1$, $\lambda_1\geq\ldots\geq$ $\lambda_{n-1}\geq0$.

Если будем решать ПСЗ при когнитивном извлечении заложенных нами знаний, то решениями ПСЗ в нашем примере являются 2 матрицы C^+_{66}, Λ^+_{66}, а ортогональное преобразование - матрица C^+_{66}, примененное к матрице z-переменных Z_1.

В модель ОСЗ для ООМ МЛРА заложено выполнение условия равенства произведения матриц $C^+_{11}\Lambda^+_{11}C^{+T}_{11}$ матрице R^+_{11} коэффициентов корреляции:$C^+_{11}\Lambda^+_{11}C^{+T}_{11} =R^+_{11}$. Это условие присутствует в программе-таблице модели ОСЗ для ООМ МЛРА (в процедуре Solver) в виде функций ограничений для целевой функции вида $\lambda^+_1+\ldots+\lambda^+_6=6$.

Функции ограничений для целевой функции имеют вид $\mathbf{c^+_j}\Lambda^+_{66}\mathbf{c_j}^{+T}=1$, $\mathbf{c^+_i}\Lambda^+_{66}\mathbf{c_j}^{+T}=r^+_{ij}$, $r_{ji}^+=r^+_{ij}$, $j=1,\ldots,5$. Неизвестными переменными являются элементы матрицы C^+_{11} и наличие для нее начальных элементов в модели ОСЗ 2для ООМ МЛРА обязательно.

Поэтому модель ОСЗ для ООМ МЛРА использует полную матрицу $C^{+(\ell)}_1$. При этом эти матрицы собственных векторов не должны иметь одну и ту же матрицу собственных чисел. Решение оптимизационной задачи (смотрите ниже) обеспечивает моделирование матрицы Λ^+_{66} как матрицы собственных чисел, а матрицу C^+_{66} - как матрицы собственных векторов для не нужной нам корреляционной матрицы R^+_{66}. А не любой симметрической матрицы. Условие, налагаемое на тип матрицы R^+_{11} требует ввода в соотношения модели ОСЗ для ООМ МЛРА дополнительных ограничений на ее элементы. Эти ограничения существенны в решаемой оптимизационной задаче.

Мы рассматриваем случай n=6 из-за использования нами разных «конфигураций», образуемых индексами (k,j) элементов c_{kj} j-ых собственных векторов $\mathbf{c_j}=(c_{1j},c_{2j}\ldots c_{n-1,j})^T$, $j=1,\ldots,6$. В разных матрицах C_{66} мы выделяли по разным критериям пары номеров (k,j) разных компонент элементов c_{kj}. Все элементы находятся в подматрице C^+_1.

Решения C^+_{11} ОСЗ для ООМ МЛРА существенно облегчают задачи моделирования пар матриц $(C^+_{11},\Lambda^+_{11})$, удовлетворяющих тому или иному критерию [1,5-7] и соотношениям $C^{+T}_{11}C^+_{11}= C^+_{11}C^{+T}_{11}=I_{(n-1)(n-1)}$, $R^+_{11}C^+_{11}=C^+_{11}\Lambda^+_{11}$, $R^{+T}_{11}=R^+_{11}$.

Матрица C_{11} имеет весомые значения, являющиеся выделенными компонентами собственных векторов $[\mathbf{c_1}|\ldots|\mathbf{c_{n-1}}]$. Выделенные компоненты присутствовали в ПСЗ (в матрице C_{66}) и активно участвовали при извлечении

цифровых знаний [1,5-7], где подматрица C_{11} была единственно доступной.

Для каждой матрицы $C^{(\ell)}_{11}$ –решения ОСЗ 1 вида $\Lambda_{11}=>(C^{(\ell)}_{11} R^{(\ell)}_{11})$, $\ell=1,…,k_\ell=500$ решение – матрица C^+_{11} нашей ОСЗ для ООМ МЛРА, моделирует множество других матриц $C^{+(\ell)}_{11}$, каждая из них является источником косвенных сведений и «выдает» те же цифровые знания [1,5-7] что были «заложены» в матрицу C_{11} или C^+_{11}. Одни и те же знания соответствуют нашему множеству цифровых данных, адекватных реальным данным (таблицам «объект-свойство»). В данной статье ОСЗ для ООМ МЛРА решается после решения ПСЗ, так как в работах [1,5-7] при извлечении цифровых знаний применялась ПМ ГК. Но можно использовать и решение ОСЗ 1. Случаев необходимости использования решений ОСЗ 1 существует много. Здесь их не рассматриваем.

Программа –таблица моделирования матрицы $C^{(+)}_{11}$ и матрицы Λ^+_{11}

Описание нашей программы повторяет описание программы –таблицы из статьи [1]. Только размерность у нас n-1=5 а не n=6. В [1] моделируется матрица $R^{(+)}_{nn}$, здесь же мы излагаем программу моделирования матрицы $C^{(+)}_{11}$ и матрицы Λ^+_{11}. Их размерности равны (n-1) -на-(n-1).

Введем в ячейки ЭТ Excel известные значения элементов матриц C_{11} и Λ_{11} [1]. Проверяем в программе-таблице (Таблица 2) выполнение и точность равенств $C^{\tau}_{11}C_{11}=C_{11}C^{\tau}_{11}=I_{(n-1)(n-1)}$, $R_{11}C_{11}=C_{11}\Lambda_{11}$. Эти значения являются начальными для реализации метода GRD2 в процедуре Solver. Далее реализуем ниже приведенные Шаги 1-7.

Шаг 1. Выделяем индексы (k,j) и значения элементов c_{kj} из подматрицы C_1 с выделенными индексами Так как $\ell=5$, о введем пары ячеек ЭТ Excel (имени и значения элементов) из каждого столбца матрицы C^+_{66}. Эти элементы не изменяют своих значений.

Шаг 2. Ввод в ячейки ЭТ Excel скалярных равенств, взятых из матричных равенств $C^{+\tau}_{55}C^+_{55}=C^+_{55}C^{+\tau}_{55}=I_{55}$, $R^+_{55}=C^+_{55}\Lambda^+_{55}C^{+T}_{55}$. Для элементов моделируемого нового спектра $_{66}\Lambda^+_{66}=diag(\lambda^+_1,…,\lambda^+_6)$ введем ограничения $\lambda^+_1+…+\lambda^+_5=5$, $\lambda^+_1>…>\lambda^+_5>0$, $\lambda^+_1=\lambda_1$, где λ_1– известный всегда наибольший элемент известного спектра $\Lambda_{55}=diag(\lambda_1,…, \lambda_5)$.

Шаг 3. Назначить ячейку с формулой $\lambda^+_1+…+\lambda^+_5$ целевой функцией процедуры Solver.

Шаг 4. Назначить в качестве изменяемых ячеек (неизвестных переменных задачи) ячейки

матрицы C_{55} и ячейки элементов столбцов №1,…№5 матрицы C^+_{55}.

Этим действием достигается неизменяемость компонентов собственных векторов №1,…, №5.

Шаг 5. Назначить в качестве изменяемых еще 5 ячеек с значениями $\lambda^+_1…,\lambda^+_5$.

Шаг 6. Ввод в строке окна Solver ограничений для ячеек с их значениями вида $\lambda^+_1…>0$, …, $\lambda^+_6>0$, $\lambda^+_1=\lambda_1$.

Шаг 7. Нажать кнопку «Выполнить».

Моделируем нужную нам пару матриц $(C^+_{11},\Lambda^+_{11})$. Они определяют матрицу $R^+_{11}=C^+_{11}\Lambda^+_{11}C^{+T}_{11}$. Следовательно, вместо схемы $(n,\varphi_{11})=>(R_{11})$ мы реализовали схему $(n,\varphi_{11})=>(R^+_{11})$. Чтобы вычислить требуемую матрицу $R^{(+)}_{12}$ нужно умножить известный вектор коэффициентов регрессии β на модельную матрицу $R^{(+)}_{11}$: $R^{(+)}_{12}=R^{(+)}_{11}\beta$.

Этот новый вектор $\beta^{(+)}=R^{+-1}_{11}R^+_{12}$ отличается от старого вектора $\beta=R^{-1}_{11}R_{12}$, тем, что его компоненты зависят от матрицы C^+_{11}, содержащей нами введенные знания. Индикаторы присутствия знаний были заложены в нее. Зависящая от матрицы C^+_{11} корреляционная матрица $R^+_{11}=C^+_{11}\Lambda^+_{11}C^{+T}_{11}$ является C^+_{11}-источником знаний. Формула вектора для вектора **β** в ООМ МЛРА принимает вид $\beta=(R^+_{11},R^+_{12}= C^+_{11}\Lambda^+_{11}C^{+T}_{11}R^+_{12}$ изобразим так: $(R^+_{11},C^+_{11},\Lambda^+_{11})=> (Y^{(t)}_{m(n-1)},$ $Z^{(t)}_{m(n-1)})$, $t=1,…,\kappa_t<\infty$, а подзадачу 3 $(R^+_{11},\beta)=>R^+_{12}$. Результат решений трех подзадач обозначается в виде: $(m,n,\varphi_{11},\beta,C^+_{11})=> (R^+_{11},R^+_{12},Z^+_1,Z^+_2)$.

Практические рекомендации по эксплуатации программы-таблицы для решения **подзадачи 1**.

Шаг 1. При фиксированном значении параметра φ_{11} моделируем спектр $\Lambda_{n-1)(n-1)}= diag(\lambda_1,…,\lambda_{n-1})$, с значением φ-параметра спектра $\Lambda_{(n-1)(n-1)}\varphi=[(f_2(\Lambda_{(n-1)(n-1)})-n)/(n(n-1)]^{1/2}$, равного заданному значению φ_{11}. Значение φ_{11} должно принадлежать одному из 5 интервалов изменения коэффициента корреляции по шкале Чеддока (Chaddock scale). По этой шкале количественная мера тесноты связи: абсолютное значение коэффициента корреляции, принадлежащее интервалу от 0 до 0.3 - качественно интерпретируется как «очень слабая», интервалу от 0.3 до 0.5-«слабая, умеренная», интервалу от 0.5 до 0.7-«заметная» (moderate positive), интервалу от 0.7 до 0.9-«высокая», интервалу от 0.9 до 1-«очень высокая». Схему этого Шага 1 обозначим так: $(n-1,\varphi_{11})=>\{\Lambda_{n-1)(n-1)}=diag(\lambda_1,…,\lambda_{n-1})\}$. Фигурные скобки {} обозначают бесконечность множества таких спектров. При этом элементы $\lambda_1,…,\lambda_{n-1}$ спектра $\Lambda_{n-1)(n-1)}$ неизвестной корреляционной матрицы $R_{n-1)(n-1)}$ моделируем с применением программы SPEKTR из ППП «Спектр» [10].

Заметим, что программа SPEKTR не моделирует матрицу $R_{n-1)(n-1)}$ (в виде блока R_{11}) а моделирует только спектр $\Lambda_{n-1)(n-1)}=diag(\lambda_1,\ldots,\lambda_{n-1})$ с заданным значением f-параметра $f_2(\Lambda_{n-1)(n-1)})=\lambda^2_1+\ldots+\lambda^2_{n-1}=f_2(R_{n-1)(n-1)})$. Элементы спектра упорядочены в порядке убывания:$\lambda_1>\ldots>\lambda_{n-1}>0,\lambda_1+\ldots+\lambda_{n-1}=n-1$, при чем матрица $\Lambda_{n-1)(n-1)}$ может быть как полноранговой, так и, при необходимости, может быть смоделирован и с неполным рангом. Тогда число ее положительных элементов равно k<n-1. Одна из таблиц значений φ_{11}, принадлежащих 5 интервалам изменения параметра φ, приведена в статье [9, стр.187, Таблица 1].

Приведенные «Модельные значения элементов 20 спектров 20 неизвестных корреляционных матриц, имеющих заданные значения f-параметров спектра» получены при значениях φ_{11}=0.20,0.35,0.40,0.45,0.50,0.55,0.60,0.65,-0.70, 0.70,0.75,0.80,0.80,0.85,0.85,0.90,0.90,0.95,0.98. Значение φ_{11} $(0<\varphi_{11}<1)$ не зависит от значения n. Оно позволяет моделировать n-1 положительных элементов $\lambda_1,\ldots,\lambda_{n-1}$, в сумме равных n-1. Значение φ_{11} регулирует интервал значений, в пределах которого изменяются значения генерируемых коэффициентов из матрицы C^+_{11}. Примеры фиксации интервалов для значений φ_{11} приведены, например, в [9,стр.187].

Спектр $\Lambda_{n-1)(n-1)}$ может быть получен и по-другому. Если требуется моделировать спектр с заданными значениями его f-параметров f_1,f_2,f_4, то задача моделирования (f_1,f_2,f_4)-спектров $\Lambda_{n-1)(n-1)}$ $(f_1$=n-1) по-разному решены в [4-11]. Все модельные (f_1,f_2,f_4)-спектры из их бесконечного множества имеют заданные значения f-параметров f_2,f_4, с заданной погрешностью [1,2] $\|f_2-f_2(\Lambda_{nn})\|\leq\epsilon_0$, $\|f_4-f_4(\Lambda_{nn})\|$=0.

Шаг 2. Моделирование блока R_{11} корреляционной матрицы R_{nn}. Здесь нам предстоит воспользоваться одним из решений из бесконечного множества решений Обратной спектральной задачи (ОСЗ): $\Lambda_{n-1)(n-1)}=>(C^{(\ell)}_{n-1)(n-1)}, R^{(\ell)}_{n-1)(n-1)})$, ℓ=1,…,$k_\ell<\infty$. Здесь мы будем использовать одну из корреляционных матриц $R^{(\ell)}_{n-1)(n-1)}$, элементы которой по абсолютным величинам должны удовлетворять нас и соответствовать выбранному значению φ_{11} в предыдущем Шаге 1.

Для моделирования бесконечного множества корреляционных матриц $R_{n-1)(n-1)}$ с одним и тем же спектром $\Lambda_{n-1)(n-1)}=diag(\lambda_1,\ldots,\lambda_{n-1})$ используем программу CORMAP (CORMAT, COMA31) из ППП «Спектр» [10]. В нашей ОЗ МЛРА и в других задачах анализа данных, где применяется ОМ ГК [2-5], для модельного спектра $\Lambda_{(n-1)(n-1)}$ существует бесконечное множество корреляционных матриц $R^{(\ell)}_{(n-1)(n-1)},\ell$=1,…,$\kappa_\ell<\infty$ (лемма C.P.Chalmers [12]).

Зафиксируем номер ℓ решения обратной спектральной задачи (ОСЗ) [5], а полученную корреляционную матрицу $R^{(\ell)}_{n-1)(n-1)}$ обозначим как искомый блок R_{11} матрицы R_{nn}. Подзадача 1: $(n,\varphi_{11})=>(R^{(\ell)}_{11})$, ℓ=1,…,$\kappa_\ell<\infty$ решена.

Необходимо проверять точность равенства левой части формулы ее правой части во всех матричных равенствах нашей модели. Например, по условию ООЗ МЛРА элементы из подматрицы $R^{(\ell)}_{12}=R^{(\ell)}_{11}\beta$ должны удовлетворять равенству $R^{(\ell)}_{12}=(1/m)Z^{(\ell)T}_1Z_2$. Это матричное уравнение должно точно выполняться численно.

Таблицы числовых значений всех матриц демонстрируют все матричные равенства. Эти же таблицы участвуют при обратном процессе извлечения введенных знаний с применением когнитивного моделирования. Совпадение элементов здесь смоделированных с элементами таблиц, полученных при когнитивном моделировании извлечения введенных знаний будет показано в другой статье.

Заключение

Разработанная модель ОСЗ для ООМ МЛРА применялась при моделировании матрицы собственных векторов и матрицы собственных чисел. Но с заданными значениями их выделенных компонент из матрицы собственных векторов. Наша модель ООМ МЛРА является вкладом в теорию обратных спектральных задач [14]. Для 5 объектов ОМ ГК в качестве входных объектов отобраны следующие полезные для пользователя подмодели [14]: (R)=>,(Y)=>,(Z)=>, (Λ,C)=>,(Λ,R)=>,(Λ,Y)=>,(Λ,Z)=>,(Λ,C,R)=>, (Λ,R,Y)=>,(Λ,Y,Z)=>,(Λ,C,R,Y)=>,(Λ,R,Y,Z)=>, $C_{66}=[C^+_1|C_2]$=>$(C^+_{nn},\Lambda^+_{nn})$=>$(R^+_{nn},Z^{(t)}_{mn},Y^{(t)}_{mn})$, t=1,…,$k_t<\infty$, где слева от стрелки => обозначены входные объекты из ОМ ГК, а справа от стрелки => подразумевается присутствие обозначений выходных объектов из ОМ ГК. Все схемы обратных подмоделей реализованы программно.

Задачи решены с применением ООЗ АГК: Λ_{11}=>$(R^{(\ell)}_{11},C^{(\ell)}_{11}Y^{(t,\ell)}_{m(n-1)},Z^{(t,\ell)}_{m(n-1)})$, ℓ=1,…,$k_\ell<\infty$, t=1,…,$k_t<\infty$. ОСЗ для ООМ МЛРА использует косвенные сведения, содержащиеся в матрице собственных векторов C^+_{11}, обнаруживаемые, например, при когнитивном анализе реальных данных. Применение модели ОСЗ для ООМ МЛРА в задачах моделирования цифровизации валидных и измеряемых показателей предприятия [15] актуально из-за периодического появления дополнительных сведений, отличающихся от тех, что были учтены в момент времени извлечения цифровых знаний.

Эти исследования повышают эффективность применения наших моделей и позволяя нам

Clarivate Analytics *indexed*

перейти к решению других, более интересных задач.

References:

1. Zhanatauov, S. U. (2018). Inverse model of multiple linear regression analysis. *ISJ Theoretical & Applied Science, №4(60)*, pp.201-212. www.t-science.org

2. Zhanatauov, S. U., & Akhmetov, K. A. (2018). Simulation of multidimensional sample with the assigned values of the coefficients of linear regression. *ISJ "Theoretical &Applied Science". 2018, № 9(65)*, pp.301-314. www.t-science.org

3. Zhanatauov, S. U. (2012). Primenenie metoda lineynoy regressii dlya samootsenki riska bankrotstva banka. *Finansovaya analitika: problemy i resheniya, 15(105)*, aprel', pp.40-43.

4. Zhanatauov, S. U. (2013). Kognitivnaya karta i model' sotsial'no-ekonomicheskikh faktorov kar'ernoy uspeshnosti shkol'nikov munitsipal'nykh shkol SShA. *Sibirskiy pedagogicheskiy zhurnal, №6*, pp.28-33.

5. Zhanatauov, S. U. (2014). Analiz budushchikh debitorskoy i kreditorskoy zadolzhen nostey munitsipalitetov gorodov. *Ekonomicheskiy analiz:teoriya i praktika. Moscow, №2(353)*, pp.54-62.

6. Zhanatauov, S. U. (2015, May 16-17). *Kognitivnaya karta i kognitivnaya model' analiza glavnykh komponent* (telekommunikatsionnaya otrasl'). Natsional'naya assotsiatsiya uchenykh (NAU).IX Mezhd. nauch.-prakt. konf: «Otechestvennaya nauka v epokhu izmeneniy: postulaty proshlogo i teorii novogo vremeni». (pp.55-58). Rossiya, Ekaterinburg.

7. Zhanatauov, S. U. (2018). Modeling eigenvectors with given the values of their indicated components. *Int. Scientific Journal Theoretical &Applied Science, №11(67)*, pp.107-119. www.t-science.org

8. Zhanatauov, S. U. (2016). Model and histogram to adequacy of variables (С,Λ)-samples and real multidimensional sample. *International Scientific Journal Theoretical &Applied Science, № 11, vol.43*, pp.53-61. www.T-Science.org

9. Zhanatauov, S. U. (2014). *The (С,Λ,Y)-sample is adequate to real multidimensional sample*. Proceed. Int. conf.. "Leadership in Education, Business and Culture". 25 apriel 2014,Almaty-Seatle,ICET USA.Leadership Iternational Conference "Leadership on Education, Business and Culture». pp.151-155.

10. Zhanatauov, S. U. (2017). *Modelirovanie mnogomernykh vyborok znacheniy priznakov zernovoy kul'tury*. "II mezhdun. nauchno-prakt.konf. «Evropa i tyurkskiy mir: nauka, tekhnika i tekhnologii".Izmir (Turtsiya), 29-31 maya 2017. www.regionacadem.org

11. Zhanatauov, S. U., & Agaev, A. (2019). A giving realism to the property values of the cereal crops in the model Λ-sample stat'ya *Int. Scientific Journal Theoretical &Applied Science, №5(73)*, pp.101-112. www.t-science.org

12. Zhanatauov, S. U. (2019). A matrix of values the coefficients of combinational proportionality. *Int. Scientific Journal Theoretical &Applied Science, 71№3 (68)*, pp.401-419. www.t-science.org

13. Chalmers, C. P. (1975). Generation of correlation matrices with a given eigen – structure. *J. Stat. Comp. Simul., vol.4*, pp.133-139.

14. Zhanatauov, S. U. (2018). Inverse spectral problem with indicated values of components of the eigenvectors. *ISJ Theoretical &Applied Science, №11(67)*, pp.359-370. www.t-science.org

15. Zhanatauov, S. U. (2018). Inverse spectral problem. *ISJ Theoretical &Applied Science, №12(68)*.

16. Zhanatauov, S. U. (2017). The optimization problem with linearized equations f-parameters (f1,f2,f3,f4,f5,f6)-spectrum. *International scientific journal Theoretical &Applied Science, №11, vol.55*, pp.251-267. www.t-science.org

QR – Issue   QR – Article

Alaa Hussein Tamadhur
University of Kufa
Department of Physics, Faculty of Science, Najaf, Iraq

Hamza Hussain Hayder
University of Kufa
Department of Physics, Faculty of Science, Najaf, Iraq
hayder.alshibana@uokufa.edu.iq

THEORETICAL STUDY OF STRUCTURE PROPERTIES OF PRISTINE AND DOPED (AL-N) NANOLAYER AS CS GAS SENSOR

*Abstract: Using density functional theory (DFT) with Perdew, Burke, and Ernzerhof (PBE) /6-31G basis set, is investigated the sensitivity of pristine aluminium nitride **P**(Al-N) nan ribbons, and one atom doped, boron- (B-doped aluminium nitride), (p-doped aluminium nitride) and (c-doped aluminium nitride), for common gases Rn, K and Cs ,Gaussian 09 program which applies .*

*The results show that the adsorptions of of Cs on pristine aluminium nitride **P**(Al-N) (on atom and center ring) are weak physisorption with a E_{ad} (0.976, 0.987) eV, otherwise pristine aluminium nitride **P**(Al-N) (on atom and center ring) could be a good sensor for Sc. However, the adsorptions of Sc, the (B-doped aluminium nitride), (p-doped aluminium nitride) and (c-doped aluminium nitride) (on atom and center ring) are a strong chemisorption with E_{ad} larger than 1 eV, due to the strong interaction, (B-doped aluminium nitride), (p-doped aluminium nitride) (c-doped aluminium nitride), (on atom and center ring) could catalyst or activate, suggesting the possibility of as a catalyst. The results reveal the electronic properties of which pristine aluminium nitride modified by boron or carbon and phosphorous doping and molecules adsorption, that could be used to design chemical sensors, and pristine aluminium nitride **P**(Al-N) could be used to build sensors for the detection of particular molecules in this research.*

Key words: pristine aluminium nitride, gas adsorption, density functional theory, HOMO and LUMO.
Language: English
Citation: Tamadhur, A. H., & Hayder, H. H. (2019). Theoretical Study of Structure Properties of pristine and doped (Al-N) Nanolayer as CS Gas Sensor. ISJ Theoretical & Applied Science, 06 (74), 623-628.
Soi: http://s-o-i.org/1.1/TAS-06-74-76   Doi: crossref https://dx.doi.org/10.15863/TAS.2019.06.74.76

1. Introduction

The nanostructural properties of Aluminum nitride (AI-N) have been exceedingly synthesized for experimental and theoretical studies due to their broad applications in optics, electronics, and photoelectronics [1,2]. The theoretical studies on the molecular adsorption of gases on the Al-N nanosheet surface have been reported recently [3,4] and shown an armchair-shaped edges (Al-N)NRs. These edges have presented semiconducting and nonmagnetic properties, where the direct band gap of(Al-N)NR decreases monotonically with increasing nanoribbon width [5]. Gases such as CO_2, k, Cs, Rn, NH_3, and O_2 are examples used for the adsorption on the AI-N surface. For example, the interactions of CO_2 on the surface of Al-N nanostructures are investigated to be a candidate CO_2 capture material [3]. Also, the

adsorption of NH_3 and NO_2 molecules on the surface of Al-N nanosheets have revealed more interesting results, where the electrical conductivity increases upon the NO_2 adsorption, however it becomes insensitive toward the NH_3 adsorption [6].

Further details, and to compare between AI-N and, (Al-N)NRs are advantageous over Al-N nanosheets because it has small volume and free reactive edges giving more accessible to some doping [5] and chemical modification [6] which correspondingly resulting in higher susceptible structural defects [7]. Similarly, these structural defects also exist in Al-N nanostructure in which they can be deliberately introduced into the host Al-N lattice which correspondingly alter its physical properties by either irradiation or chemical treatments [8]. Furthermore, it is very well-known that dangling

Clarivate Analytics *indexed*

bond (DB) defects around the vacancy sites or at the tips determine the electronic and magnetic properties of Al-N nanotubes [8].

2. COMPUTATIONAL DETAILS DFT

Our calculations are based on the use of DFT were performed using Gaussian 09 package[9] with the Becke- three parameter density functional with Lee-Yang-Parr correlation functional (PBE) [10] was used

with the 6-31G(d,p) basis sets progressively in order to save computation time. Table 1 shows there is a difference between the HOMO and the LUMO energies of P(Al-N) -Sheet. The deduced values of ionization potential (IP), electron affinity (EA) are calculated by HOMO and LUMO energy, the IP, EA and Fermi energy (E_F) for BN-Sheet. The energy gap (E_g) plays crucial role in the properties of a solid.

Table 1. The structural and electronic properties of pristine P(Al-N) – Sheet.

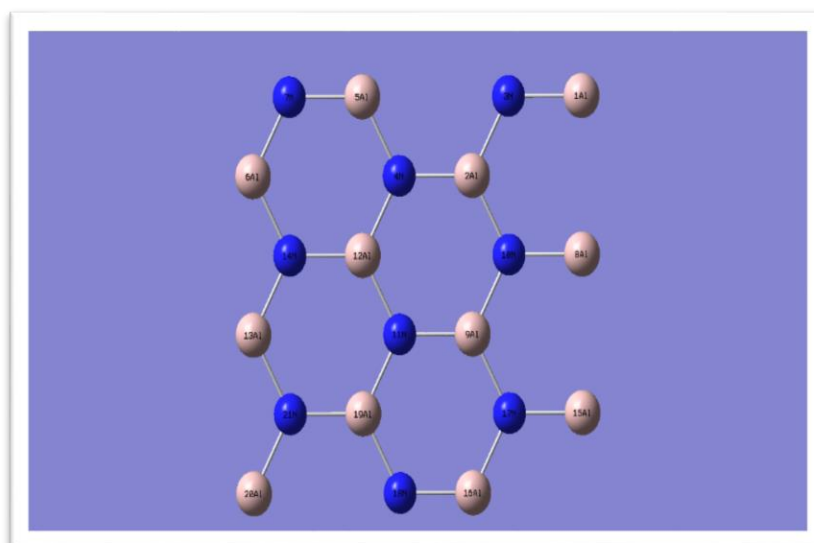| Property	P(Al-N) -Sheet
E_{Tot}	-3400.1595
E_g	0.6303
IP= (-HOMO)	6.9820
EA=(-LUMO)	6.3616
E_F	-6.6718

Fig. 1. Geometric structures of the P(Al-N) -Sheet

Figure 1 shows the structure of pristine aluminium nitride **P**(Al-N) -Sheet that is used in the present study, we can see from the figure that the structure of pristine **P**(Al-N) -Sheet contains 21 atoms (12 aluminium + 9 nitrogen).

The optimized bond lengths of B–N are 1.40 Å for **P**(Al-N)-Sheet. These values are in agreement with other calculations for aluminium /nitrogen **P**(Al-N)-hybrid[11]. On the other hand, the (PBE) /6-31G(d,p) basis set is used for the geometry optimizations of the adsorption effect of CO and NO molecules on BN-Sheet . The (PBE) /6-31G (d,p) is a reliable and commonly used level of theory for nanotube structures [12,13]. We calculate the chemical potential or Fermi energy (E_F) of the complexes, as given below,

$$E_F= E_{HOMO} + E_{LUMO} / 2 \qquad (1)$$

Where E_{HOMO} is the energy of the highest occupied molecular orbital and E_{LUMO} is the energy of the lowest unoccupied molecular orbital. The energy gap in energy levels (E_g) of a system is defined as $E_g = E_{LUMO} - E_{HOMO}$. The adsorption energy (E_{ads}) is estimated using the following approximate expression:

$$E_{ads}= E_{COMPLEX} - (E_{BN\text{-}Sheet} + E_{gas}) \qquad (2)$$

Where $E_{complex}$ corresponds to the P(Al-N)-Sheet /gas complex in which the gas molecule has been adsorbed on the surface of P(Al-N)-Sheet, $E_{BN\text{-}Sheet}$ and E_{gas} are the energy of the isolated P(Al-N)-Sheet and gas molecule[14].

Figure 2 illustrated the density functional at 6-31G(d.p) basis set, to investigate the adsorption effect of gas molecules Cs effect on the electronic structure P(Al-N)-Sheet.

3. RESULTS AND DISCUSSION

3.1 Electronic Structure of Pristine P(Al-N)-Sheet

Table 1 listed the calculated structural and electronic properties of P(Al-N)-Sheet. The HOMO is the orbital that primarily acts as an electron donor and the LUMO is the orbital that mostly acts as the electron acceptor play a significant role for density of states (DOS) of P(Al-N)-Sheet. The calculated electronic and structural properties of P(Al-N) are listed in Table (3.1). The natural bond calculations were performed to conclude the total energy (E_{Tot}), energy gap (E_g), HOMO and LUMO energies and (E_F). As is clear from the Table the Fermi energy is calculated from the E_{HOMO} and E_{LUMO} ($E_F = (E_{HOMO} + E_{LUMO})/2$) equal to -6.671 eV, however, the P(Al-N) is a semiconductor with $E_g = 0.620$ eV.

3.2 P(Al-N)-Sheet with Cs Gas Molecules Adsorption

In order to find the favorable adsorption configuration, a comprehensive study on the adsorption of gas molecules (Cs) on P(Al-N)-Sheet is placed at two different occupation sites: The top first site directly above the atom, top second site directly above the center ring of cs gas molecule, as shown in Figure 3. Its known that Cs is a non- disturbing and colorless gas, when it enters the body of human, Cs combines with blood haemoglobin that prohibit the union of oxygen and haemoglobin, leading to body tissue hypoxia and suffocation[15].

3.4 Adsorption of Gas CS on P(Al-N) ,B, P and C-Doped aluminium nitride (Al-N).

After adsorption of these gas we try to examine its effect on structural and electronic properties of P(Al-N) , B-doped aluminium nitride P-doped aluminium nitride, C-doped aluminium nitride and (adsorption center). In order to find the favourable adsorption configuration, a comprehensive study on the adsorption of gas molecules CS on molecules studies.

3.4.1 Electronic Properties of Adsorbed CS on P(Al-N) ,B, P and C-Doped aluminium nitride (Al-N).

The P(Al-N) , B-doped aluminium nitride P-doped aluminium nitride, C-doped aluminium nitride and (adsorption center) is considered a potential candidate of gases sensor, so the adsorption of CS molecules on various P(Al-N), including (B-doped aluminium nitride P-doped aluminium nitride, C-doped aluminium nitride and (adsorption center), after relaxation of CS adsorbed on P(Al-N), B-doped aluminium nitride P-doped aluminium nitride, C-doped aluminium nitride and (adsorption center) is shown in Fig. (3.6). Meanwhile, the bond lengths of, C-N, N-B and N-Al are 1.1.847 Å, 1.529 Å and 1.818 Å respectively, are consistent with the other results [16], which basically decrease and increase of electrons decrease and increase in the elements [17]. from fig.(3.6) (a) the side view of gas molecules CS adsorption Al atom of P(Al-N), on the distance (3.2 Å), the fig (b) shows that the gas CS on the center ring of P(Al-N), with (3.2 Å) .The CS of the (B- doped P(Al-N) on the distance (3.2 Å) it note that on the fig (c) , fig(d) gas molecular on the center ring B- doped P(Al-N), on the distance (3.2 Å), the CS of the P-doped P(Al-N), on the distance (3.2 Å) is observed that on the fig (e), fig(f) gas molecular on the center ring P- doped P(Al-N), for the distance(3.2 Å) the CS of the C- doped P(Al-N) for the distance (3.2 Å) we see that on the fig (g) , fig(h) gas molecular on the center ring C- doped P(Al-N), on the distance(3.2 Å).
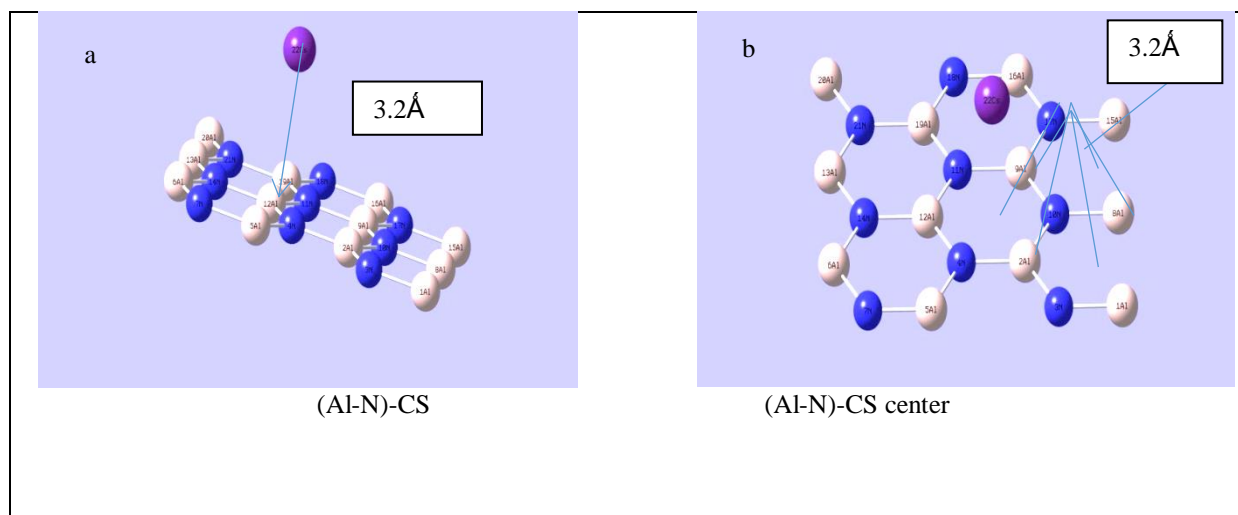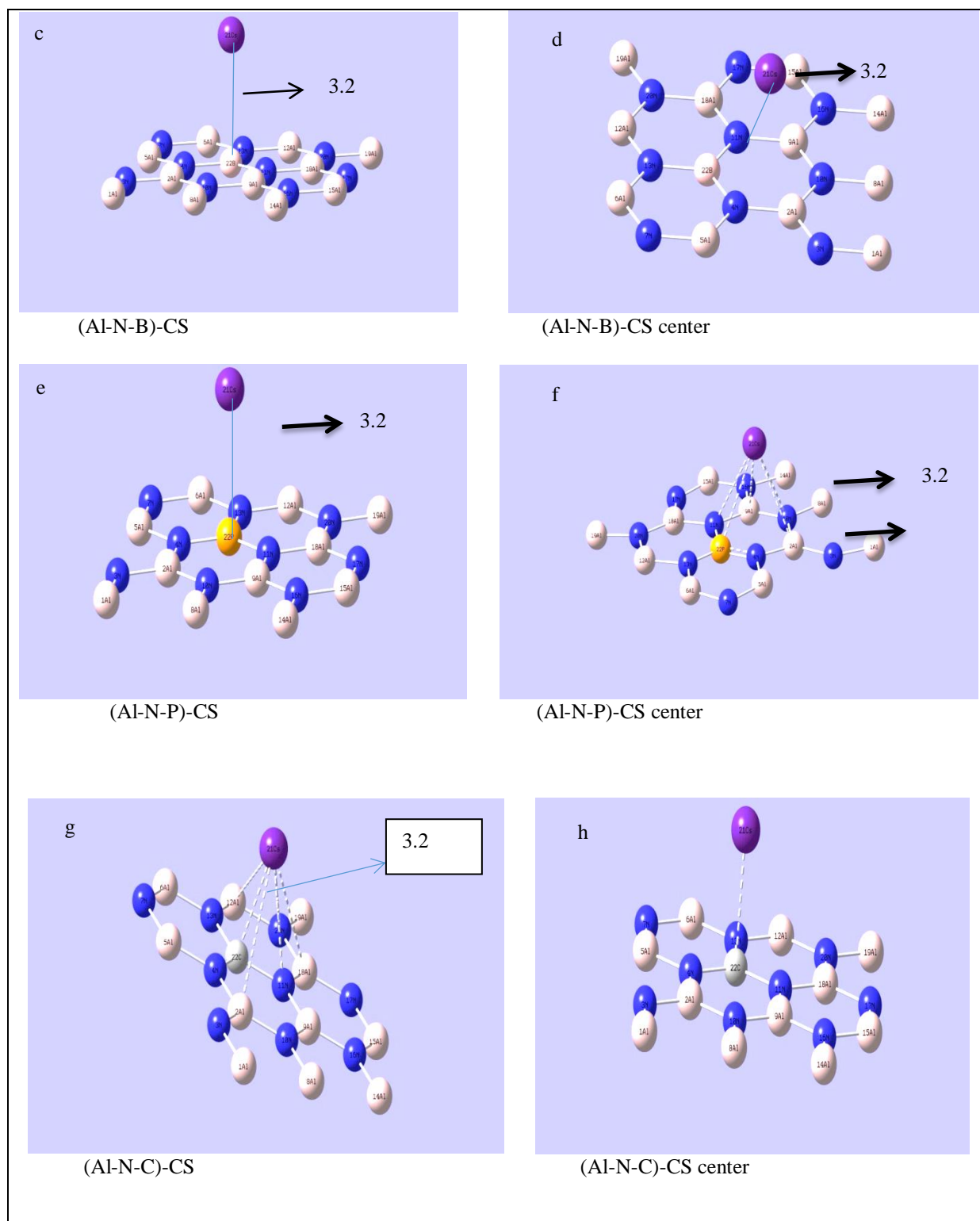

(Al-N)-CS

(Al-N)-CS center

Fig. 2. Structural model of Cs - P(Al-N) Sheet - Cs - P(Al-N)$_{center}$ Sheet adsorptive system.

It can be noticed from Table (2.5), that E_{Tot} for adsorption of CS on, **P**(Al-N) , B-doped **P**(Al-N) , C-doped **P**(Al-N) and (adsorption center) are smaller than adsorbed P-doped **P**(Al-N), this indicates that E_{Tot} increases (in magnitude) with increasing the number of atoms while the E_{Tot} for adsorption of CS on, B-doped **P**(Al-N), C-doped **P**(Al-N) and are

smaller than adsorbed P(Al-N) because that decreases (in magnitude) with decreasing the number of atoms. And adsorption energy (E_{ad}) of CS on the **P**(Al-N) , B-doped **P**(Al-N) , C-doped **P**(Al-N) and (adsorption center) are (0.976eV), 0.987eV), (2.07eV) and 2.07eV),(10.9Ev),(12.67 eV),(1.73 eV) and (1.730 eV) respectively . E_{ad} of a gas atom are found using

equation (2.67). However, the E_g of CS oF the **P**(Al-N), B-doped (Al-N) , P-doped **P**(Al-N) and C-doped **P**(Al-N) are (1.0176eV),(0.813eV), (0.511eV) and(1.384eV) respectively. While (E_g) of CS on the center ring of the are **P**(Al-N), B-doped **P**(Al-N) , P-doped **P**(Al-N) and C-doped **P**(Al-N) (0.873eV), (0.552eV),(1.384eV)and (1.634eV) respectively. E_g of a gas atom are found using equation (2.67). While the E_g for adsorption of CS on **P**(Al-N), B-doped **P**(Al-N), P-doped **P**(Al-N) are smaller than those of C-doped **P**(Al-N) respectively, which indicates that the E_g decreases with the adsorption of CS on **P**(Al-N), B-doped **P**(Al-N) , P-doped **P**(Al-N). One can see from the overall results that are displayed in Table (3). The E_{ad} of, B-doped **P**(AlN) , P-doped **-**(Al-N) and C-doped **P**(Al-N) (on atom and center ring) is larger than 1 eV, corresponding to strong chemisorption [18]. The E_{ad} **P**(Al-N) (on atoms and center ring) are smaller than 1 eV, corresponding to weak physisorption [19]. The E_{ad} for **P**(Al-N) are: (0.976

eV) and (0.987 eV) are in agreement with the previous results [20]. In general, the E_{ad} in the results indicates that B-doped P(Al-N) , P-doped P(Al-N). C-doped P(Al-N). is strongly reactive to molecule CS, the Ead is (2.07 eV) and (2.07 eV) center ring, (10.9eV), (12,67eV) center ring, (1.730eV),(1.730eV) center ring, corresponding to a strong chemisorption. Therefore, due to gas slow desorption from B-doped P(Al-N), P-doped P(Al-N) and C-doped P(Al-N) is not suitable as a sensor of CS. Nevertheless, this molculars could catalyst or activate this adsorbate due to the strong interaction, suggesting the possibility of B-doped P(Al-N), P-doped P(Al-N) and C-doped P(Al-N) as a catalyst. The results Ead for P(Al-N), B-doped P(Al-N) and C-doped are P(Al-N) consistent with those reported in other studies [15]. Thus, P(Al-N), can be used to detect CS since the adsorption-desorption equilibrium of CS, the P(Al-N), are easily built.

Table 2. Structural and electronic properties of adsorption of CS molecule gas on P(AlN), B, P and C-Doped aluminium nitride (Al-N).

Property (eV)	a	b Centre	c	d Centre	e	f Centre	g	h Centre
$E_{Tot (au)}$	-3420.385	-3420.3419	-3202.9057	-3202.9057	-3518.656	-3518.5937	-3216.0736	-3216.0736
E_{ads}	0.976	0.987	2.07	2.07	10.9	12.67	1.730	1.730
E_g	1.017	0.873	0.813	0.813	0.511	0.552	1.384	1.384
E_{HOMO}	-3.920	-3.953	-4.103	-4.103	-3.833	-3.923	-4.326	-4.323
E_{LUMO})	-2.903	-3.080	-3.289	-3.289	-3.322	-3.371	-2.938	-2.938
E_F	3.412	-3.516	-5.520	3.696	-3.578	-3.647	-3.631	-3.631
EA $=-E_{LUMO}$	4.157	4.090	4.969	5.175	4.336	4.495	4.406	4.455
E_F	-5.275	-5.211	-5.520	-5.583	-5.257	-5.498	-5.286	-5.272

4.CONCLUSIONS

The bond lengths of optimized structure for adsorbed system decrease with increasing of number of electrons in the elements. The calculated E_{Tot} for all systems increases (in magnitude) with increasing the number of atoms. There is no distortion in the planar structure of **P**(Al-N) sheet in the case of doping B-doped **P**(Al-N), P-doped **P**(Al-N). C-doped **P**(Al-N)The adsorption of gas molecules on **P**(Al-N). Pristine (Al-N) sheet can be used as a good sensor for CS , and not suitable for usage as a gas sensor for B-doped **P**(AlN) , P-doped **P**(Al-N). C-doped **P**(Al-N) .

References:

1. Novoselov, K. S., et al. (2005). Proc. Natl. Acad. *Sci. U.S.A., 102*, 10451–10453.
2. Geim, A. K., & Novoselov, K. S. (2007). *Nat. Mater., 6*, 183-191.
3. Blasé, X., Rubio, A., Louie, S. G., & Cohen, M. L. (1995). Phys. *ReV. B, 51*, 6868–6875.
4. Watanabe, K., Taniguchi, T., & Kanda, H. (2004). *Nat. Mater., 3*, 404–409.
5. Novoselov, K. S., et al. (2004). *Science 306,* 666.
6. Pease, R. S. (1952). An x-ray study of boron nitride. *Acta Crystallogr, 5,* 356–361.
7. Geick, R., Perry, C. H., & Rupprecht, G. (1966). Normal modes in hexagonal boron nitride. *Phys. Rev., 146*, 543–547.
8. Rumyantsev, S. L. (2001). *Properties of Advanced Semiconductor Materials GaN, AlN, InN, BN, SiC, SiGe*. Edited by M. E. Levinshtein, S. L. Rumyantsev, and M. S. Shur John Wiley and Sons (Eds.). (pp.67-92). New York.
9. Rubio, A., Corkill, J. L., & Cohen, M. L. (1994). Theory of graphitic boronnitride nanotubes, *Phys. Rev. B, 49*, 5081–5084.
10. Frisch, M. J., et al. (2009). Gaussian 09, revision A. 02 Gaussian, Inc., Wallingford CT.
11. Seminaro, J. M., & Politzer, P. (1995). Modren Density Functional Theory: A Tool for Chemistry, University of New Orleans, USA.
12. Drissi, L. B., Saidi, E. H., Bousmina, M., & Fassi-Fehri, O. (2012). *J. Phys.: Condens. Matter 24,* 485-502.
13. Gan, L., & Zhao, J. (2009). *Physica E 41*, 1249.
14. Ahmadi, A., Beheshtian, J., & Kamfiroozi, M. (2012). *Journal Molecular Model 18*, 17-29.
15. Wendt, M., & Weinhold, F. (2001). NBO View 1.0. Theoretical Chemistry Institute, University of Wisconsin, Madison.
16. Zhang, X., Dai, Z., Wei, L., Liang, N., & Wu, X. (2013). *Sensors 13*, 151-159.
17. Imani, K., Jafari, G., & Abolhasani, M. R. (2012). *ISRN Condensed Matter Physics 2012, 5*, Article ID 368634.
18. Jiang, Y., Yang, S., Li, S., Liu, W., & Zhao, Y. (2015). Journal of Nanomaterials, 7 (2015), Article ID 504103.
19. Feng, J., Liu, Y., Wang, H., Zhao, J., Cai, Q., & Wang, X. (2014). *Computational Materials Science, 87*, 218.
20. Huang, B., et al. (2008). *J. Phys. Chem. C 112*, 134-142.
21. Pashangpour, M. (2010) International Conference on Nanotechnology and Biosensors IPCBEE, IACSIT Press, Singapore, Vol. 2.

U. Hayitov
Tashkent State Technical University of Uzbekistan
Associate professor,
Tashkent, Republic of Uzbekistan

SECTION 22. Policy. Innovations. Theory, practice and methods.

DYNAMICS OF POLITICAL PROCESS IN UZBEKISTAN AND IT'S CHARACTERISTICS (1991-2015)

Abstract: In the given paper the author discusses the dynamics of the political processes its peculiarity, with the relation of the social political system and modernization institutes conditions on economic and political dynamics and some questions of political changes and modernization. Consequently, the essence and trends of the political process in the period of globalization and the dynamics of transformation in the socio - political developments in the Republic of Uzbekistan are analyzed.
Key words: Uzbekistan, political processes, society, economic dynamics, social processes, civil institutions.
Language: English
Citation: Hayitov, U. (2019). Dynamics of political process in Uzbekistan and it's characteristics (1991-2015). ISJ Theoretical & Applied Science, 06 (74), 629-632.
Soi: http://s-o-i.org/1.1/TAS-06-74-77   Doi: crossref https://dx.doi.org/10.15863/TAS.2019.06.74.77

Introduction

The study of the dynamics of political processes plays an important role in the research of the content, orientation, political and social development opportunities of political processes. Today, political processes are reflected not only in the process of formation of political systems, but also in the form of integrated system, which changes from one state to another, as well as changes in the political system. The inner genetic interconnection between political and social events implies the existence, change and development of general laws. Such laws are related to the transition from one state to another due to nonlinearity, periodicity, fluctuation, change of characteristics, features of political objects, their structure and function, the pace and appearance of political evolution. Dynamics is such a social phenomenon, where social solidarity is replaced by the difference and contradictions of ideas and interests, that is, they are replaced by new integration. That is, social contradictions are the source of changes in the political dynamics - political institutions and political dominance in the political system. Therefore, the dynamics of the political process necessitates the emergence of new forms of political institutions, the organization of human social life. There may be vibrations and retreats, long and long periods of decline, uncertain circles.

Materials and methods

We will also include the most important social resources of political processes, their willingness to change the political system, the willingness and ability to protect the social welfare and social interests of the population. Understand your interests and changes in the mood of non-elite political entities (public, classes, social groups, and individuals) lead to the rising or falling political processes, the tension, the conflict, the tension. Sociologists and experts in political science also demonstrate the interconnection between the dynamics of economic and political processes. Political and economic processes, like politics and economics, are a systematic phenomenon [1]. At the same time, it can be said that economic changes may not be the cause of political shocks. Political upheavals are influenced by social, cultural, socio-psychological factors. At the same time, political power can have a serious, even decisive, impact on the economic processes in the face of the government and its servants. At the same time, in the history of political thinking, it is important to determine the role of the state as an intermediary between government regulation of the economy and political parties and public associations between government and market management.

In the report of the first President Islam Karimov "on the concept of further deepening of democratic reforms and development of civil society in the

Clarivate Analytics *indexed*

country" at a joint meeting of the Legislative chamber and the Senate of the Oliy Majlis of the Republic of Uzbekistan was given the opportunity to adopt the law "on public control in The Republic of Uzbekistan", aimed at creating a systematic and effective legal mechanism for the implementation by society, civil institutions of control over the implementation of legislation by public authorities and management"[2], There is a huge logical framework to claim. Changes within political processes affect all its constituents - participants and methods of participation, as well as political institutions, their relationships, and the relationship between them and society. At the same time, the first thing is that the subject is subject to change, the perceptions about them, and secondly, the object being studied is transformed into subject in the course of these changes, and thirdly, their change is based on space and time and finally the subject itself is quantitative and qualitative so that the subject is going to evolve. Political processes are essentially political changes, and they have certain pace, rhythm, appearance, and consistency in their realization. In the form of social demands from the outside, the level of their satisfaction varies widely in different societies and at different stages of development, which can create sharp processes, take strong decisions under the influence of pressure on the government, and lead to change of dominant subject or change of dominant government.

Differentiation is temporal, i.e. the elements of the system, in general, are internal and external to the system consistently changes one after the other. Under the influence of this, political processes represent legitimate processes of action, defined by systemic - notorious factors and external influences. At the same time, it is important to determine the state of the system and the source of change. According to the theory of development, the political system is the level of understanding of the causes of social change, the changes in the state and attitude of classes and social groups, and the classroom (firstly the oppressed classes). Political processes are seen as a way of bringing social-class confrontations that focus on economic relations, the production of material resources. Thus, the political dynamics can be seen as a system-free change. At the same time, it is worth mentioning that the activities of people who are trying to realize their needs and interests on the ground of these processes are functioning. The ability of political parties in the movement to act as conscious and willing to change the form of interconnectedness within and outside of the political process, puts the question of the individual's role in political processes and enables the practitioner to take an active approach to analyzing political change. According to this approach, the role of people in certain situations, the role of political change in the mechanism of change and its role in the subsequent changes [3]. There are rumors about the conflicts, disagreements, the causes

of unwanted acts of some political powers and the needs and interests of the people and the most important things for them. Their degree of realization, nature and content defines the nature and content of the social system in which the political systems and people are formed. Modern research describes the relationship between political institutions of particular societies, deep-rooted global changes in the functioning of the political system, the impact of the political system on the interaction between society and the political system, the impact of social interests and values on political processes. In the microarchitecture, the political dynamics is associated with various ideological and cultural norms, values, and different forms of political behavior. In transition conditions, the system less and non-institutional factors will intensify, with the technological movement of power dominated by the state's legal action, which can lead to a new type of political revolution. This can be seen in the examples of events in Eastern Europe (Serbia, Romania), as well as in Georgia, Ukraine, Moldova, and Kyrgyzstan. Specific forms of political change in the twentieth century in the context of globalization, political transit, modernization and democratization [4] and the theories of postmodernism play an important role in a number of modern political concepts.

In our view, political processes are objectively based on objectively political and political planning, and political processes are objectively oriented, although in the political practice, in all its aspects, it is impossible for them to be struck by the consequences of systemic structures because it involves self-conceptual elements does not always lead to the formation of a political system. As a result of political processes, the system cannot be upgraded as it does not have the advanced edge. The present-day science has expanded its crucial ideas about the direction of political processes in progress or degradation. Taking into consideration the current state of affairs in the late 20th and early 21st century, it can be argued that the political processes are advancing, that is, advancing toward progress and decline, and experiencing a period of stagnation and decline. According to the postmodernism theory, development is not a potential success, but a universal standard, rather than a final success, but rather a universal standard [5]. In our opinion, political dynamics cannot be regarded as a sign of a democratic order, as subjects of the political process are only institutional subjects and citizens. There is a division of responsibilities between the ruling elite and the population, and various political entities and institutions are actively engaged and cooperate, while political dynamics are shaped by the influence of institutionalized and non-institutional elements. Moreover, in the authoritarian-type political regime, political dynamics are created by political elites and mobilized citizens. Based on the philosophical interpretation of the concept of

"change," a change in the state of political processes is defined as the change in the content of the content from one state to another [6]. At the same time, political processes play the role of the amortization, accelerator or restrictive of social processes that occur in a certain social environment, and change the way they exist in space and time. The development of political processes in Uzbekistan was based on the "Uzbek model", in which the economy was given priority over politics. The state has been consistently pursuing the socio-political and economic stability of the country, modernizing the country, deepening democratic reforms and building civil society, as the constitution and law as the main reformer, as well as social-economic reforms gradually implementing the social protection of the population. Changes in political processes, historical, economic and cultural features, in general, change social processes. At the same time, the political process itself involves the formation of a social environment and reflects the ongoing changes.

Changes in various social spheres are societies historical movements, local changes, the nature of the political changes that can be repatriated, irrevocable, directed and directed, spontaneous, self-organizing [7]. Sustainability is a form of social contracting in a certain period between authority and society. Most social needs or priority social needs are realized there. Stabilizing processes in all countries are usually a trustworthy character, provided only by the government, personally by the power vertical. This is because of the contradictory situation in society and the ability of the political power to adapt quickly enough to change the stocks of self-destructive resources. However, these periods are also of great importance to the society as it strives for further development of forces in the stabilization years, such as changes in the government, the emergence of new parties and social movements, the appointment of administrative staff in the territorial bodies, the selection of new leaders of the regional bodies you can. If these processes are consistent with the general mechanism existing in the legal and organizational relationships in the society, then they will have profound changes at both the regional and the national levels. Political stability is turning into a political system when the whole system is integrated and effective cooperation with the society.

In addition, the stability of political processes in transitional periods can be created by the interaction of public organizations and self-governance. They provide the opportunity to regulate and manage social processes, in general, to balance the social system. It must be institutionalized in public organizations and self-governance bodies and institutions, initially to provide legal support for the constitution and legislation, and then gradually formulate culture, skills, self-organization, and culture of governance. Thus, in the transition period there is a need to formulate political processes that combine state and non-governmental organizations. Together they work together to get a socially-political result in managing social processes. It should be noted that in conditions of modern transitional societies, when legal democratic institutions are not established or that neither in the power elites nor in the population, there is a lack of proper legal culture. It uses the technology of its decision-making, which promotes political processes and their orientation, and represents the most important mechanism of the coup and disaster.

The development of political processes means a transition to a new quality. The trends in the development of political processes (direction, idea, and idea), the character of the political regime in the social sphere, and the interaction of the main political forces, first of all, the elite and counter-elite, the emergence of new political forces in power and the state of the social siege and socio-psychological state their unsatisfactory and dissatisfied mood. There may also be problems related to the problems that arise as a result of the political dissatisfaction of the population and the problems that arise due to the lack of political power and the incompetence of political power. Therefore, during the social disaster, new political centers are formed, new political forces and movements around them are formed and there is a struggle between them. Thus, the scope, structure, pace and content of the current political processes dramatically increased the idea of the nature and outcome of political processes. It is possible to imagine that modern political movements, following the evolutionary (evolutionary) stereotype, the political processes of the 21st century, unlike previous revolutions, can not only express positive movements, and in some cases, as in some CIS countries, they may have a definite regressive character . In modern conditions, it provides additional resources that enable him to control the public by artificially enhancing and directing political movements, parties and organizations, and even social unrest. Therefore, there is a tendency in the political processes to turn into a virtual reality, with the game of political powers separated from social integrity. Under these circumstances, only limited narrow corporate interests and sufficient manipulation technologies can be used to meet them. In such a case, political processes may put an end to the development of society or complicate it. This can be illustrated by examples of political crisis and serious political changes that occurred in foreign countries during the 2011-2012 periods in Tunisia, Egypt, Algeria, Bahrain, Libya and Syria.

The dynamics of political processes are the emergence of some political institutions, the collapse of others, and the withdrawal of political parties. But the experience of contemporary societies shows that the political processes that began as modernization do not end with the formation of democracy all the time and everywhere. First of all, the importance of

democratic institutions is unquestionable, and political processes cannot be regarded as the only option in the direction of democracy. Second, it can be questioned that democracy is a universal value. Because of the ecological, demographic problems that existed in the millennium of the past and the ongoing world inequality, without the involvement of countries. Recognizing the importance of separate democratic processes (elections, political competition), we cannot say that democratic ideals represent the only one. Democracy, as any other political ideology, is a factor in world culture if it does not have the means to deal with corruption, racism, chauvinism, and humanism. It is well known that democracy is a political institution that originates from the West, and extraneous to the international community. Implementation must be the result of the historical development of any country, its internal and external political needs, and most importantly, the desire and aspirations of its citizens.

Conclusion

Changes and development of political processes are determined not only by the dynamics of social dynamics, but also by changes in the activities of political entities that, in turn, determine the changes in political institutions. The intensity and nature of these changes determines the impact, pace and character of their return to social processes. At the present time, transition societies need to provide a scientific tool to explain the political changes in the context of the concept of political science and the concept that is based on the major theories, concepts, methods and approaches used in sociology. The current political processes and their role in socio-political development enable the political sociology to be studied in terms of science, analyze the political process in Uzbekistan and define its perspective directions, make conclusions and make recommendations.

References:

1. Petrushenko, L. A. (1971). *Samodvijenie materii v svete kibernetiki. Filosofskiy ocherk vzaimosvyazi organiztsii i dezorganizatsii v prirode*. (p.72). Moscow.

2. Karimov, I. (2010). *Concept of further deepening of democratic reforms and formation of civil society in our country*. (p.46). Tashkent: Uzbekistan.

3. Stomp, P. (n.d.). *Sociology of social sciences*. Per. s angl. pod red. VA Yadova (Eds.). (p.61). Moscow.

4. Gelman, V. Y. (2001). Postsovetskie politikicheskie transformtsii (The theory of Nabroski). *Police, # 1*, pp.15-29.

5. Goncharov, P. K. (2006). Politichesky transit: ot kontseptsii modernizatsii paradigm tranzitologii. *MGU Vestnik. Ser.18; Sociology and politology. №2*, pp.59-78.

6. Melvil, A. Y. (2004). O traektoriyax postkommunisticheskix transformation. *Police, №2*, pp.64-75.

7. Melvil, A. Y. (1998). Opyt teoritiko-metodologicheskogo synthesa strukturnogo i protsedurnogo podxodov k democratic transit. *Police, №2*, pp.6-39.

8. (2005). *Uzbekistan is on democratization and renewal of society, modernization and reform of the country*. Tashkent: Academy.

9. Qodirov, A. (2006). *Traditional society and strategy of its modernization.* Tashkent: TDYu publishing house.

10. Ergashev, I., Jakbarov, M., & Nazarov, N. (2007). *Democratization of society and national idea.* Tashkent: Academy.

11. (2001). *Novaya filosofskaya encyclopedia (v 4-x tomax)*. T.2. (pp.87-90). Moscow.

Zarina Amirovna Abduazimova
National University of Uzbekistan
Basic doctoral student

UDC 17.0

THE MODERN WORLD AND THE PROBLEMS OF ENVIRONMENTAL ETHICS

Abstract: *Environmental ethics is an area of philosophical research, the subject of which is the substantiation and development of ethical principles and norms governing relations between people in the process of their interaction with nature. It is called in the foreseeable future to change the value priorities of the development of mankind. The initial stage of the formation of environmental ethics is the environmental code. Environmental ethics is based on universal and universal human values and is an integral part of global morality. Modern society is facing a fundamentally important choice: to preserve the existing way of interacting with nature, which will most likely cause a global ecological catastrophe, or change its perception and ways of interacting with nature in order to preserve the biosphere. The right choice is possible only in the conditions of a radical restructuring of the people's world outlook, a change in customary values, and an increase in the importance of spiritual culture, including ecological culture.*

Key words: *Ecology, morality, biosphere values, culture, activity, spirituality education, morality, code. Norms, standards of society, psychology, emotionality, states. Globalization, problems of morality, practice, research results.*

Language: *English*

Citation: Abduazimova, Z. A. (2019). The modern world and the problems of environmental ethics. *ISJ Theoretical & Applied Science, 06 (74)*, 633-637.

Soi: http://s-o-i.org/1.1/TAS-06-74-78   *Doi*: crossref https://dx.doi.org/10.15863/TAS.2019.06.74.78

Introduction.

Today we clearly understand that ecological culture is an integral part of the life of society, which creates a framework of morality in the sphere of human influence on the natural environment, and also forms the means of spiritual and practical development of nature. The essence of ecological culture, according to B.T Likhachev, lies in the unity of the developed consciousness, emotional and mental states and scientifically based volitional utilitarian-practical activities in the field of ecology. Within the framework of ecological culture, new views and approaches are being formed to preserve and restore a previously created cultural human environment, including all spheres of social life. Thus, ecological culture is one of the spiritual and moral spheres of human life, which characterizes variants of its interaction with nature and includes a system of interrelated elements: ecological consciousness, ecological attitude and ecological activity. Habitat changes were mostly local in nature and evaluated from a pragmatic point of view. In our time, the proliferation of environmental crisis trends has led many researchers to abandon anthropocentric ethics and look for opportunities to include nature in the sphere of human responsibility. In this regard, questions have arisen about the sources, basic principles and norms of environmental ethics, and this means the need to address an issue that has a long history but has not received an unequivocal solution: how to understand good and evil in relation to the outside human sphere.

In different traditional cultures, this issue was resolved in different ways, so many authors raise the question of the relationship of environmental ethics with culture, worldview and science. At the same time, a number of authors believe that there is no need to create special ecological ethics, since it is enough just to get rid of some extremes of the former anthropocentric ethics, assuming that natural processes do not have to be in the service of a person and that care should be taken in dealing with them. , care and skill. And this is the task of science, technology and economic analysis of costs and profits. In turn, other authors believe that the destructive consequences of modern technical and economic practice have reached such a scale that it is necessary to impose restrictions on some of its types and

prohibitions on others. In other words, in the field of ecology, it is necessary to develop a system of fundamental laws similar to the biblical ten commandments.

The development of modern ecology as a special system of knowledge about the nature of the interaction of human communities with the surrounding natural environment has passed a difficult path from a rigorous factual study of the negative effects of the exponential growth of industrial and industrial production and the search for local technical and technological ways out of the ecological crisis to the realization of the need to adopt a common civilizational , global ecological path of behavior in relation to nature. It assumes the characteristic work of maintaining the emerging structures of the new mentality and new moral-ecological imperatives and ideals. The cultivation of the moral content of ecological globalism is the most important task of the current stage of its development. What is the essence of this content and how did it manifest itself as environmental issues develop.

The ethical problems of the modern world, which goes back to the global society by the "steps" of a market economy, are complex and multifaceted. This is particularly pronounced at the turn of the millennium, since the socioeconomic, scientific and technological development of a planetary civilization is becoming more complex, leading to transformation in the natural-biological environment. All these complex interweaving together form the social and technological development of the world, at the "edge" of which time there are questions about the possibility of harmonious to the evolutionary socio-natural development and the development of humane global ethics. The social and philosophical justification of the need to form a world ethic of responsibility is an integral part of the ethics of morals. Within the framework of a narrow sociological approach, social reality and the ethics associated with it are considered in the context of the complication of social relations. The socio-philosophical approach explores social evolution extensively, in conjunction with natural-biological and man-made changes in the biosphere and man. In reality, the emergence of a reality created by the society, filled with myriads of artificial substances and objects, transforming the way affects the life of the society itself and the biosphere nature, leads to the spread of technologically modified living organisms and the growing ecological crisis.

Review literature.

New humanism - humanistic ethics should be implemented to the same extent in relation to nature as in interpersonal relationships, demanding that a person show Love, Respect and Responsibility to the whole natural world. The ability of a person to abandon his own anthropoegoism and begin to live in the interests of the Other is the manifestation of the genuine, "humane" humanism. The eco-ethics problem of natural values is debatable: should the independence and intrinsic value of natural objects be recognized, or is their value determined depending on the person, his needs and interests? This question is not a theoretical scholastic, but a practical one, on it in eco-ethics is built the whole building of the equal rights of a living person to life and compassion. Some environmentalists (Prof. N. N. Marfenin, Moscow State University) [1] believe that "not a single living being, except man, possesses the" intrinsic value "of itself", citing as an argument the lack of interests and desires of natural objects, will (which, by the way, is not indisputable). This would be fair if it were about the realization of this intrinsic value (it really cannot be), but it is about something else: its objective presence or absence, regardless of its awareness. This person should be aware that the grass has or can have (not recognized by itself) the will and desire for life, well-being (sun and heat), etc., and act in accordance with this recognition. Therefore, we stand on the point of view that ecosystems should be recognized as independent moral subjects that have intrinsic value. And the point is not whether they are able to realize their intrinsic value - the baby doesn't realize it either, but because of this his life does not cease to be self-valuable: we are able and obliged to realize it for him. Therefore, a person does not have the right to decide from the position of benefit and expediency the question of the value or right to life of one or another type; It should take care of the conservation of all species and objects of nature, avoiding losses in biodiversity. Thus, eco-ethics imposes a normative-moral moratorium on the treatment of nature as a thing and a resource, and therefore only the intrinsic value of natural systems can be the basis of modern eco-ethics.

It is obvious that exclusively human-centric goals can no longer remain the only principle of the ecobiopolitics of mankind. Therefore, the solution of the problem of nature's intrinsic value runs along the line of the divide between anthropocentrism and non-anthropocentrism — fundamental alternative positions that determine the theoretical content and practical style of the relationship between man and nature. At the same time, a non-anthropocentric approach does not reduce the role and value of a person, but instead puts forward a harmonious and equal community of people and all other components of nature as the highest level in the scale of values. One of the manifestations of the non-anthropocentric approach is the moral-understanding relationship to nature (the term of V. A. Petritsky) [2], which manifests itself in an effort to "spiritualize" and understand the Living, up to the interpenetration in his feelings and experiences. For such a co-feeling, co-suffering, it is necessary for the Living - the "non-human" subject to be recognized as a source of relationships equal to the human subject. Such an

attitude to nature is possible only when establishing a subject-subject relationship between man and nature, when the world of natural phenomena is perceived by man as "his Other", as Other subject, Other thinking creature or social organism (idea V. I. Falco). Principle subject - the subject relationship of man and nature determines and makes possible the formation of moral values of eco-ethics around two rods: feelings of love and compassion for nature and feelings of time involving the care of natural conditions exist future generations (O. Leopold) [3]. Turning to the future, in turn, is based on a number of specific moral principles, norms and values that should underlie our obligations to future generations. These are: the principle of chronological objectivity, which prohibits ignoring the interests of individuals due to their temporary, spatial or ideological distance; "Duty to descendants" who have specific rights in relation to us; norms-imperatives of dialogue with the future, including the need to abandon any action that could undermine the possibility of existence or the interests of future generations. Compliance with all these principles is possible only in the conditions of moral and environmental freedom and responsibility, the ratio of which is determined by the degree of knowledge of social and natural laws and the possibility of mastering and "manipulating" them. Obviously, moral and ecological freedom depends on taking into account and observing the fundamental tenets of moral and ecological responsibility, which include: the transition from the "model of the predominance" of man over nature to the "model of coexistence" of man and nature; adoption of a new concept of environmental protection is not so much for a person as for a person; control of the "animal" that is inside us; "Reconciliation" of the economy and production with the environment based on moral criteria. The considered principles, norms and imperatives may well, in our opinion, lay claim to the role of conceptual foundations of environmental ethics [4]. Of course, they are far from indisputable, but their recognition and implementation would contribute to the process of ecologization of morality, which is necessary in the context of modern ecobiopolitics.

Philosophical understanding of environmental problems in the conditions of scientific and technological progress has been deeply reflected in the work of the members of the "Rome Club". But now the time has come for a concrete natural-science solution of environmental problems. And what is interesting, working out a strategy for solving the issues that have arisen, Academician NN Moiseev, a representative of exact natural science, rose, like V.I. Vernadsky in his time, [5] to a deep philosophical understanding of the situation and ways out of it. "Unlike the principle" do not kill! ", He writes," environmental principles will change along with the development of technology and technology, as

resources are exhausted and, possibly, as a result of a complete restructuring of the entire technological basis of our civilization. People will have to reckon with this and learn to measure their actions, their desires and goals with environmental principles. There is a kind of "environmental imperative." Science must formulate it, and people must accept it. It is in this latter that I see the main difficulty in ensuring the co-evolution of man and the biosphere. " And further: "The ability to properly use and regulate the power of modern society means" ecological culture "and" ecological thinking ".

The need for the ecological and ethical regulation of social relations is determined by a number of practical demands and needs of the global and regional (local) levels. The basic theoretical principles of eco-ethics regulative are: the principle of the subject-subject relations of man and nature, "reverence for life" by A. Schweitzer, the "ecological imperative" by N. Moiseev. They are the conceptual foundations of environmental ethics and imply a transition from anthropocentrism to a non-anthropocentric paradigm, recognition of the intrinsic value of natural systems, a moral-understanding attitude to nature, "turning to the future", designed to ensure the process of ecologization of morality.

Results.

In the field of nature management, there are ideas that are quite common for all about the moral environment: nature is our mother, our common wealth; we must take care of it both for ourselves and for all; do not spoil, do not break the green spaces in the city; all who break them and pollute nature are immoral; committing environmental crimes should be punished to the fullest extent of the law and it is still insufficient. Realizing the responsibility for the fate of nature, humanity is concerned about the problems generated by modern civilization. A special place among them is environmental problems. The surrounding nature is almost completely involved in the life support of a person who exploits all ecosystems. The idea of the unlimited resources of the biosphere and the independent activity of man from the environment turned out to be untenable. Irreplaceable resources of the subsoil are depleted, clean water reserves are reduced, many pollutants are not included in the natural circulation and accumulate in the biosphere, worsening the state of living organisms. Degradation is due to the weakening of the moral imperatives of human activity. To preserve the biosphere of traditional measures to improve environmental management, the assimilation and deepening of ecological knowledge is not enough. It is possible to overcome the current situation by enriching the moral and aesthetic potential of a person. In this regard, modern pedagogical science pays special attention to improving the system of environmental education and upbringing,

environmental awareness, environmental performance and environmental culture in general. Efficient organization of the process of forming an ecological culture will enhance the basic ecological knowledge, determine the ecological world outlook and develop the need for relevant activities in the development of nature and the use of natural resources. The environmental component of the content of the educational process contributes to the formation of new relations in the man-nature system.

Anthology of environmental ethics.

Environmental ethics today covers a variety of, not necessarily related areas, its anthology includes:

Animal rights. Ethics of the Earth. Ecofeminism. Deep ecology. Surface ecology. The rights of geo-objects (rocks, valleys) and so on. Bioethics. We are trying to formulate the principles of ecological ideology. First of all, it is taking into account in all spheres of human activity the reaction of the natural environment to the changes made to it, activity not instead of nature, breaking its circulation of substances, trophic levels and destroying its constituent parts, but activity together with nature taking into account its capabilities and laws of functioning. This principle of activity gets its legal continuation in the concept of the rights of nature, which is currently being intensively discussed. It is based on the idea of the equivalence of all forms of life, regardless of the obvious differences in the complexity of the structure and levels of the organization. Man from the "crown of nature", which he worshiped from the Renaissance, is transformed into one of the types that have no value advantages over others. Eccentricity is replacing anthropocentrism.

The global problems of our time require an immediate rethinking of the installation historically formed in the human consciousness, aimed at the consumer, destructive and in many cases destroying the attitude of man to nature.

In the modern world against the background of thoughtless attitude to their own lives and those around us, when millions of living beings are annihilated unnecessarily, the deeply moral principle of sustainable development, which satisfies the needs of the present time, but does not compromise the ability of future generations to meet their own needs. A.A. Skvortsov describes four types of relations between man and nature, which have been observed during the whole time of their interaction.

The first type is an immoral, evil attitude. It is quite rare (arson of the forest for fun, killing animals and deforestation in order to demonstrate their strength, etc.).

The second type is the utilitarian attitude, the most common at the present time. It is typical for him to see in nature only the resources necessary to maintain well-being.

The third type is the relation to nature: theoretical, scientific, opposing a purely utilitarian one. A real scientist doesn't care about what benefit knowledge will bring him, his task is to search for objective laws of nature, unshakable foundations on which the whole universe rests.

The fourth type is an aesthetic attitude.

However, A. A. Skvortsov considers the first and second types of relations to be inadmissible, and the third and fourth ones to be insufficient. The most accurate formulation of the only decent attitude of man to nature is the affirmation of the human principle in space and cosmic in man.

Ethics, which mixes fact and value, nature and concept of nature, nature and thinking about nature, do not meet the basic requirements of the rationality of terms. Such ethics seeks its foundations in nature, thereby ceasing to be ethics. Empirical (ecological) realities keep consciousness in the grip of a poorly organized language: we consider moral not the sphere of due, but the sphere useful for our survival, which has nothing to do with morality. Ecological ethics speaks about the facts of nature with the facts of ecology (giving them the status of values), ignoring the facts of the soul, consciousness, spirit.

Acquisition of clarity in the vision of nature is the leitmotif of philosophy, which provokes self-reflection, finally born, left the maternal bosom, and therefore capable of becoming as a person, distinguishing you and You, I and I. Distinction presupposes transcendence, and it is unconditional the ethics of an act having the force of an apodictic-practical principle.

References.

General environmental education for sustainable development is a modern stage in the development of environmental education, based on the values of sustainable (balanced, harmonious) development of nature and society; the philosophical-political strategy of education for sustainable development; theoretical foundations of the formation of a postindustrial society, reflected in the concept of the federal state educational standards of the new generation. General environmental education is humanitarian-natural science education aimed at developing an ecosystem cognitive model for students as the basis for the development of environmental thinking, environmental literacy, and its creative application to accumulate personal and joint experience of reflexive-evaluative and project-oriented activities of environmental ethics and sustainable development - as a condition for the development of the citizen's environmental culture, his responsible attitude to the observance of legal and moral standards in the field of environmental protection, health and safety of life. The content presented in the subject-activity form is paramount. The substantive component of the content is represented by scientific knowledge about

environmental relations and relations in the "man-society-nature" system, their contradictions, laws, theories and development models; environmental ethical and legal regulations; historical experience of ecological culture of different times and kinds; environmental issues in art, fiction, philosophy, traditional religions, project culture, technology - that is, the environmental component of the various elements of human culture. Activity means of familiarizing students with the ecological culture of mankind and the development of ecological thinking in a person; environmental awareness; environmental preparedness for social activities - advocating the development of an ecology-specific cognitive model; reflexive-evaluative actions to determine the personal meaning of moral, legal and environmental imperatives; ways of environmentally oriented project activities.

References:

1. Marfenin, N. N. (2007). *Ecology and ethics // Russia in the outside world: 2006* (Analytical Yearbook). (p.172). Moscow: MNEPU-Avant.
2. Leopold, O. (1983). *Calendar sandy county*. Moscow: Mir.
3. Petritsky, V. A. (1990). Ecologization of Morals and Ethics. *Philosophical Sciences,* pp.103–106.
4. Mishatkina, T. V. (2012). Conceptual foundations of environmental ethics. Environmental ethics: studies. manual. (pp.51-65). Minsk: Moscow State University of Economics A.D. Sakharova.
5. Moiseev, N. N. (1991). *Man, environment, society*. Moscow: Science.
6. Vernadsky, V. I. (1988). *The Philosophical Thoughts of a Naturalist".* (p.56). Moscow: Academy of Sciences of the USSR.
7. Mishatkina, T. V., & Melnov, S. B. (2016). Environmental ethics: life practice and theoretical principles in the context of ecobiopolitics. *Bioeconomy and ecobiopolitics, №1,* pp.182-189. https://moluch.ru/th/7/archive/26/1186/
8. (2015). *Global Bioethics in the Social Dimension: A Vocabulary Reference Book* / ed. T. V. Mishatkina (Eds.). (p.196). Minsk, IPEI them. A.D. Sakharov BSU.
9. Potter, V. R. (2002). *Bioethics: a bridge to the future*. (p.216). Kiev: Sphere.
10. Tulchinsky, G. L. (2002). *The modern humanitarian paradigm: humanitarianism against humanism?* Philosophical age. Almanac. Issue 21. The science of man in the modern world. Part 1. St. Petersburg, p.211.

QR – Issue   **QR – Article**

Lola Ibragimova Isomiddinova
Tashkent state technical University
senior lecturer
Uzbekistan, Tashkent

UDK 37.81-13

THE USE OF ICT IN TEACHING ENGLISH

Abstract: The article emphasizes the relevance of the use of modern multimedia in teaching English in a changing social and cultural environment. As well as the results of dissertation research revealed some features of the modern stage of the use of ICT in teaching English.

Key words: competence, pedagogical technology, educational resources, information and communication technologies (ICT), education, English.

Language: English

Citation: Isomiddinova, L. I. (2019). The use of ICT in teaching English. ISJ Theoretical & Applied Science, 06 (74), 638-641.

Soi: http://s-o-i.org/1.1/TAS-06-74-79   Doi: crossref https://dx.doi.org/10.15863/TAS.2019.06.74.79

Introduction

Today, a characteristic feature of the development of modern society is the increasing importance of information, which is becoming a comprehensive and integral resource. Work with information has become the main content of almost any kind of activity, including in the field of education.

Intercultural communication and the widespread use of ICT in the educational process should become integral conditions in achieving the modern professional quality of training of specialists with high spiritual, cultural, creative, search and social activity, which are reflected in the "National training program" of the Republic of Uzbekistan.

Materials and Methods

Modern development of world education indicates the fact that the concept of media literacy. For the time being. it has become a necessary constant for the formation of highly intelligent and highly qualified specialists.

The influence of media culture on the formation of personality, personal qualities of a person taking into account the educational aspect, according to N.B.Kirillova, who understands media culture as information and communication means, as well as material and intellectual values in the aggregate, determine the formation of social and political consciousness in the developing society.

Thus, in modern linguodidactics the concept of information competence, information literacy is replaced by the term media literacy, considered by N.Chicherina – as one of the fundamental competencies necessary for any professional in the effective functioning of the so-called information environment.

In our opinion, media literacy is the process of preparing a media literate person with information competence, conditioned by the understanding of the socio-cultural, socio-political and intercultural context of the functioning of media culture in the modern world, code and representation systems, or, in other words, the ability to "see" not only explicit, but also the implicit information in the media text, for decoding certain images, symbols and associations, including mastering, translating, i.e. (transmission of adequate, logically correct and axiological information), interpret/analyze.

This process is the most important and goal-setting, as the semantic analysis of the complexities in the interaction with each aspect. Each reader makes his own adjustments and complements the meaning that lies in the implicit basis of the media text.

Scientists linguodidactic realized the need for new approaches in teaching Russian language. The idea of implementation of the competence-based approach in the learning process reflects the need to improve the efficiency of the learning process, the quality of education through the use of modern methods and forms of training, the formation and development of competence and taking into account the peculiarities of personal development. One such approach is the use of multimedia and information and

Clarivate Analytics *indexed*

communication technologies (ICT). The meaning of the term "technology" is still being clarified, the term is used in a rather broad context. In practice, there are also such terms as pedagogical technology, educational technology, pedagogical or innovative technology.

In modern didactics, the term "pedagogical technology" is more common in many methodological works. Stages of development of the concept of "pedagogical technology" can be identified: the use of visual AIDS in the educational process (40-s – mid-50s), programmed training (mid-50s - 60s) to pre-designed educational processes that ensure the achievement of clearly defined goals (up to 70 years), to create computer and information technology training (since the early 80's).

Indeed, "new pedagogical technologies come into the practice of education". The need for this is due to changes in the requirements of society and the internal needs of the education system [1, p. 15]. Today, students tend to have some experience with a variety of tools for processing multimedia data, transfer, storage and presentation of information in everyday life, as well as show great interest in their use as a means of recreation. It is obvious that there should be such a model in the educational process, which would ensure not only the formation of effective use of computer skills during the preparation and processing of the necessary educational information, but also the development of personal qualities, values of the citizen of the information society.

The study of practical experience has shown that the use of ICT in teaching English is not a mass phenomenon. Among the reasons there are not only organizational, pedagogical problems, but also lack of readiness of the teacher to the solution of the problems connected with computerization of educational process. The reason, according to many researchers, is the lack of clear ideas on how ICT helps to achieve the planned results of learning Russian, which should be changed in the content, forms of organization, methods and principles of training.

However, scientists who studied linguistics, linguodidactics, experience of successful implementation of certain types of information and communication technologies: development and application of electronic educational resources, including distance learning in professional activities; in teaching English as a native language, Russian as a foreign language (E.S.Polat, N.A.Algazina, M.Y.Bukharkina, S.I.Gudilina, G.G.Maleva, N.Ladyzhenskaya, M.A.Tatarinov, etc.).

Analysis of monographic and methodological literature, the results of dissertation research revealed the following level of knowledge of the problem. Pedagogical Sciences show the positive impact of modern multimedia technologies for the development

of communication skills and the study of English language in Uzbekistan.

There is a need for a deeper theoretical and methodological justification of the use of ICT in teaching English in the field of professional and business communication, based on the introduction of educational opportunities of modern multi-media, such as differentiated learning, and focused on the intellectual and personal development of students in the formation of key competencies, on the education of the individual living in the information society.

So, of course, today's new approach to teaching English is the use of information and technology. As is known, unlike their usual means, methods and information production and processing is the use of electronic devices, especially computers.

There are many terms for definitions related to media education, computer training in Russian and foreign linguistics. The review of currently existing approaches to media education, showed a common definition of the term media education as "the process of personal development through and on the material from the media (media), in order to form a culture of communication with the media, creativity, communication skills, critical thinking skills for perception in full, interpretation, analysis and evaluation of the media, learning various forms of expression using existing technologies." In our opinion, these goals should be considered as one of the main ones if we take into account the influence and constant impact of the media on the learning process of students.

In recent years, the terms "information technology", "information and communication technology" have been widely used, showing modern functions and computer technology and telecommunications.

Different concepts define three main uses of ICT in education, namely:
• organization and management of educational process;
• training in the broadest sense of the word – training under the guidance of a teacher (stationary and remote) to the use of computer technology for self-study;
• study of specific disciplines.

In practice, the use of ICT in native language learning, since the mid 80-ies of the last century began to use a variety of applications - text editors, spell checking, electronic dictionaries, as well as spreadsheets, desktop publishing, encyclopedias, games and other programs. The second phase of ICT use in mother tongue education, which began in the 1990s, involves a qualitative change in the technical capabilities of computers and the diffusion of ICT in the learning process. Features such as hypertext, which creates a cross-reference system in the text, combining hypertext and multimedia capabilities, allow you to use ICT to work on improving all kinds

Clarivate Analytics *indexed*

of speech activities (listening, reading, writing, speaking, including aspects like pronunciation and intonation) and for real communication in written and oral form.

The next stage (beginning of the 21st century) is the development of ICT training Using virtual reality. In the "virtual" classroom – laboratory, students have the opportunity to work in a variety of modeling speech situations, it will undoubtedly expand the ability to improve speech and cognitive skills, create optimal conditions for the formation of communicative and socio-cultural competence.

The main feature of the modern stage of ICT use is the mass and purposeful use of space on the Internet, professional and computer programs of various types: actual training, applications, telecommunications tool - in order to create a unified environment of computer training, through which the communicative competence of students is more effectively developed. In modern studies, the importance of the Internet for the study of English in higher education is emphasized by the fact that Internet resources provide teachers and students with information on various aspects of scientific theoretical studies of the English language. For example, for University teachers and students online resources may be interesting, because they specialize on the basis of electronic libraries, search engines, providing search capabilities subject area (projects, lesson plans, systematic links, interactive exercises) and professional features of students; portals that allow you to participate in discussions, get acquainted with advanced methodological and pedagogical practices.

One of the main problems associated with the teaching of English is the problem of trust, scientific and educational value of the content and importance of information found on the Internet. It is obvious that the genre specificity of sites (news sites, personal pages, information materials, scientific publications, etc.) involves their different content, in this case, teachers and students should have the skills to critically perceive the information posted on the Internet to which they refer.

The effective use of modern ICT in teaching their mother tongue depends on many factors, among which the leading ones are:
• provision of computer equipment and Internet access;
• availability of specialized training materials and required set of programs of various types;
• educational quality of multimedia learning tools used;
• adequate level of General computer literacy (media literacy) of students and teachers;
• special training of teachers in computer linguistics;
• special organization of the educational process.
With the obvious significance of all these factors, we believe that the key figure in the integration of ICT in the learning process is the teacher who has the necessary qualifications and applies them in practice.

Taking into account the fact that most of the students who are currently working in educational institutions at different levels, were not able to obtain the necessary training in the use of modern ICT in teaching English, and is necessary and the development of computer technology is very fast. In our opinion, the most important task mentioned in a significant number of studies should be the organization of the system of professional development and information and methodological support of teachers in the field of computer linguodidactics.

Currently, theoretical and applied aspects of computational linguistics are developed by leading scientists from different countries, which can be divided into three areas of research.

Research on the development of theoretical aspects of the use of ICT in language learning belong to the first direction. These works discuss the following issues:
• methodological problems of computational linguistics;
• psychological and pedagogical problems of computerization of language teaching;
• typology of training materials in the use of ICT;
• the problem of software quality assessment in the learning process;
• opportunities to develop communication skills in ICT-based learning and a number of other challenges.

The second area includes experimental work on the creation and use in the educational process of electronic materials for various purposes, forms and training profiles.

The third area explores ways to integrate computer-based learning into English language learning, and the development of effective methods of using ICT in the learning process.

These areas of research suggest a comprehensive approach to the study of this problem. Nevertheless, we believe it is necessary to emphasize that the leading aspect is the preparation of English language teachers for the educational process using ICT.

Conclusion

Summing up, it should be noted that the growth of media culture products in the process of learning English and training of highly qualified personnel on a systematic basis is a promising direction of modernization and goal-setting of the content of vocational education in modern integrative conditions. Thus, we can conclude that the case method allows us to activate theoretical knowledge and practical experience of students, develop the ability to express thoughts, ideas, suggestions, see an alternative point of view and argue our own, show and

improve analytical and evaluative skills, willingness to work in a team, promotes understanding of the ambiguity of solving problems in real life.

References:

1. Akhmetov, N. (2004). Grammar games//English. *Appendix to the newspaper "September 1", №34*, pp. 6-9.
2. Baryshnikov, V. N. (2000). *The cognitive perspective on learning technology in foreign language* // Cognitive paradigm (proceedings of the International. Conf.). (p.10). Pyatigorsk: Pyatigorsk state linguistic University.
3. Kravchenko, A. V. (2012). Cognitive Grammar and EFL Methodology: the Case for "Tenses". *Actual problems of Philology and pedagogical linguistics Vol. 14,* Vladikavkaz, p.343.
4. Velikanova, A. V. (2007). Competence-based approach to education / issue 2. (p.92). Samara: Profi.
5. (2004). New pedagogical and information technologies in the education system: a textbook for students of pedagogical universities and the system of advanced training of teachers. Staff / E.S.Polat, M.Y.Bukharkina, M.V.Moiseeva, A.E.Petrov. (p.272). Moscow: Academy.
6. Polat, E. S. (2000). Method of projects at foreign language lessons. *Foreign languages at school, №2*, pp.3-10.
7. Tsaturova, I. A. (2004). *Computer technologies in teaching foreign languages*. textbook for universities. (p.200). Moscow: High school.
8. Goncharova, M. V. (2004). *Case-method in teaching foreign-language communication between managers*. Moscow: Center for the Study of the Interaction of Cultures FRI MSU. M. V. Lomonosov.
9. Surmin, Y. P. (2002). *Situational analysis, or the anatomy of the case method*. (p.286). Kiev: Center for Innovation and Development.
10. Ilyina, O. K. (2009). *Use of the case method in the practice of teaching English*. (pp.253-261). Moscow: MGIMO -University.

Clarivate Analytics *indexed*

Odinakhon Rakhmanovna Parpiyeva
Ferghana State University
senior teacher

Alijon Dadajon ugli Ostanakulov
Ferghana State University
student

PSYCHOLOGY OF PATIENTS WITH ONCOLOGICAL DISEASES

Abstract: *From year to year, the incidence of oncological diseases among the population is growing rapidly. Oncological diseases are observed in all organs of the human body. It frightens people because of the fact that these diseases often end in death. And patients who have heard about the presence of an oncological disease in themselves are in severe mental anguish.*

Key words: *oncological disease, genetic, radiologist, brain tumor, Consilium, tumor, MRI, MCT, mammography, elostography, treatment with light, narcotic analgesic, malignant tumor, safe tumor, depression, ipohondria, hysteria, insomnia, ocularization, cachexia, leukemia.*

Language: *English*

Citation: Parpiyeva, O. R., & Ostanakulov, A. D. (2019). Psychology of patients with oncological diseases. *ISJ Theoretical & Applied Science, 06 (74),* 642-645.

Soi: http://s-o-i.org/1.1/TAS-06-74-80   *Doi*: crossref https://dx.doi.org/10.15863/TAS.2019.06.74.80

Introduction

Today, oncological diseases are the first in the world in terms of mortality and disability, and the second in some states. Specialists of all directions of activity in the field of Medicine will have to work in their practice with malignant tumors. Because oncological diseases are three in almost all organs of the human body. In the fight against oncological diseases, not only medical personnel, but also biologists, geneticists, chemists, physicists, radiologists and specialists working in several directions of such science are involved.

Materials and Methods

The aspirations of scientists made it possible to achieve great achievements in the field of early detection and treatment of oncological diseases[1].

In addition to all the above examinations, it would be necessary for the patient to be seen by a neurologist, otoneurologist, oculist, psychiatrist and give his own conclusions. Based on the conclusions of these specialists, or with their participation, a consortium was conducted, and after that, a consensus was reached on whether there was a tumor in the head brain or not. This means that the patient could not detect a brain tumor without going to the hospital and doing so many examinations. This means that for an accurate diagnosis of one patient, almost 10 doctors would have to work for at least 10 days. And yet, each day lost to inspections is equal to each day lost to start treatment early. During these days, most of the doctors ' Behavior found out that patients were looking for a tumor in themselves, which was a great psychological test for the patient and his loved ones. What now? Now almost an hour of time is enough to determine whether the patient has a brain tumor, that is, the time he went to MRI (magnetic resonance imaging) or MCT (multispectral computed tomography) examinations.

Of course, the meticulous examination and mutual consultation of several specialists in one patient increases the clinical picture of the doctor, the skill of the doctor, who communicated with several colleagues, was even higher. However, both those times and now the doctor's goal was the only one, after which it remains the same. This is also the early detection of the diagnosis and early initiation of treatment[2].

It should be mentioned here that" modern methods of verification, such as MRI, MCT, mammography, elastography, are priceless checks, but the emergence of which makes doctors lazy, they are not working on their own, " there are opinions. Does this situation prevent the formation of clinical

thinking in doctors who are now taking steps in medicine? This question can also be answered" yes", and" no". Let's analyze the same problem with an example of Neurology. Because, in Neurology, the importance of topographic diagnostics in determining the clinical diagnosis is very great. If the neuropathologist, without examining the patient's neurological status, sends him to an MRI or MCT examination, then of course, the development of clinical vision may lag behind. If he sends the patient to an examination and then an MRI, MCT, examination, of course his clinical vision will develop. Because he will find out whether the diagnosis is correct or wrong. He searches for the causes of his error, where he will find out what kind of shortcomings he has made. He will examine the patient again and compare the signs he has checked himself with the furnace found on MRI. So, modern methods of verification can only improve the skills of the doctor, and this depends on how the doctor uses these checks.

It is not surprising that we start talking about the psychology of patients with oncological diseases with situations associated with the diagnosis of a brain tumor. Because, unlike tumors located in other organs of the body, the tumors of the brain itself cause a number of mental disorders. In addition, a tumor is detected in the brain and the patient, knowing that it can be treated surgically, falls into a severe mental state. Because the saying goes about the brain! So here the task of the doctor is to alleviate the psychological tension associated with these treatments, and not a psychologist with this issue, it is necessary to deal with exactly the neurosurgeon itself. Although the operation is complicated, then it is necessary to explain to the patient the neurosurgeon itself, in which the patient's condition improves significantly and relieves him of the suffering.

Invited to the neurosurgery center or department, a psychologist should not only identify and treat mental disorders caused by tumors in the patient, but also actively participate in the preparation of the patient for surgery in cooperation with neurosurgeons and in the treatment processes from the operation to the last period[3].

It is known that a patient with a malignant tumor is detected, as far as possible, should be aware of the presence of this disease in it. How does the doctor behave in such situations. Usually, it is said that "you really have a tumor detected, but it is safe, that is, it does not risk your life, it can be treated." But the doctor should tell his relatives that the patient has a dangerous type of tumor. The fact is that sooner or later the patient will learn about his illness from relatives, or not, he will notice from the behavior of doctors, from the communication he has with the patient. Here, especially nurses should be very careful. Because the patient sometimes tries to find out the truth from the nurses by deceiving them, and it turns out that this is also true. Every medical professional should remember that there is a legal responsibility for this. Legal responsibility can be of different types: from dismissal to deprivation of Liberty. Because the patient, knowing that he has a dangerous ill, can commit suicide. Sometimes the patient leaves a letter to a loved one and there also indicates from whom he knows the secret. In some cases, the patient learns his illness from the patients. Therefore, doctors should not tell a second patient about the illness of another patient. A patient who knows the secret may have severe resistance to treatment, abandon treatment and leave the hospital or cause a great deal of distress in the treatment business[4].

As a rule, in a patient with a secret, initially a mental hangover occurs, this message is received as a judgment, which he issued about death. It remains to know what he will do, the Dreamer will make all sorts of plans, he will not be able to make a clear decision, the doctors will think that I was not mistaken, ask for a re-examination. Consultation with other specialists or other medical centers requires consultation from a loved one.

We live in the age of Information Technology, which has been developing steadily. In addition to almost all educational Institutions, Hospitals, Enterprises, the internet came into every apartment. From there, a lot of information can be reached[5]. It is likely that the patient will also use it and find the necessary information for himself. Here, students should also be careful, it is not difficult for the patient to learn the necessary information from them. When students enter what they see patients, they should not leave textbooks and teaching aids in the chambers, they should not give them to the patients they ask for.

From the Diagnostic and therapeutic methods used, the patient can also learn about their type of disease. For example, many people know that the method of light therapy is often used in malignant tumors or prescribe narcotic analgesics to relieve pain, weight loss is typical for cancer.

This means that keeping a secret in oncology is a very difficult task, but it is necessary to strive to get out of it, and after the patient has learned the secret, the doctor should also think about how to behave. As a rule, Patients with cirrhosis develop reactive neurosis or reactive psychosis. Here, of course, you will need the help of a psychologist and it is necessary to use it more efficiently. In general, workplaces for psychologists should be allocated in the scientific centers of oncology, neurosurgery, ftisiology, cardiology, surgery and Traumatology, military hospitals. It is so in almost all developed countries. Because in these centers there are many types of diseases and the number of patients.

In oncological diseases, reactive states are manifested, first of all, with the development of a restless-depressive syndrome. It can also lead to the occurrence of ipoochondria, hysteria, insomnia and

aggressive states, or vice versa, the patient appears completely indifferent to his illness and can reach the level of complete denial of the doctor's conclusions. If the operations performed on the patient are successful, the symptoms of reactive neurosis and psychosis begin to decline on their own.

If the disease worsens the patient's condition by taking the outbreak, mental disorders can develop and various hallucinations. They are most often observed in patients with advanced cachexia and can manifest as acute manifestations, as well as with remission. In extreme cases of the disease, stupor cases are also observed.

Suppose the patient found out that she had cancer in herself and told her to the doctor. How should the doctor act in this situation? It should be noted that in some states after the detection of cancer, for example, leukemia, the disease is not hidden from the patient, he is given all the information related to the treatment and its consequences. Because it is necessary to solve not only medical problems associated with this disease, but also a number of legal problems related to family members and the place of work (for example, issues of succession). Therefore, it is necessary to decide on an individual basis to give information about the disease to patients who have already identified dangerous diseases. The should take into account the age of the patient, the role he holds in the family and society. Of course, before the patient is given information about the type of his illness, it is necessary to consult with his close family members. If the family members are against this, it is better not to open the secret.

The doctor should approve his opinion if the patient, who heard the message, denies the information, says: "I do not have a disease, I do not believe." Only in fate, when a malignant tumor is detected as a result of all Examinations, it can be told to the relatives of the patient. Because, a mistake in the diagnosis of oncological diseases can lead to severe complications and quarrels. Unfortunately, the diagnosis of" malignant tumor " is encountered in medical practice, when it turned out to be safe in recent examinations. Sometimes an error is also made in histological examinations. This means that inspections must be carried out with extreme accuracy.

There are also disadvantages to not informing the patient about the disease. For example, it is necessary to inform the parents of a planned young man or girl about the illness of her child in the near future, following all the laws of deontology and ethics. Unaware that the disease is serious, the patient may not come to treatment at the indicated time and may not take the necessary medications on time, or may go on long trips, taking harmful physiotherapeutic

procedures. It is also necessary to remember that in those professions that make money to work with this disease, that is, there are dangerous situations for the life of the pilot, train driver, driver and the like himself and others. There are a lot of such situations and they need to be taken into account by the doctor.

After the patient is informed about the disease, it is necessary to give detailed information about the benefits of its treatment. The doctor is very skillful, it is necessary to conduct a conversation with the patient, having correctly selected each sentence. It is also beneficial to give examples of patients who have been treated with this disease and have observed good results.

Reputation-a respected doctor is able to find a language even with extremely difficult oncological patients, using reliable psychological methods, and to immerse himself in them. And the opinion of the patient is aimed at fulfilling the recommendations of the doctor, there are many patients who do not abandon the recommendations of the doctor and live with hope for life, even until the last days of their life, when the condition is aggravated. To achieve such co-existence with the patient, the oncologist must be an extremely skillful psychologist.

Conclusion

In oncological hospitals, psychological help consists not only of a psychological interview, but also it is necessary to take advantage of all the opportunities that distract the mind of the patient. Carrying out various activities also reduces psychological tension. It is also useful to conduct psychological conversations, organize meetings with famous doctors, while breaking down a number of patients. In addition, the fact that patients are engaged in walks in the fresh air, Morning physical exertion, dancing and autotraing have a positive effect on their psyche. As already mentioned above, it is necessary to provide psychological support not only to the patient himself, but also to his close family members. If psychologists and oncologists do not deal with them, patients and their loved ones lose valuable time to other treatments, which are extremely necessary for proper treatment, referring to physicians and pseudo-doctors who promise to "completely get rid of cancer."

It should not be forgotten that not yet developed cocaine or drugs that completely rid the body of cancer. However, supporting modern methods of treatment, the patient can completely get rid of malignant tumors, as in the initial stage. It is necessary to conduct explanatory work on it to patients and their relatives. It is also very important in hospitals to hang scientific-popular Wall gazettes about this, to prepare small-scale brochures.

References:

1. Cherenkov, V. G. (2010). *Klinicheskaya onkologiya*. 3-e izd. Moscow.
2. (2007). Bol'shaya entsiklopediya Kirilla i Mefodiya.
3. Trakhtenberg, A. K., Reshetov, I. V., & Kolbanov, K. I. (2005). *Vtorichnye zlokachestvennye opukholi grudnoy stenki/Khirurgiya grudnoy stenki*. Moscow.
4. Matveev, V. F. (1991). *Meditsina psikhologiyasi, etikasi va deontologiyasi*.
5. Ibodullaev, Z. (2008). Tibbiet psikhologiyasi. Toshkent.
6. Mazhidov, N. M. (1998). V.D. Profilaktik nevrologiya. Monografiya, 1996-1998.
7. Murodkhỹzhaev, N. K., Khudoyқulov, T. K., & Zhỹraev, M. D. (2002). *Onkologiya*. Toshkent.
8. Dvoyrin, V. V., Aksel', E. M., & Trapeznikov, N. N. (1996). *Zabolevaemost' zlokachestvennymi novoobrazovaniyami i smertnost' ot nikh naseleniya stran SNG*. Moscow.
9. Napalkov, N. P. (1989). *Obshchaya onkologiya*. Leningrad.
10. (1995). *O merakh po dal'neyshemu uluchsheniyu profilaktiki, ranney diagnostiki i lecheniya zlokachestvennykh novoobrazovaniy*. Prikaz MZ RUz T 631 ot 15.12.1995 g.

UDK 371.811.1

QR – Issue   QR – Article

Shaxnoza Baxtiyorovna Sagatova
Tashkent state technical university
teacher

Munisa Baxtiyor qizi Nuralieva
Tashkent state technical university
teacher

METHODS OF TEACHING ENGLISH LANGUAGE

Abstract: In this article highlights of methods of teaching English language, and the latest interactive resources: the latest generation of computers, Internet, TV programs, Newspapers, magazines.
Key words: foreign language, interactive methods, computers, ICT, teaching.
Language: English
Citation: Sagatova, S. B., & Nuralieva, M. B. (2019). Methods of teaching English language. *ISJ Theoretical & Applied Science, 06 (74),* 646-649.
Soi: http://s-o-i.org/1.1/TAS-06-74-81   *Doi*: crossref https://dx.doi.org/10.15863/TAS.2019.06.74.81

Introduction

Foreign language in the modern world is almost the same attribute of a successful person as a mobile phone. With the help of English, in particular, the language can communicate in almost any corner of the earth. However, it should be borne in mind that modern realities require a modern approach in teaching a foreign language. But, unfortunately, often our teaching methods are very inert and do not meet modern requirements.

Modern methods of teaching foreign languages offer us a wide range of teaching concepts, methods and technologies – both traditional and innovative.

There are different methods of teaching English. Teaching a foreign language, it is necessary to pay attention to new ways to stimulate the speech of students. However, numerous classical schools are still trying to teach the old methods and old books. There will always be problems and you will never speak English well. Using new methods, you can easily learn to speak English and improve in this. You will be able to speak as a native speaker. Key words: methodology, English language, training.

It has been a long time since learning a foreign language was reduced to passive learning of new words and expressions. Monotony, boring cramming of grammatical rules and, at best, the ability to translate a Russian phrase into a foreign language - that was the limit of perfection in the development of a foreign means of communication. And although the world has long known a huge number of approaches

to the study of a foreign language and methods, a real revolutionary revolution in the methods of teaching English in our country occurred only in the XX century. Today, everyone is learning a foreign language. In proportion to the number of people increased and the number of techniques. However, each of the techniques has both pros and cons. The principles of the old school today are subject to sharp criticism, despite the fact that the use of "classics" has borne fruit, and considerable. The only question is at what cost these results were achieved. As a rule, in order to master the language, had a long time poring over books, giving a lot of time translation, reading texts, memorizing new words, performing various exercises and retelling. To change the activities offered tasks such as writing essays or dictations.

Materials and Methods

One of the oldest methods is classical or fundamental. The purpose of the classical technique is not so much the study as the understanding of the subtleties and details of the principles of a foreign language. The main task pursued by the classical technique is the formation of the grammatical base of the studied language. The target audience - people who are starting to learn English "from scratch", from the basics. This technique is perfectly familiar to those who started to learn English at school. It is worth noting that it is preferred by many language universities, both in Kazakhstan and in the border States. The simplified scheme is - the study of

grammar, the basic rules, which are subsequently applied in specific examples and fixed with the help of exercises. The most popular representative of the traditional method - N. Ah. Bonk. Her famous "textbook Bonka", written in collaboration with other representatives of the same traditional methods, is a kind of template. This textbook has withstood tough competition with the latest techniques that came from the West, and continues to be the standard. The only drawback, even more precisely, drawback of classical methods is limited experience speaking. This disadvantage can be filled by adding other methods of communicative learning to the classical method.

One such method is the so - called linguosociocultural method. Supporters of the above method are those who believe that modern foreign language should not be a set of lexical and grammatical rules. On the contrary, the absence of extra-linguistic factors leads to the fact that learning English becomes boring and aimless. Proponents linguosociocultural method of erecting a foreign language to the rank of communicative tools, which helps the man not just speak, but also gives the who the possibility of self-expression. Following the principles of the linguosociocultural method, we can safely say that a foreign language is a kind of mirror, which reflects the way of life, traditions and customs, culture and history of the language.

However, in recent years in the top of the most popular methods of teaching foreign languages is a communicative technique, which occupies the first place in the rankings and calculations of statisticians. This technique is well established in America and Europe. Continuing to conquer the world, communicative methods came to us, taking pride of place in the leading language universities of the Republic. The method is based on the integration of two main methods of teaching foreign languages: traditional and modern. As the name implies, an important role in the communicative method is assigned to communication. The main goal pursued by this technique is to overcome the language barrier. The main thing is to save a person from fear of a foreign language, from fear of speaking a foreign language and at the same time to develop other language skills, in particular oral and written speech, reading, listening. It is worth noting that grammar is studied in the process of speaking, communicating in a foreign language. The principle is as follows: first, students learn and memorize language formulas, expressions, phrases, and only then analyze the grammatical structures found in memorized phrases. In simple words, the principle of oral advance.

The fact that in the communicative method a special place is occupied by the practice of communication, says the name itself. Communicative method is aimed at the development of skills of speaking a foreign language. It is also worth noting that the use of the technique directly affects the structure of the lesson. Very often in the classroom you need to use game situations, to carry out group work, to develop tasks to find errors, the ability to compare and compare. As a rule, such classes make active work not only memory, but also logic, which allows you to develop the ability to think analytically and figuratively and, in turn, encourages to Express thoughts.

Today, the development of modern IT-industry makes available in the study of English the latest interactive resources: the latest generation of computers, Internet, TV programs, Newspapers, magazines. It is very important to put into practice all of the above. This helps to awaken students ' interest in the history, culture, traditions of the country of the studied language and helps to form skills that will be needed in the future.

The essence of interactive learning is that the learning process involves all students to the maximum in the learning process, so that each participant has the opportunity to understand and reflect on their knowledge and thoughts. Hence, a huge role is given to the individualization of knowledge of each individual in the joint activities of students in the educational process. Exchange of knowledge, thoughts, ways of activity – that's what offers interaction. During the training sessions, there is also the development of dialogue/polylogue communication, which leads to mutual understanding, interaction, to the joint solution of common but individually valuable tasks for each participant. Interactive excludes the dominance of one speaker and one opinion over another. As a result, students learn critical thinking, analysis of circumstances and solving complex problems, weighing alternative opinions, making informed decisions, discussions, communication with other partners. To do this, the lessons are organized individual, pair and group work, used research projects, role-playing games, working with various information sources, using creative work. Along with the traditional (work in small groups, in pairs,role-playing or business game) forms of work,the interactive method uses techniques such as work in rotary (removable) threes, carousel, unfinished proposal, aquarium and others.

What are the forms of interactive learning? In modern society, methodologists and teachers-practitioners have developed many forms of group work for teaching foreign languages. The most widespread of them are the "outer circle", "turntable", "aquarium", "brainstorming" and "debate" (the names may vary, the essence is important). These forms are effective only if the lesson discusses a problem in General, about which students have initial ideas based on previous classes and daily life. In addition, the topics discussed should not be closed or too narrow. Now let's talk more about learning technologies:

- Spatial arrangement in the classroom.
- questions around the circle;

- outer circle (chairs in a circle, children less prepared);
- small circle (chairs in a circle, children are more prepared);
- desks Christmas tree (work in groups);
- debate;
- work in groups;

Questions around the circle:

"Circle of ideas" is a form of work, the purpose of which is to resolve acute controversial issues. A list of ideas is compiled. All students are involved in the discussion. Groups must perform the same task, consisting of several questions (positions), which are given in turn. In the answers, each of the groups voices only one aspect of the problem, and the teacher continues to ask questions in a circle until the ideas are over. Thus, the possibility of answers to all questions by one group is excluded.

"Unfinished sentence" – students themselves come up with endings sentences.

Group work form:

"Replaceable triples" – the composition of groups (triples) changes during the lesson.

"Decision tree" –the class is divided into several groups with the same number of students. Each group discusses the issue and makes notes on the "tree" (a sheet of paper or a Board). The groups then change places and finish on the trees, neighbors thought.

"General project" – groups receive various tasks that cover the issue from different sides. After the work is finished, reports are prepared and notes are made on the Board. From these records, drawn up a common project, which is reviewed and complemented by the group of experts.

"Synthesis of thoughts" – a copy of the previous method with the difference that students make all the entries on the sheets, which are then transferred to the next group. The sheet highlights thoughts that the group disagrees with. Experts process the sheets and make a General report, which then discusses the class.

"Information search" – the method is used to revive the dry and uninteresting material. At the same time there is a team search for information that complements the existing (teacher's lecture or homework). Subsequently, students answer questions. Answers to questions should be found in textbooks or handouts For information analysis and finding answers to questions given a limited time.

Ex: After studying the topic "The Pleasure of Reading" examines the reasons for the immense popularity of the Saga of Harry Potter.

Two circles:

"Carousel" is a kind of work that children like very much. To do this, two rings are formed: internal and external. In the inner ring, the disciples sit still. In external change every 30 seconds. In a few minutes the students say a few topics and try to convince the interlocutor of their rightness.

"Aquarium" – the method is that several students play the situation in a circle, and the rest observe and analyze.

Thus, at the moment a large number of methods and forms of interactive learning have been developed. But every progressive teacher can come up with their own methods of working with the class. Most of these interactive methods relate to cooperative learning technologies, where students are combined to perform tasks, learn the material and develop communication skills in the discussion and argument of their positions. The great advantage of this type of learning activity is that all the students of the class are involved in the overall work. The difficulty lies in the ability to organize the activity of students, to attach them to this type of work as a permanent. The methods mentioned in the article can serve as a basis for the creation of new forms. The interactive creativity of the teacher and the student is limitless, this is the main advantage of interactive learning.

Conclusion

Education is an active interaction between teachers and students, and it cannot be one-sided. It depends on the teacher how successful the learning process will be.

It is obvious that each teacher is guided according to the personal experience in a choice of methods and receptions of work. But, based on the results of the experimental and practical work, it can be argued that the use of a variety of techniques in the framework of communicative, inductive, deductive methods gives a positive result and, of course, contributes to the effectiveness of teaching grammar.

References:

1. Ignatkina, I. V. (n.d.). *Sotsiokul'turnyy i lingvodidakticheskiy aspekty prepodavaniya angliyskogo yazyka v tekhnicheskom vuze.* Retrieved 2019, from https://elibrary.ru/download/elibrary_17343025_47951943.pdf

Clarivate Analytics indexed

2. Mikhaylov, V. V. (2018). Perspectives of Science & Education, 4 (34), Rossiya, Magnitogorsk, p.149.

3. Koval', O. I. (2012). Osobennosti prepodavaniya angliyskogo yazyka v neyazykovom vuze. *Aktual'nye problemy gumanitarnykh i estestvennykh nauk, № 6*, pp.234-238.

4. (2015). *Case study: principles of creation and use.* (p.114). Tver: SKF-office publishing House.

5. Matsuda, A. (2012). Angliyskiy yazyk kak mezhdunarodnyy: peresmotr osnov prepodavaniya angliyskogo yazyka. Lichnost'. *Kul'tura. Obshchestvo, T. XIV. № 2 (71-72)*, pp.177-188.

6. Platkova, A. B., & Kotina, A. G. (2016). *Nekotorye aspekty obucheniya inostrannym yazykam v tekhnicheskom vuz*e. Retrieved 2019, from http://scientificjournal.ru/images/PDF/2016/VNO-17/nekotorye-aspektyobucheniya.pdf

7. Pokrovskiy, E. A., Savchuk, E. V., & Yurchuk, L. Y. (2012). K probleme prepodavaniya inostrannogo (angliyskogo) yazyka v tekhnicheskom vuze. *Sbornik nauchnykh trudov SWorld, T. 17, № 1*, pp. 21-25.

8. Diesterweg, A. (1956). *Selected pedagogical essays*. Moscow.

9. Kruchinin, V. V. (1998). *Development of computer training programs*. Tomsk.

10. Tsaturova, I. A. (2004). *Komp'yuternye tekhnologii v obuchenii inostrannym yazykam/ Uchebnoe posobie dlya vuzov.* (p.200). Moscow: Vysshaya shkola.

Eshnazar Jabborov
Termiz state university
researcher

COMPARATIVE ANALYSIS OF ENLIGHTMENT VIEWS IN UZBEK-FRENCH LITERATURE

Abstract: The article is about the subject of prominence in Uzbek-French literature. In the history of every nation the path of enlightenment is of special importance. In the French literature, like the Uzbek literature, the beginning of enlightenment began in the Middle Ages. There are a lot of common and intersecting points in the literature of French enlightment period and Uzbek Jadid literature. This is especially evident in efforts to reform the existing system through word, literature. In the study, these views were studied in a comparative aspect.
Key words: enlightment, reforms, Jadid literature, national independence, the idea of enlightment.
Language: English
Citation: Jabborov, E. (2019). Comparative analysis of enlightment views in Uzbek-French literature. ISJ Theoretical & Applied Science, 06 (74), 650-653.
Soi: http://s-o-i.org/1.1/TAS-06-74-82   Doi: crossref https://dx.doi.org/10.15863/TAS.2019.06.74.82

Introduction.

In the history of every nation, the way of enlightenment was unique. In the French literature , just as in the Uzbek literature, the beginning of the enlightenment began in the Middle Ages. Literary and art criticism of scholars on literary criticism of B.Kosimov, N.Komilov, B.Nazarov, N.Karimov, Sh.Turdiev, B.Dustkorayev, H.Boltaboev, N.Abduazizova, R. Kochkor, B.Karimov and other literary critics could be named as researchers conducting their studies in this sphere. There are a lot of common and intersecting points in the literature of French and Jadid literature. This is especially evident in efforts to reform the existing system using language and literature.

The struggle for the national independence of the Turkestan peoples was cinducted in two ways. The first was and armed conflict, the way of rebellion. The other was a cultural-enlightenment method, the main purpose of which is to advance the cultural-enlightenment level of the nation by raising the national economy to a new level and, at times, with the help of the Russian government, which possessed a strong military-political status,to secure the true freedom of the nation by adopting administrative methods. These two approaches sometimes came together and sometimes turned into conflict, but in practice they were complementary and mutually supportive.

Ahmed Donish, Furkat, Feruz began the initiative of the country, which was active in the second half of the 19th century and was a manifestation of the Jadid movement in the early 20th century.

Both ways began at a smaller scale at the end of the XIX century, and from the second decade of the twentieth century to the massive development throughout the region, it rose to the level of the National Awakening. On the one hand, the wave of revival in the East, such as Turkey, Egypt, Iran and China, and the wind of changes in Turkistan under the influence of Russian and Caucasian Muslims began to blow rapidly. Domestic businessmen have settled the trade with Europe, building new types of cotton ginning plants, oil refineries. The banking system has been introduced. In 1884, 200 people from Turkistan subscribed to the Tarjumar newspaper in Bogchasaroy. During those years in Tashkent, such forward looking people as Saidazimbai, Sharifhoja Qazi, Muhiddinhoja Qazi Saidga sponsored opening of new schools for local children (so called Russian-tuzem schools).

The balance between the Uzbek and world literature and the enlightenment role can be observed in various contemporary scientific and literary approaches. Raising the state and the nation in the views of educators was a priority. The state and the nation call for educating. The famous French writer and Christian historian Ernest Renan writes: "The

nation is such a great unity that the sacred feelings derived from the past and future futures are lies. The nation demands the heroism of the past, the will of today and the general program of future action ... ". In Jadid literature, the nation and the state are in harmony with enlightenment. In ignorance, the term "enlightenment" refers to the pursuit of secular sciences. Nowadays, according to popular belief, "enlightment" means the secular science that teaches school to children.

The views of a prominent orientalist academician N. I. Conrad regarding the relationship between education and enlightenment are worth attention. According to them, if the ideas of western enlightenment will spread across other countries or continents, they will obtain the qualities of enlightenment. These phenomena do not repeat each other, though they have a number of common features within the range of relevant civilizations. It is well known that in the western enlightenment, the tasks of the anti-feudalism and its tyrannical absolutism were in the forefront, and this phenomenon was initiated as a new socio-cultural phenomenon not only in Europe, but also in the periphery, in the world process. In the East, this enlightenment, besides relying on its own ground, has drawn attention to the education of the individual. As for the East, instead of relying only on foundations of enlightenment, they also paid attention to the education of a personality.

The term "enlightenment" was first used by an English poet John Milton in his "Lost paradize" and was introduced to feudal France where dogmatic, sceptic, scholastic, and absurd ideas of the king were ruling. Therefore, the historic boundaries of the Enlightenment Movement cover the historical era, from the day of the inauguration of Ludovic XIV (1775), who was called the "King of the Sun", was as arrogant as pharaon, and who used to say "the state is me", to the Great French Bourgeois Revolution (1789). The term "enlightenment" was used in the West, particularly in France to refer to this time. The literary and philosophical basis of the idea of enlightenment consists of emotionally-sensualism and dualism, the former of which represented great significance in the beginning of the evangelistic movement, and the subsequent developmental processes. The Enlightenment movement was founded by well-known spiritual figures such as De Cente-Evremon, A. Bulenville, Bale, Mele. In recent years, such intellectuals as Voltaire, Monteske, Kondilyak, Lametri, Golbah Didro, Gelvetsi, Russo, Byuffon have been extensively educated and educated have managed to spread and spread the principles throughout Europe. Enlightenment ideas became widespread after the "Enlightenment Age" and served as an important factor in socio-political, national-liberation. Among the prominent educators of the national liberation movement of Central Asia: Muhimiy, Furkat, Avaz Otar, Ahmad Donish,

Mahmudhuzha Bexbudiy, Munavvar kori Abdurashidhanov, Abdurauf Fitrat, Abdulhamid Chulpan, Hamza Hakimzoda Niyazi, Abdulla Avloniy, Tavallo, Botu, Sadriddin Aini, Abdulla Kadiri, and Osman Nosir should be recognized. The Jadid movement, who created the ideological foundations of enlightenment in Uzbekistan and fought freely for the sake of national liberation and prosperity, was a great expression of the struggle for freedom and prosperity, the national liberation struggle for the realization of the hopes of creating a free and prosperous life.

Starting from one society to another, social system, transition from a particular historical period to a second, begins with educating. People who are knowledgeble the most mature, conscious, white-and-white people of the time, who are truthful, selfless, educated, glorious, who live in the country, distribute enlightenment to the people. Educators usually raise ideas for the present and future of society, and are consistent in their pursuit of this idea. Every era will be unique only taking into account the scholars and educators who lived in it. For example, in 1869, the educator of the time, Ahmad Donish, went to the administration of Tsarist Russia from the emirate capital. At this time, the Emirate of Bukhara was not a sovereign state but a vassal. The ambassador did not treat his officials, including his envoy, Ahmad Donish, as he used to because now, they were not independent but they were dependent. Ahmad Donish, made a conlusion stating the following: "When shall we, Uzbeks, wake up from the darkness? When shall we get rid of the ignorance?". The way to get rid of this darkness he sees in enlightenment and education. And this was quite an advanced way of thinking for that time. Similarly, Abdulla Qadyri was bitterly sorry about the folk and ironizes throught the words of his heroes in "Long past days" asks a question "Who will hear the call for help in the cemetery?". Such other writers of the period of enlightenment as Muqimiy, Furqat, Komil Khorazmiy, Avaz Utar, Zavqiy, Sattorkhon, and Ilyoskhona Tura also put forward similar ideas in their books. As for Tawallo, refering to ignorance, he wrote the followings:

The enemy shot canons
Many people were lost.
And us, we can do nothing but
Beat the drum-
Taram-tararam..."

In his poems he complains of the people's ignorance and calls them for edcation. The French poets also faced many opposition, like our writers of the enlightenment era. Our educators during the dissemination of knowledge to the people were engaged in their profession. One of the Russian researchers says: "In France, enlightenment was not just one branch. There were many philosophers, doctors, chemists, physicists, writers and poets. "

Local intellectuals, who had been occupied by Turkistan during the colonial period, were occupied by the Russian Empire, and the spirit of the nation was dominant in their spirituality, from the world to the artistic creativity. Even in the conditions of the cellars, uniting the nation, as well as in the time of Temur, a well-deserved part of a well-educated country dreamed. Particularly, the classic poet Turdi Farogi included tribal unions and separatism into the causes that prevented the nation from uniting:

Tor ko'ngullik beklar, man-man demang, kenglik qiling,

Tuqqon ikki bovli O'zbek yurtidur, tenglik qiling.

Birini qipchoqu, xitoyu, birini yuz, nayman demang,

Qirqu, yuz ming son bo'lib, bir xon oyinlik qiling.[1]

The basic principles of the French educators' teachings can be summarized as follows: By nature, people are humble. Their goal is to achieve prosperity through social development. People can achieve this goal by science and knowledge. The biggest obstacle on this path is disgust, superstitiousness, and disobedience. Education needs to be overcome. As people become more educated, they are more self-righteous than others. As a result, the world promotes progress through enlightenment. Intelligence is unique to everyone, not just a specific group of privileged individuals. Natural rights protect individual rights from class privileges. The subject of ethics is a personal, personal benefit, and everyone needs to look for and seek the best life for himself. The ideal and most effective form of public administration is to ensure simultaneous legal and personal freedom. These principles, put forward by the French enlightenment followers or founders, represent the interests of growing proprietors in the protection of private property and the initiative. Voltaire and Montesquiel are the first-generation educators of the French educators who are called philosophers.

In France, in the 40's of the eighteenth century, the development of natural sciences, artistic literature, drama and philosophy became a major social movement in the spiritual life, and the French scholars achieved a high point. During this period the scholars of the second generation appeared. They were represented by J. Rossso, J. Lametri, D.Didro, K.Gelvetsi, P. Golbah E. Kondilyak, J.Kondorselar. More than 20 years have been spent by D.Dridro to create "Encyclopedia or dictionary of arts, arts and crafts".

Between 1751 and 1780, Encyclopedia was one of the major events in the field of culture of the eighteenth century and made a great contribution to the development and formation of the ideological worldview for enlightenment representatives. Didro was the initiator and leader of this publication, which came into being in the mid-40's. Didro described the main trends in the "Prospect" edition published in 1750 and stated that "giving advice on any matter and serving as a guide, if anyone is independent of enlightenment." "Prospect" has contributed to the 35-volume bulletin, and the number of subscribers reaching 4,000.

For more than two decades, the Encyclopedia has become an important public work of scholars-enlightenmenters, and since its publication, it turned into a tradition to call educators as encyclopaedicians. The history of the publication of Encyclopedia was full of dramaticism, which reflected the mood of enemy forces. Enlightenment can vary considerably under the influence of various historical conditions, historical environments, and historical and territorial factors. The concept of enlightenment differs not only from the nationality but also from its regional perspective. This, in turn, testifies to the formation of Long, Near, Middle Eastern Enlightenment, as well as the formation of American, Caucasian, and French Enlightenment. The wisdom of each centenarian has its own unique features. The Oriental Enlightenment was a special stage in social development, and its aim was to adapt the traditional religion to new circumstances, which is to say that it is a movement for religion reform. However, the regional awareness-raising activities vary considerably depending on the level of socio-economic development, various spiritual values, dependency on European countries, the character of the current religious system (Islam, Buddhism, Hinduism). Consequently, they shaped on the basis of educating every nation.

The Uzbek-French literature, and the world's educational philosophy, are interconnected through various means. The character of the Oriental Enlightenment is its antifodal approach, including reform, humanism, national self-consciousness, religious extremism, education, education, and so on. There are many researchers who say that the West has been developed as a repetition of the French philanthropy. However, the enlightenment in our country is far from being a state. Because our education in our country is unique in its own way. These signs, in turn, are the basis for the development of other forms of enlightenment, and their development is at a certain boundary with regard to the characteristics of the socio-historical development of a particular country. In this respect, as Dillée says, the idea of "European centurism is enlightened," in essence, a necessity. Epicur, for example, must be built on the basis of the agreement between the state.

---

[1] Турди. Танланган асарлар. Т., Узфаннашр, 1951, 21-бет. Бундан йигирма йилдан кўпроқ вақт аввал проф. Б.Қосимов ёзган эди: "Турди замонасида ўзбек уруғларининг бирлиги, хамжиҳатлиги учун курашиш муҳим масалалардан бўлди". Б.Қосимов. Излай-излай топганим.... Т., Ғафур Ғулом номидаги Адабиёт ва санъат нашриёти, 1983, 93-бет.

The idea of social consensus that Epicurus promoted was later continued by the French educators of the eighteenth century and the 20th century philosophers.

Lametri and Gwelecki, Didro and Golbakh paid particular attention to the problems of national statehood, human rights and freedoms, which were of great importance in French life. They have shown ways and means of achieving these values in their works in order to raise the French nation to spiritual heights and transform it into an enlightened nation. The multi-colored "Encyclopedia" created by them has risen to the level of "European bestseller", which has shown the ways and means of enabling them to solve the spiritual problems of the day. Many other prominent French scholars and specialists have also been involved in this book, and its significance, from the point of view of the problem of universalism, and its proximity to the French nationality, is an invaluable book of the eighteenth century Europe. The authors of this book, with their other works and works, have transformed the universal values put forward in the Declaration of Human and Civil Rights adopted by the French Revolution of 1789-1884 as the most important spiritual dimensions of society development.

Just like them, our predecessors, especially the Jadids, set up various print publications. According to the adjectives, a person wants to satisfy his/her body and soul needs during his lifetime. Satisfaction of the body's needs is a prerequisite for human existence. But the meaning of life is not only in material things, to be self-centered, to enjoy, to be rich. The human spirit also needs a particular kind of food. Therefore, there are spiritual qualities such as enlightenment, humanism, justice, mercy, piety, conscience, worthiness, and patriotism.

Conclusion

High spirituality cleans human beings and strengthens their faith. There were answers to the question of freedom and how to live in the first political programs of the jadidism representatives.

Abdulla Avloniy, who said "Education for us is the question of life and death, of resque or catastrophe, of prosperity of tragedy", targeted at finding solutions to serious problems. Despite the fact that the meaningfull speeches of our great ancestor who made a lot of effort to change the society through education, were made a century ago, even tpoday, when science and new technologies are highly developed, people's world mentality, understanding and imagination expanded, and today's educational system has risen to a new level, they still preserve their meaning and value because social, economic and technological development of the society is progressive, each historical era is characterized with its more complex problems related to the spiritual enlightenment of human beings and the education of young generation.

References:

1. Alig'eri, D. (1962). *O Norodnoy rechi.* (p.49). Moscow: Iskusstvo.

2. (1984). *Istoriya zarubezhnoe literatury XVIII veka.* Strany Evropy i SShA. (p.158). Izd-vo Moskovskogo universiteta.

3. Rouzental', F. (1978). *Torzhestvo znaniya kontseptsiya znaniya v srednevekovom islame.* (p.33). Moscow: Nauka.

4. Sarokin, P. A. (1992). *Chelovek. Tsivilizatsiya. Obshchestvo.* (p.71). Moscow.

5. Krsimov, B. (1994). *Maslakdoshlar: Beҳbudiy, Azhziy, Fitrat.* (p.156). Toshkent: Sharҝ.

6. Ziemuҳammedov, B. (1998). *Ma''rifat asoslari.* (p.31). Toshkent: Chinor ENK.

7. Alimova, D. (2000). *Khaҡiҡatning tutash manzili.* 2-son. (pp.54-55). Toshkent: Tafakkur.

8. Kosimov, B. (1983). *Izlay-izlay topganim....* (p.93). Toshkent: Ғafur Ғulom.

9. Hotamov, N., & Sarimsoqov, B. (1983). *Russian-Karakalpak Dictionary of Literature terms.* (p.376). Tashkent: Teacher.

Clarivate
Analytics indexed

Ibrokhimjon Xayrullo ugli Ismonov
Ferghana branch of TUIT
student

UDK 37.02.004

THE ROLE OF COMPUTER SCIENCE IN ORGANIZATION OF EDUCATIONAL PROCESS AT UNIVERSITIES USING COMPUTER TECHNOLOGY

Abstract: In this article highlights of the design of projects like webpages or websites by students demanding strong background knowledge and diligent work with various literary, artistic and other resources to find and choose the necessary material has a specific place in students teaching.
Key words: ICT, computer, science, education, technology, students, higher education.
Language: English
Citation: Ismonov, I. X. (2019). The role of computer science in organization of educational process at universities using computer technology. ISJ Theoretical & Applied Science, 06 (74), 654-657.
Soi: http://s-o-i.org/1.1/TAS-06-74-83   Doi: crossref https://dx.doi.org/10.15863/TAS.2019.06.74.83

Introduction

Today, the development of scientific and technological progress in an increasingly changing world is largely due to the rapid growth in the number of means and means of disseminating information. Currently, it is not difficult to get access to almost any information, any source of knowledge. This determines the main goal of the University course of Informatics — to teach students, using an appropriate set of tools and methods of obtaining information, to gain access to the necessary information, while the main priority in solving this problem should be the formation of a motivational component in human activity.

Based on the above, the subject of "Informatics" is given the role of a special system-forming subject among the training courses. The consequence of this should be such an organization of the structure of consciousness of students, in which the implemented conscious control of the search for information will be subordinated to the goals defined by the personality for its progressive development. The role of the teacher and his influence on personal development is one of the main aspects of education and training of the future professional, who will be able to adapt to the modern information space without much effort. Preparing a student to realize himself as a professionally demanded person, facilitating the process of socialization as a person - is the task of a modern University teacher. The student must clearly formulate for himself: I know this, I can now study it, I already know how to do it, and I want to do this and for this I have the knowledge, information, there is a reputable teacher who can always seek advice.

Materials and Methods

Based on the analysis of the results of educational activities of students, the analysis of various topics of the course "Informatics" can be concluded: almost all topics of the course contain internal opportunities for the formation of cognitive interests of students. At the same time, the necessary conditions for the development of cognitive activity of students are five criteria for the selection of the content of educational material:

1. The novelty of educational material, the unexpected insights and rules.

Computer science contains great opportunities and is able, like no other subject, to show students previously unknown to them, something that can amaze and surprise them. To demonstrate these opportunities, it is necessary to create a problem situation in the classroom, during which new information is presented in such a way as to cause students to have an emotional perception of the topic. Thus, in the study of the topic "Algorithms", you can use excerpts from famous literary works, which "hidden" types of algorithms (for example, excerpt works. M.Twain "The Adventures of Tom Sawyer": "...with a sigh, Tom dipped his brush in lime, ran it

over the fence Board, then did the same again...". The movement of the brush in this example is nothing more than a cyclic algorithm, on which the teacher emphasizes, or in the fairy tale of A. S. Pushkin "the Tale of Tsar Saltan..."given the opportunity to determine the information processes, in his other fairy tale -"the Tale of the dead Princess and the seven heroes" all events are developed exclusively through the flow of information, search engines, information networks. In this regard, it is appropriate to note and highlight the most interesting forms of presentation of the lecture material:

- schematic presentation of the material, using educational literature, which plays the role of reference abstract;

- dynamic slide lecture, which is a complete thematic module, which, in turn, has a complex system of relationships with the ability to exit the menu from any slide. Here each separate slide is a "portion" of information displayed either in static or dynamic mode.

2. The study of the material known to students from a new angle.

When studying the material already known to students, it is necessary to keep in mind that "new" is not always and not only a completely unfamiliar, first encountered object or phenomenon. "New" can be recognized and seen in familiar and well-known objects and phenomena. It is important that the teacher constantly emphasizes this fact and focuses on it. Therefore, the pedagogical task sounds like this: to teach a student to be surprised by the usual (familiar) facts. For example, in the study of the topic "Architecture" it turns out that the principles of the device computer — a model of a person working with information, and that the computer includes devices that perform information functions inherent in the thinking person. Further, analogies are made with other specific devices, thereby turning the process of studying the material (for some of the students already familiar) into an interesting and informative activity.

3. Use in the classroom information from the history of computer science.

To expand the knowledge and erudition of students among the necessary information include biographies of great scientists, the history of significant scientific discoveries, familiarity with popular science, historical literature, journals on the topic, electronic encyclopedias, Web sites. To ensure this task, it is advisable to place a permanent exhibition of computer technology development in the office of Informatics, for example "From abacus to computer", in which abacus and components of third-generation computers are present.

4. Vital importance and importance of the acquired knowledge of real life.

Cognitive activity of students only then you will have a solid Foundation for its development, when the connection between the content of educational material, and its value in life will find a permanent place in the system of classes; the student always attracts the application of theoretical knowledge, received, for explaining well-known processes, even the simplest ones. The system of practice-oriented Informatics training used by the author allows to implement this criterion in practice, solving applied problems in the classroom, as well as organizing project activities in the classroom, special courses and after hours.

5. Introduction of students to modern scientific achievements.

Computer science is one of the fastest growing Sciences. To maintain interest in the subject and the development of cognitive activity of students (familiarity with new software products, new information services on the Internet, etc.), it is necessary to constantly appeal to modern achievements in the field of information technology. The priority role is given to group and frontal forms, taking into account the principles of independence, differentiation, individualization, cooperation in their activities.

The organization of active cognitive activity allows to increase the efficiency of classes and create a favorable psychological climate, to provide a stable positive motivation of students to study the subject and to study in General.

Integration of knowledge in the classroom in computer science and interdisciplinary communication.

The problem of organization of interrelation of the taught disciplines in all their diversity is one of the most urgent problems of modern didactics, psychology and teaching methods. Solving problems - specific models of phenomena - in the classroom for computer science, is one of the most powerful forms of implementation of interdisciplinary connections of computer science with other Sciences.

Methodological interdisciplinary connections - instrumental and methodical - reflect the unity of forms, means and methods of the process of cognition of the surrounding world, the study of academic disciplines of the program. Their use is of great importance for the organization of transfer of methods of solving problems from subject to subject, the implementation of creative development of students.

Types of interdisciplinary connections used in computer science classes can be divided into three groups, depending on the stage of studying computer science:

- at the preliminary stage are used tasks of extracurricular work in Informatics (quizzes, contests, puzzles, anagrams, crosswords, chainbody, games);

- at the basic stage, it seems appropriate to solve problems from various Sciences (mathematics, geometry, physics, chemistry, biology);

- at the profile stage, the study of computer technologies of information processing allows the use

Clarivate Analytics *indexed*

of tasks in Economics, ecology, mathematical analysis, environmental management in the construction of predictive models, modeling of various phenomena and processes.

Generalization of knowledge from various fields of knowledge in the classroom on Informatics is implemented in integrated courses in various subjects. When non-standard forms of implementation of the tasks arise, respectively, and non-standard forms of lessons.

The establishment and strengthening of interdisciplinary ties, and creating the conditions for perception and understanding of information processes in society, nature, knowledge, the formation of the information picture of the world are the most important and significant educational objectives of computer science and information technology.

The challenges facing modern education require overcoming the existing fragmentation between academic disciplines. The main and system-forming role in this process should be given to Informatics. Each scientific discipline has its own inherent combination of formal and informal methods of modeling of phenomena, procedures of proof and explanation, and only computer science is able to easily overcome interdisciplinary "barriers", to enrich all areas of scientific knowledge.

Technology of level differentiation. Differentiation of the content of the course of Informatics is carried out in the University in two forms: level and profile. Level differentiation is an in-depth study of computer science in the physical, mathematical, economic and telecommunication profiles of training, and for humanitarian and chemical and biological profiles of training are taught only the basics of computer science.

The integration of knowledge in the lessons of computer science allows to implement level differentiation as a form of training at various planned levels. Here it is desirable to choose one or another type of implementation of the use of knowledge, information from other areas and subjects (integrated environment, non-standard form of the lesson, interdisciplinary communication).

Profile differentiation is directed specialization of the content of education.

The curriculum, which provides for the possibility of using different types of classes, provides for the creation of pedagogical situations of communication between teachers and students, during which each student (regardless of his / her personal abilities) can show initiative, creativity, research approach in the course of studying and processing of educational material.

When studying the course of Informatics, the content of training should ensure the transition from informatization of education to the formation of information culture. Information culture of the user is the ability of a person to solve a specific problem with the help of information technology. The curriculum should not be a rigid set of completed topics, but a number of thematic areas, each of which requires an appeal to a particular aspect of the topic.

The essence of teaching computer science is to teach not so much programming and the use of specific programs, as the ideology of the computer world as a whole. The latter suggests that in the classroom you need to consider, say, not a separate material about binary arithmetic and not working with a specific text or graphics editor, but in General the ideology of presenting information in the PC, the ideology of working with text, the ideology of machine graphics.

Each scientific discipline, due to its individuality, is characterized by a special combination of formalized and non-formalized methods of modeling phenomena, procedures of proof and explanation. Computer science, which includes a fundamental and applied aspect, allows:

- to form a broad, holistic, encyclopedic view of the world and the place of man in it;
- allows a person to be protected socially, flexibly rearranging the content and direction of its activities;
- subject overcomes fragmentation and isolation due to the interdisciplinary connections;
- allows you to clearly define the place of Informatics in the General system of knowledge;
- integrate knowledge from different fields in the study of computer science.

One of the main values of the subject "Informatics" is its applied side: the right to exist have only those knowledge that are applied in practice. This statement is the basis of the system of practice-oriented learning.

Priority is given only to those educational tasks that are not only aimed at acquiring knowledge of specific facts, properties, rules, but also form students ' ability to see their application and use this knowledge in everyday life. Organization of project activities in the classroom. A special place in the formation of practical skills of students is the organization of project activities in due time. During the preparation of the project, students are able to independently acquire the missing knowledge from different sources, learn to use the acquired knowledge to solve their cognitive and practical problems, acquire communication skills for teamwork, develop their research skills to identify problems, collect information, observe, analyze and so on), systemic thinking.

The form of protection of projects can be in the form of a conference, presentation or exam. Regardless of the form, the protection of the project contributes to a deep, conscious assimilation of basic knowledge, which is ensured by their universal use in different situations.

Conclusion

As an additional education in the organization of project activities, the author uses the opportunities of the global Internet through participation in a variety of telecommunication projects. This form of work allows you to solve a range of tasks: subject, General, developing, educating. A special place in the training of students is the preparation of such projects as a Web-page or a Web-site, which requires serious basic knowledge and painstaking work with various literary, art, artistic and other sources for the search and selection of the necessary material. Mastering the technological side of this process is a strong psychological and motivating tool and allows students to better understand and assimilate the processes of transmission, processing and storage of information, forms their strong interest in information technology. Based on the above, it can be concluded that the development of computer science, based on the use of knowledge, which is confirmed by practice, is particularly promising in terms of further development of new technologies, opportunities for the implementation of elements of interactivity, computer graphics and animation, programming, etc.

Scientific adviser: Karimov Ulmasbek, senior teacher of Ferghana branch of TUIT.

References:

1. Andreev, A. A. (2006). *Higher School Pedagogy.* New course. (p.264). Moscow: Moscow International Institute of Econometrics, Informatics, Finance and Law.
2. Demkin, V. P., & Mozhaeva, G. V. (2009). *The organization of educational process on the basis of distance learning technologies.* Educational and methodic manual. (p.135). Tomsk: TSU.
3. Kryukov, V. F. (2006). *Modern method of teaching*. (p.176). Moscow: Norma.
4. Kuzemin, A. I., & Vasilenko, A. A. (2010). Analiz estestvenno iazykovykh ob"ektov i predstavlenie znanii [Analysis of natural language and knowledge representation of objects]. *Vostochno-evropejskii zhur-nal peredovykh tekhnologii. Tekhnologicheskii tsentr (KHar'kov) [Eastern European Journal of advanced technologies. Technology Centre (Kharkiv), T. 6, no. 2 (48)*, pp. 60-64.
5. Piatov, E. A. (2014). Potentsial ispol'zovaniia metoda klassifikatsii slov dlia sozdaniia tekstov [Potential use of the method of classification of words to create a text]. Filologicheskii klass. *Ural'skii gosu-darstvennyj pedagogicheskii universitet [Philological class. Ural State Pedagogical University] (Ekaterinburg), no. 2 (36)*, pp. 27-29.
6. Shutikova, M. I. (2011). Mezhpredmetnye vozmozhnosti informatiki [Interdisciplinary Informatics opportunities]. *Cherepovetskii gosudarstvennyi universitet [Bulletin of Cherepovets State University], T. 4*, p.202.
7. Shutikova, M. I., Labutin, V. B., & Dzamyhov, A. H. (2016). Faktory, vliiaiushchie na sostav i strukturu ponia-tiia «Inzhenerno-tekhnologicheskaia kul'tura» [Factors influencing the composition and structure of the concept of "Engineering and Technology Culture"]. *Mir nauki, kul'tury, obrazovaniia [The world of science, culture and education], no. 3 (58),* pp.140-143.
8. Gromtsev, S. A., & Shutikova, M. I. (2017). Metodicheskie aspekty primeneniya semanticheskogo konstruktora v obuchenii informatike. *Vestnik Cherepovetskogo gosudarstvennogo universiteta, №2(77)*, p.150.
9. Bel'skiy, I. V. (2002). *Sistemy effektivnoy trenirovki: armrestling, bodibilding, benchpress, pauerlifting.* (p.352). Moscow: Vida.-N.
10. Petrov, P. K. (2014). *Informatsionnye tekhnologii v fizicheskoy kul'ture i sporte: uchebnoe posobie*. 4-e izd., stereotip. (p.288). Moscow: Akademiya.
11. Yanson, Y. A. (2005). *Uroki fizicheskoy kul'tury v shkole. Novye pedagogicheskie tekhnologii*. (p.432). Rostov-na-Donu: Feniks.

QR – Issue   QR – Article

Elmurod Salimjonovich Karimov
Andijan State University
teacher

UDC 37.03

THE ROLE OF INNOVATION IN INCREASING YOUTH INTELLECTUAL POTENTIAL IN UZBEKISTAN

Abstract: Today we are creating innovation to develop our lives at the level of modern requirements. This article covers the term innovation, its content, its characteristics, the role of innovative activities in increasing the potential of youth.
Key words: innovation, youth, activity, intellect, intellectual potential, science, education.
Language: English
Citation: Karimov, E. S. (2019). The role of innovation in increasing youth intellectual potential in Uzbekistan. ISJ Theoretical & Applied Science, 06 (74), 658-661.
Soi: http://s-o-i.org/1.1/TAS-06-74-84   Doi: crossref https://dx.doi.org/10.15863/TAS.2019.06.74.84

Introduction

The term "innovation" is currently one of the most used in our country and is used in various fields of production, science, culture and education, economic, legal, social relations and other spheres of human activity. The word "innovation" comes from the Latin word "innovus" (in — and novus — new) and is translated into Russian as "new", "update", "change" [2]. There are many different definitions of innovation, both domestic and foreign experts. In the term "innovation" different authors put a slightly different meaning. To clarify the concept of "innovation", we distinguish several definitions that characterize this concept from different positions.

The analysis of the given definitions of the term "innovation" allows us to state that at the present stage three main points of view are common and innovation is presented as:

- the end result - innovations (new product, product, processes, technologies, methods, services, etc.).);

- the creative process aimed at the development of new types of products, technologies, processes, methods, services, organizational, technical and socio-economic management solutions of industrial, economic, administrative and other nature in the field of organization, economy and production management;

- the process of introduction into production of new products, elements, technologies, approaches, methods qualitatively different from the previous analogue and having a higher scientific and technical potential, new consumer qualities.

Materials and Methods

In the process of developing research on varieties of innovation and understanding their role in economic development in the 1960s, there was a need for pan-European research and development statistics. For its satisfaction in 1963 in Italy in Frascati the first manual for carrying out the corresponding statistical surveys is accepted: "the Manual of Frascati" Subsequently it actually grew into the International standards in statistics of science, equipment and innovations [1].

According to these standards, innovation is the end result of innovation, embodied in the form of a new improved product introduced in the market, a new improved technological process used in practice, or a new approach to social services. S. A. Agarkov identifies the following sources of ideas for innovation [2]:

- discovery, scientific idea, scientific theory, phenomenon;

- invention, a number of inventions, licenses;

- innovation proposals;

- other situations (unexpected event, market needs, changes in the structure of the industry or market, demographic changes, etc.).

Innovation proposals differ from innovation on the following grounds:

Clarivate Analytics *indexed*

- Innovation is carried out at the level of technological (applied) order, and the discovery and invention - as a rule, on the fundamental;

- Innovation is developed by the team, and the discovery, invention and innovation proposal can be made alone;

- Innovation can not happen by accident, it is always the result of the search and requires a feasibility study. Discovery, invention and innovation proposal can happen by accident;

- Innovation always aims to increase productivity, reduce production costs and make a profit. Discovery, invention and innovation proposal are not intended to obtain material benefits.

The role of young people in modern late industrial societies is increasing due to their increasing dependence on innovation. The innovative nature of modern social development makes the participation of young people in the functioning of industrial and social spheres necessary not in the role of students, but in the role of full partners, and even leaders. It is young minds who make most of the scientific discoveries, put forward many social and economic initiatives, develop a significant number of technical improvements, offer a maximum of "fresh" ideas. Thus, it is young people who act as a resource for creating competitive advantages. However, sometimes among the older generations, including among their representatives in power, there is a desire to deal with conformist young people. This desire is understandable, because for young people the more natural state is not conformism, but criticism and the desire to transform the world, which creates conditions for a possible conflict of generations. But also preventing the activity of young people is a threat to the whole society, which has become on the path of social and political modernity.

Today, Uzbekistan is one of the youngest sovereign States in the entire post-Soviet space, as young people have 64 % of the total population. The modern youth of Uzbekistan is fundamentally different from the older generation, primarily because it was born, formed in a new state, where it is destined to be a direct participant in all ongoing democratic reforms. The younger generation has an advantage over the rest of the population expressed in the fact that it is a new form of their worldview, coinciding in the main directions with the tasks of building a developed democratic state. The priority task of our state is to ensure the vital interests of young people: getting a modern education, mastering a profession, employment, creating conditions for the manifestation of abilities and potential, support young families and all possible assistance to them when entering into a large and beautiful independent life. In Uzbekistan, favorable legal, social and economic conditions are being created to improve the level of professional training and increase the intellectual, spiritual and moral potential of young people. The country has formed a legislative and regulatory framework, accumulated and tested experience in working with young people to form a progressive young generation capable of solving the problems of state development.

Of strategic importance is the call of First President Islam Karimov: "our children should be better, smarter, wiser, and of course, happier than us!"[3]. This confirms that the interests of young people are embodied in the state policy. Young people of Uzbekistan should focus their efforts on solving economic problems, on which the future of the country will depend, it is designed to become an important reserve of personnel for the entire system of public education.

Innovation is important elementary intellect of young scientists.

Table 1. Components, content and criteria of formation of innovative activity of a young scientist.

№	Component / criteria	Component Content	Indicators reflecting the level of development of the component / criterion
1.	The motivational component.	The broader research and educational motivation; proactive attitude; conscious sustained interest in technological innovation, the motive of creative activity, of self-improvement and self-realization in scientific activity, overcoming difficulties in professional activities through the search of ways of its improvement; psychological predisposition to innovative activities	Formed motivators of social and psychological activity of the individual; the predominance of motives for success over the motives of avoiding failures; the formed system of needs and motives for self-realization in innovative scientific activity.
2.	Cognitive component	Knowledge about innovative technologies; understanding the goals of innovative activity in the light of solving urgent scientific problems; knowledge about modern innovations in the field of their scientific specialization; broad Outlook, providing the ability to integrate knowledge on an interdisciplinary basis; sufficient level of	The amount of knowledge about the peculiarities of innovative technologies, the essence and specificity of innovative activity; the level of development of various types and properties of thinking and reflection that constitute the

		development of divergent, creative, theoretical, practical, intuitive thinking; flexibility of thinking; prevailing cognitive style of information collection and processing; prognostic abilities; the ability to critically analyze the results of their own innovation.	intellectual potential of the personality of the young scientist; the ability to see in everyday problem; the ability to statement promising ambitious goals.
3.	The emotional component	Experience of positive emotional States in relation to innovation; satisfaction from the performed research work; positive emotions associated with the process of performing scientific research, the thirst for discovery, etc.	Kind, modality, the power of emotions experienced.
4.	Strong-willed component	Initiative, independence, commitment, the ability to take responsibility, organization, self-discipline, determination, perseverance in achieving the goal and bringing it to the end; the ability to overcome external and internal obstacles to obtaining a new scientific result and innovation; endurance and perseverance in the situation of primary misunderstanding, non-acceptance of new ideas, contrary to traditional views; willingness to start again in the event of refutation of the original hypotheses; the ability to volitional regulation of their own research activities; tolerance for change, innovation, the ability to risk etc.	Level of development of volitional properties and willpower of the young scientist, providing personal competitiveness, the ability to take a hit.
5.	Operational-activity component	Ability to search and critical evaluation of innovative ideas; availability of necessary professional skills, research skills, experience, sufficient level of development of professional competence in the field of scientific specialization, methodological culture, possession of modern information and communication technologies that allow the development of innovative projects, the introduction and use of innovative technologies; the ability to work effectively in a team.	Indicators of efficiency of scientific activity of young scientists (participation and victories in competitions, innovative conventions, scientific exhibitions, won applications for grants, personal and collective scientific achievements, participation in conferences of different levels, number of publications, availability of patents, etc.).

Conclusion

Therefore, we need that in the formation of youth values listed above, it would meet the following criteria:

- spiritual development and enrichment of young people, turning them into active participants in the process of comprehensive reform of society, the use of their intellectual, moral, spiritual potential to solve the problems of maintaining social stability;

- continued work on the preservation and development of national human values, language, culture, traditions of all peoples of Uzbekistan;

- fight against any manifestations of social order: extremism, terrorism, racism, nationalism, fundamentalism;

- work to explain the humanistic nature of Islam and other great religions (Christianity, Judaism, Hinduism, etc.). The reforms carried out today for the renewal and modernization of the country are carried out with the participation of young people: the majority of young people solve the problem of radical change in their attitude to life, work, property, understanding their duty and involvement in the fate of the Motherland, love and devotion to the country and the people and strengthening of socio-political activity connects with them their life prospects and the growth of physical, personal, educational and professional qualities.

The developed state youth program is aimed at further strengthening of the PA resource, personnel and information infrastructure, ensures the constitutional rights of young people - the right to education, professional work, targeted expression of creative abilities, comprehensive intellectual development, as well as promotes an active position and participation in all spheres of public life.

Clarivate Analytics *indexed*

References:

1. (2002). *Standart otchetnosti po nauchnym issledovaniyam i razrabotkam (Proposed Standard Practice for Surveys of Research and Experimental Development — the Frascati Manual*, 193 str.). (p.150). OESR.

2. Agarkov, S. A., Kuznetsova, E. S., & Gryaznova, M. O. (2011). *Innovatsionnyy menedzhment i gosudarstvennaya innovatsionnaya politika*. Akademiya Estestvoznaniya.

3. Karimov, I. A. (2000). *Nasha vysshaya tsel' — nezavisimost' i protsvetanie Rodiny, svoboda i blagopoluchie naroda*. T.8. (p.512). Tashkent: Uzbekistan.

4. (2008). Counsil of Europe. White Paper on intercultural Dialogue — "Living Together as Equals". Strasbourg: Counsil of Europe.

5. (2007). United Nations Department of Economic and Social Affairs. World Youth Report 2007.

6. (n.d.). Young People's Transition to Adulthood: Progress and Challenges. New York: United Nations publication. Retrieved 2019, from www.un.org/esa/socdev/unyin/wyr07.htm

7. Babamuratov, E. K. (1996). K kharakteristike molodezhi kak sotsial'no-demograficheskoy gruppy obshchestva. *Obshchestvennye nauki v Uzbekistane, № 4–5*, pp. 50–58.

8. Tulenova, G. (2008). *Molodezhnaya politika v Respublike Uzbekistan: sostoyanie i perspektivy razvitiya*. Tashkent: ALOQACHI.

9. Yarychev, N. U. (2011). *Kontseptsiya razvitiya konfliktologicheskoy kul'tury uchitelya v samoobuchayushcheysya organizatsii*: Avtoref. dis…. doktora pedagogicheskikh nauk. (p.45). Chelyabinsk.

10. Omel'chenko, E. L. (2003). Kul'turnye praktiki i stili zhizni rossiyskoy molodezhi v kontse XX veka. *Rubezh, № 18*, p.150.

Clarivate Analytics **indexed**

QR – Issue   QR – Article

SECTION 31. Economic research, finance, innovation, risk management.
UDC 685.17: 335.46

Artur Alexandrovich Blagorodov
Institute of Entrepreneurship and Service sector (branch) DSTU
bachelor, g. Shakhty
blaghorodov@list.ru

Dmitri Olegovich Bordukh
Institute of Entrepreneurship and Service sector (branch) DSTU
bachelor, g. Shakhty
bordukh95@bk.ru

Angelina Vladimirovna Kopylova
Institute of Entrepreneurship and Service sector (branch) DSTU
bachelor, g. Shakhty
angelinakopylova22121999@mail.ru

Vladimir Timofeevich Prokhorov
ISOP (f) DGTU
Doctor of technical sciences, professor,
professor of the department "Designing, technology and design", Shakhty
prohorov@sssu.ru

Igor Mikhailovich Maltsev
Institute of Entrepreneurship and Sevice sector (branch) DSTU
associate Professor, Ph. D.-m н., g. Shakhty

Natalia Vassilievna Tikhonova
Kazan national research technological University
Doctor of technical sciences, professor
Kazan, Republic of Tatarstan

OPPORTUNITIES OF COMPETITIVE ADVANTAGES OF THE MADE IMPORT-SUBSTITUTING PRODUCTION ON THE BASIS OF THE ANALYSIS OF DEMAND FOR ITS DEMAND BY CONSUMERS OF REGIONS OF SOUTHERN FEDERAL DISTRICT AND SKFO

Abstract: The article discusses the possibility of the production of competitive and marketable products, which are possible only if managers are professionally trained and politically responsible for its performance. The authors rightly believe that the political responsibility of heads of enterprises lYe with gravesoftwood industry and it is the highest expression of the measure of their professionals. But at the same time I would like to note that the non-fulfillment of political promises and statements - is evidence of either their inability to engage in economic policy, or the use of political governance is carried out by them in their own interests that are alien to the interests of society, provoking the impoverishment of the people, describing immorality leaders, which of course is unacceptable . And it is clear that there are no objective reasons that would justify the decline in production in the lYe with gravesoftwood

Clarivate Analytics indexed

industry, and therefore economic policy evaluation results should be either beneficial or harmful - it should always be an axiom. If it does not, then something is in that same economic policy is not a professional solution, actions harmful to society and require timely adjustments. The authors recommend the market to reconsider the concept of the formation of his demand and import substitution based on their attractiveness. Such a concept would fully meet the customer's request to meet his desire and the desire to make a purchase based on their social status, allowing manufacturers to implement sustainable TPE manufactured their products in full and ensuring their businesses activities.

Key words*: competitiveness, relevance, innovation and innovative activity, a decline in production, a useful economic policy, harmful economic policies, professional solutions, immorality, political responsibility, professional trained managers, profit, profitability, break-even, high performance TPE, high creative potential of specialists.*

Introduction

Integration, globalization - not a panacea for development. They do not cancel the competition in which the winners are not alone. More losers. Hence the relevance of the old truth, the meaning of which became clear in the dialectic. Movement in all conditions becomes a self-movement. Chinese rationally closed themselves and won. The victory ensured them: Eastern cautious and skeptical attitude toward unification. They used to have realized that integration and globalization are varieties of "pyramids" and conditionally useful for national development. From the side it might seem that Chinese reformers rejected the mentality of the curse: "you to live in a time of change." From the inside it looked traditionally - politicians do not betray a sharp movement on a national scale, in a hurry, but with constant reference to the actions of the state economic structure, reforms in the economy subordinated the traditional political dominants not repented and tried to please. About any economic shocks no one seriously thought. Finance as the circulatory system of the economic organism took "echinoid state gloves", entered the tightening of economic and corruption-related crimes, equating to a lot of them to dangerous actions against the State, did not come up with new games - update available, as always paid special attention to personnel policy. The Chinese have taken into account the experience of the Soviet party "growing" frame, which is based on the principle of steady progress, depending on the efficiency of business and lifestyle. Finance as the circulatory system of the economic organism took "echinoid state gloves", entered the tightening of economic and corruption-related crimes, equating to a lot of them to dangerous actions against the State, did not come up with new games - update available, as always paid special attention to personnel policy. The Chinese have taken into account the experience of the Soviet party "growing" frame, which is based on the principle of steady progress, depending on the efficiency of business and lifestyle. Finance as the circulatory

system of the economic organism took "echinoid state gloves", entered the tightening of economic and corruption-related crimes, equating to a lot of them to dangerous actions against the State, did not come up with new games - update available, as always paid special attention to personnel policy. The Chinese have taken into account the experience of the Soviet party "growing" frame, which is based on the principle of steady progress, depending on the efficiency of business and lifestyle.

Main part.

In the seventy years of Soviet history were isolated cases, when the management of the economy turned out to random people. They could be just coincidence, confirming its exclusivity, the personnel capacity of the political paradigm. Taking into account the economic disadvantages of excessive centralization in the management of the economy, can afford the following thesis - socialist economies of the Soviet type was not rationally constructed, but it contained a substantial reserve, which gave an opportunity to the new revolutionaries did not repeat the old Bolshevik techniques - to help one and rob others.

The Bolsheviks in the image of the revolutionaries look for all the odious policy of nationalization of property in a more favorable light in comparison with those in the 1990 squandered a national treasure and are extremely reluctant to change their interested attitude to what is happening today. The outcome of the revolution of 1917 was the industrialization and the rise of light industry, crafts, the result of the counter-revolution - 25-year-old depressed economy, the struggle for survival of the textile, shoe, garment production, the decline in the organization of training of qualified personnel across the spectrum - from workers to engineering specialties. In such circumstances, it is time to withdraw from the abstract political ideals demreformatorov and came to develop a "road map" revival of light industry in the hope that the crisis

highlights the urgency of reasonableness "brainstorming" as opposed to "New Economic School" in the trend. What is the road "map" it appears to be based on the historical experience of the XX century, when there were all major events.

1. The priority of sustainability must be the interests of national advancement. On the development of a very, I would say, but it is on a national scale is not to get. We need to "lick their wounds". At present, the most economically optimistic estimate is in pursuit of a sustainable stabilization of the economic indicators. Doctors in a similar situation are encouraging: Condition "serious but stable" Unfortunately, the economy can not be entered in the "artificial coma" to help overcome the crisis through a more economical expenditure of vitality. We are the first point of the "road map" that's what interested. Doctors seek to mobilize the potential of the life of the body, help to reveal the stock will to live. Our economy is able to fight for survival, there are many smart, knowledgeable, dedicated patriots, however, every year lost their number decreases. According to Doctor of Economics, professor of NRU "Higher School of Economics" V. Inozemtsev - one of the regular contributors AIF, annual leave from the country about 400 thousand people. Naturally, not all on permanent, someone working on a contract, in search of temporary work. In the first place to help people energetic, light them the green light at the end of the tunnel. Rely on the established officials in a quarter-century type of confidence that is not the sword of justice hanging over them, and a safe senior bureaucrat to receive compensation, it is not necessary. Option - ONF. President and regularly communicates with its interested activists. Communicating efficiently. in search of temporary work. In the first place to help people energetic, light them the green light at the end of the tunnel. Rely on the established officials in a quarter-century type of confidence that is not the sword of justice hanging over them, and a safe senior bureaucrat to receive compensation, it is not necessary. Option - ONF. President and regularly communicates with its interested activists. Communicating efficiently. in search of temporary work. In the first place to help people energetic, light them the green light at the end of the tunnel. Rely on the established officials in a quarter-century type of confidence that is not the sword of justice hanging over them, and a safe senior bureaucrat to receive compensation, it is not necessary. Option - ONF. President and regularly communicates with its interested activists. Communicating efficiently.

Academician AG Aghanbegyan testified that a year of economic recession because of unwise management requires a lot more time to revive the economy. Act on the opening segment should so have the strength to finish and would have left them for the next stage. We should not hope for great

achievements. Miraculous transformations can be expected in the private sector. Here it is able to manifest itself in case. In general, the process of the case is insignificant role. Refuse to believe in luck, however, is unwise. It is believed that "lucky" those who are lucky. Successful alignment may induce through professional activity, nature, faith in a favorable outcome, and even in a higher justice. Faith that accompanies the mind, yet no one prevented in an effort to do good work. [1]

All interstate unions must be considered solely in the national interest, otherwise you lose. Economic Agreement - an international condition, which is really to try to use for their own promotion, both at the company and industry. However, it should be understood that, unless you manage to benefit from the terms of the contract you have, then it will have your competitors, proved to be more savvy. Not ruled out a compromise where the mutual profit and temporarily divided proportionally participate. The main thing to know - the agreement in any form of competition leaves the competitors, it gives competition civilized, limiting arbitrary action. For Chinese leaders said production. Over 2016 Chinese sewed about 14 billion pairs of shoes -. 2 pairs for each inhabitant of the Earth. Chinese leaders so at the meetings, at the signing of the protocols. Our accounts more difficult - from them in the absence of similar indicators are waiting for assurances of friendship and mutual assistance. Good neighborly and mutually beneficial relations is the only valid reality of the progressive movement. Everything else - the virtual reality.

2. Bet on the full support light industry, like most areas of investment of public funds (financial, legal, political, and humanitarian), contains a risk, but within acceptable values. History checked and Russia as an independent state, and in the USSR in the ability to create a variety of quality goods in demand in sufficient quantity. Strengths of the domestic products of light industry: quality material, hygienic, ergonomic compliance with national and climatic conditions, variety of assortment. In the 1980s, with the development of co-operation have been positive developments in relation to the design. Clothing and shoes, since 1930, made available to all groups of the population.

In Russia it is possible to produce almost all kinds of materials needed for the light industry. Production of certain types of raw materials limited by volume, in principle, governed by scientific and technical progress. The development of science and technology complement the natural materials artificial synthetic. The country has developed scientific schools in the framework of agricultural production and light industry, the system of specialized vocational training was created. Personnel are trained in schools, colleges, high schools, some schools disappeared in the course of democratic reforms, but

the experience was training. It is not difficult to revive. Preserved industrial centers and enterprises. Precisely in those areas where a high percentage of the unemployed. The revival of the enterprises of light industry will lead to increased social and cultural environment and regional traditions, faith in the future the population. Return of social optimism in people.

In favor of focus to develop the production of goods required to meet the physiological needs of man, and are the size of the consumer market. They guarantee the stability of the production orders workload of the relevant goods.

3. There is still a high creative potential of specialists. He is quite competitive. Local artists, designers, engineers, and organizers have a high international rating. Often they are bigger and better known abroad than in his native country. Like all creative minded people they are seeking to diversify production development, taking into account the specifics of the market, aware of the importance of monitoring the interest and the mass market opportunities. We've gone from state regulation of the quantity, quality, price of products, than quickly took advantage of random people in the industry. Those who privatized enterprises, understand it as a way to improve personal incomes and sought to squeeze the maximum margin guilty in the collapse of the industry no less than their "senior" partner was determined by the fate of reforms mediocre people to create an economy. The oligarchs and crony capitalism as historically developing phenomenon. It is a mistake to reject the socially positive sense of their existence. One thing to financiers tycoons, media magnates, oligarchs who made a fortune on speculation mediation wild carbon extraction of raw materials, the other - those who developed the real production with a substantial proportion of the value added, ie, I am thinking about the future.

After the "Gaidar Economic Forum" and the Congress of Industrialists (. 2016), the oligarch Oleg Deripaska spoke very politically mature "in 2019 - the last year, when the state is able to use the reserves to help the production, next year we should start to help the state." We are sure that the opinion of one of the most active and experienced local oligarchs its exclusive look at the interaction between the state and businesses.

To flee from Russia in calculating the future - the lot of those who are opposed to Russia, hiding in the "white fluffy fur" abstract democratic idea of the unity of the world with his greed. The West does not need them, there is demand for their finances - not as impressive by Western standards, both in the looting of the homeland, and "anti-Putin views."

Russian history is rich in examples of intelligent, patriotic economic policy, namely large owners, were ahead of the actions of the public administration, endowed with political responsibility for the professional development of production. It seems that those who are directly responsible for the financial and industrial policy by examining historical experience, waiting to push the production itself "locomotives" for the promotion of existing staff. G. Gref, Sberbank released in the heads of the said government sector, openly referred to "the Gaidar Forum" told about the need for an active government policy planning for overcoming the crisis in the economy, finance investment in real production, control the use of state loans by banks. Frightened by the "wrong" - not cyclical crisis, banks do not want to risk even a "short" loans in the interests of production. They have a "roof" of speculators in the market and themselves became full speculators, floating financial turnover of state loans, leaving the manufacturing enterprises with no credit or assigning them to death calculation rules [1].

Light industry enterprises in a similar situation a little bit easier to operate. First, replacement of the equipment is not as costly affair. For example: the basic equipment with modern equipment Physical Laboratory costs $ 5 million.. Secondly, you can do "short" money that the joint interests of the financier and producer. But at the same time, light industry enterprises more dependent on rapidly changing market conditions, therefore, need to be able to spin quickly, to be able to use centrifugal forces - to diversify production. "Diversification" - the versatile word. In dictionaries allocate 4-5 values. In the context of our study are relevant three: "Diversification of production" as the spread of economic activities to new areas, the branching of production, diversification of products; kind of marketing strategy,

Diversification is currently "working" in the "most favored nation" mode, of course, if you have a creative approach, weighted risks and skillfully the aligned monitoring. We have in mind to begin the transition to the development of mass production from the first type in the second - «lean production», which can be translated as "gentle" or "prudent production." This type of production fundamentally changes the very purpose of the production process. In this case, the traditional task of manufacturing a large number of similar products to meet the requirements of normative documents, of which the consumer should choose the most suitable for him, replaced by the problem of manufacturing such a product is what you need to present to the consumer and it is in the required amount and at a certain time.

A new type of mass production shifts planning optimization studies to study the peculiarities of the market demand as the total expression of individually different wishes. The market is personified as a function of a large number of parameters involved, which requires strengthening the diversification of production. Changing nature of the market, and employers are required for this transformation adequately and to respond quickly.

To change the paradigm of integrating the policies of the organization and management of production, to carry out its restructuring is not enough, but a serious modification in the planning activities of the enterprises have long needed. And it has begun, it may be as long as in the minds of producers and owners, but it is a natural introduction to the practice. mosaic study of market demand complicated the search for new markets. The desire to capture the market in 2016 is unreasonable, as well as a dream to overtake China, we catch up with him, and only in a dream possible. Fortunately, you can overtake in many ways. The most primitive variant - to do something bigger, more promising - to get ahead, to squeeze into the structure of the market, where its density is not as great. The general director of the Novosibirsk enterprise "Clothing Factory" N. Treshchev sure that really squeeze into the ranks of the products' quality sewn "in a sufficiently rich fabrics, interesting design. In the 1990s, Russia had stopped the "Bush legs", and it seemed nothing could displace them from the market. At the present time they do not even remember. Our Ptitseprom won. Why should we fear the intervention of Chinese consumer goods? Looking for protectionist measures at the WTO, the SCO, but in principle they are not the crux of the matter. The movement of productive independence from external factors. Sustainable development - a consequence of self-propulsion. If you do not promote the development of existing conditions, it is necessary to look for reserves in the process, "removing" the negative effects of external circumstances. Our Ptitseprom won. Why should we fear the intervention of Chinese consumer goods? Looking for protectionist measures at the WTO, the SCO, but in principle they are not the crux of the matter. The movement of productive independence from external factors. Sustainable development - a consequence of self-propulsion. If you do not promote the development of existing conditions, it is necessary to look for reserves in the process, "removing" the negative effects of external circumstances. Our Ptitseprom won. Why should we fear the intervention of Chinese consumer goods? Looking for protectionist measures at the WTO, the SCO, but in principle they are not the crux of the matter. The movement of productive independence from external factors. Sustainable development - a consequence of self-propulsion. If you do not promote the development of existing conditions, it is necessary to look for reserves in the process, "removing" the negative effects of external circumstances.

The state is obliged to make a change in the decline in the prestige of professions related to light industry, to create the attraction for those who have decided to devote themselves to this interesting case. The owners are looking for reserves to raise salaries. She VAT in 2018 did not exceed 14 thousand. Rubles, which is half the salary of the average for the region.

Director of footwear enterprises Titov sees output in the transition to automated production systems. Companies in the past year for the acquisition of the Italian and Taiwanese equipment costs 350 mln. Rubles, which made it possible to attract qualified professionals to carry out training of the core staff and to raise the salary to an average of 28 thousand. Rub. Forecast of development of production Titov links with increased manufacturing of shoes mainstream segment. In favor of the forecast A. Titov work and reducing the presence in the domestic market of Turkish production. It is necessary to take into account the fact that China's growth will inevitably lead to an increase in wage costs. It will emphasize the relevance of logistics calculations. As a result, the Chinese will lose economic attractiveness, and with them it will be possible to compete in the segment, interested Titov. The Russian industrialists there is such a trump card, as its raw materials of natural origin. We hope that the promised investment in agricultural production will reach the farms and fields. The market for light industry grows at the expense of social and cultural progress, in particular through the development of professional sports, the increase demand for those who choose the sport as a way to a healthy lifestyle. At the end of 2015, "Sport Express" newspaper published an interview with the chairman of the Russian Outdoor Group A. Grebtsova. "The market for outdoor-goods serves climbing, hiking, extreme sports, special forces, rescue teams, service and polar forces. This direction, which require a heavy-duty, freezeproof, waterproof equipment that meets the new international safety and comfort standards. " A. Rowing reported interesting details, in particular, he compared the technological base of production of quality products in the Russian Federation, Europe and Asia. We are "somewhat behind", according to his estimate, from the Asian potential, but with Europe "Just can compete ... in Russia there are about 30 (!) Companies that are good at sewing." After the ban of imports for state procurement and defense contracts share materials from member countries of the Customs Union, delivered to law enforcement agencies of the country increased from 30% in 2011 to 83% in 2018. In 2019 the trend of increasing the share of countries in the production of materials KPES used for the production of ware property should be around 85-90%. Reversal of state order in the direction of domestic production opens possibilities for allied chemical industry (raw yarn, fittings, membranes, insulation). Grow production fabric, tailoring, it will pull the development of equipment. A. Grebnev believes that in order to consolidate the results achieved it is important to: [2] In 2019 the trend of increasing the share of countries in the production of materials KPES used for the production of ware property should be around 85-90%. Reversal of state order in the direction of domestic production opens possibilities for allied chemical industry (raw

yarn, fittings, membranes, insulation). Grow production fabric, tailoring, it will pull the development of equipment. A. Grebnev believes that in order to consolidate the results achieved it is important to: [2] In 2019 the trend of increasing the share of countries in the production of materials KPES used for the production of ware property should be around 85-90%. Reversal of state order in the direction of domestic production opens possibilities for allied chemical industry (raw yarn, fittings, membranes, insulation). Grow production fabric, tailoring, it will pull the development of equipment. A. Grebnev believes that in order to consolidate the results achieved it is important to: [2]

- make clear the importance of large retail chains purchase and placement of goods produced in Russia, of course, in view of their good quality;
- place the first orders for the production of those "who have stood up and knows how to sew." They have proved their worth;
- assist companies to obtain a European certification materials, otherwise they are not interested in foreign companies, and the goods produced in our country, does not get to the West;
- to actively support the company's collective stands at international exhibitions;
- represent such enterprises subsidies on loans for the purchase of raw materials. These loans Ratio of total lending should be from 50 to 85%;
- to liberate the modern import equipment from import duties and VAT. Equipment used in sewing shops, 90% of imports;
- implement preferential leasing.

As you can see the program A. Grebneva organizes basic and the primary steps in the direction of the light industry to ensure that the return to its former value. However, Heraclitus was right in saying that you can not step twice into the same river. The rise of light industry should be made to the new technological, economic and legal framework.

4. The reforms of the 1990s opened the "floodgates" for the flood of Chinese consumer goods. Purchasing power somehow got out before its price. Shuttles trampled on the border with its eastern neighbor entire prospectus, and in fact with them and through them to form cultural perception of the product. First they bought from despair, then, because it is cheap. And instilled a primitive flavor, bordering on bad taste. In modern times, you need to thoroughly work on the culture of consumer demand - to educate the customer. We have repeatedly emphasized in our publications, understanding that the quality of the natural and artificial phenomena is not the same. Consumer goods are made by man and for man. It alienated human essence, including the socio-cultural status of the individual. Consequently, and an understanding of quality should include a subjective perception of a product's performance through the senses and reflection. quality perception should not be allowed to "drift" to give a sensual element or simplistic thinking. It is important to learn not only the art of modern design, high-quality stitching shoes, clothes, you need to help the consumer to understand all this, send it to the aesthetic and hygienic presentation, make him empathize, to feel the satisfaction of the purchased goods.

Wise Buddha is laid in the eightfold path four key steps:

- correct understanding; making the right decisions;
- finding the right words and, finally,
- right action,
- aimed at implementing the right solutions.

The fate of the light industry now depends on what will be the final step. His performance - functions of government. Political paradigm is extremely simple - we should not compete with anyone in the fight for the world market, especially the Chinese. The Chinese rightly want to put on and to put the whole world. fifth of the world's population lives in China. Our task is quite different. We need to make sure that the Chinese are not shoes and wore us. Translate purchasing demand for its own Russian production, interest in goods produced in the country. The task such, we are quite capable, as they say manufacturers. And the government need to do consistently and in a timely manner their direct work, that is, to think, to make decisions, bring everything to the result, team work and, most importantly, respect each other in this team.

The results of the survey on the impact of marketing communications on the promotion of products of light industry in the markets of SFD and North Caucasus Federal District with the participation of students, teachers and specialists and the evaluation of competence of survey participants using the coefficient of concordance W showed the same feature, characteristic of a survey of other problems, such as the impact of competitive potential on the competitiveness of and demand for products, the role of the chipping of fur products to improve filling market demand this produ ktsiey, demand and quality, revealed the relationship competitiveness of enterprises and the competitiveness of products for the formation of a stable demand for manufactured by domestic enterprises of light industry products for consumers SFD and North Caucasus Federal District and to provide them with a stable economic situation with a guarantee against bankruptcy regions. In addition, it was carried out a survey to assess the significance of master's training to fill the domestic enterprises of light industry by highly qualified specialists, the need for which is so acute that borders on catastrophe to ensure the industry such specialists capable of against the background of advanced innovative technology solutions to form the innovative production, guaranteeing businesses

producing import-substituting products, create a town-forming enterprises in small and medium-sized cities of the Russian Federation, providing the population of these cities not only in the workplace, which in itself is vital to ensure that the population of these cities social protection, reduction of unemployment and a decrease in population explosions that can destroy the integrity of the country. In addition, the elimination of the deficit on highly qualified professionals, to provide producers with the justification for such productions for the accumulation of domestic market demand products, including those for children, which is a significant deficit today. Naturally, for the success of the light industry enterprises need to develop domestic production of components, because the number of products for more than a hundred titles,

Analyzing the results of the survey with the participation of all respondents traced the main concern of the survey participants - uncertainty in the interest of municipal, regional and federal branches of government to provide assistance to solve vital problems typical for light industry enterprises, namely:

- low salary;
- low profitability of manufactured products;
- high staff turnover;
- morally and physically obsolete equipment, ie technical and technological backwardness of light industry from foreign countries, characterized by high consumption of materials, energy content, and labor-intensive production;
- a low level of innovative solutions in the industry, provoking weak competitiveness of domestic goods, in the low share of "know-how" and innovative products in the volume of sales in the Russian and global markets;
- a high share of imports that caused the strengthening of the strategic and marketable government dependency on foreign countries, although it is no secret that the competitiveness achieved through the modernization of production processes. The new equipment allows to produce new types of products, but often the equipment we have just imported. We already bought it more than our foreign competitors, moreover, are forced to keep still and backup equipment, as if some unit of broken equipment or fails, it could trigger a stop the whole process, and reduce the output volume, which, of course, have a negative impact on the performance of the enterprise;
- the absence of a civilized market of consumer goods, in terms of increased competition in the domestic market between Russian and foreign producers;
- social and personnel problem, which manifests itself in shortage of highly-qualified

professionals, managers, main and auxiliary workers in all production processes.

They are connected both with the industry activity, and with the ongoing institutional reforms and changes in the national economy, in the area of legislative and foreign economic policy of the country, as well as changes in the global economy.

Mass domestic manufacturer hardly interested in the quality of the theory. It is not relevant to him. If, however, someone accidentally stumble on our discussion, then, likely to smile their naivety. Try using the theory to rebuild the Russian market, to give it a civilized form - classical quixotic. First, you need to organize a market space through political will, legislative initiatives and effective, rather than the sham, control legalized the procedure to return to the market of goods manufacturer, removing significant number of intermediaries - speculators.

This manufacturer is not interested in speculative transactions. Him for sustainable development requires a consumer who, by the way, in turn, do not mind to have some specific and affordable producer within the moral - legal relations.

national esteem brought history and the current reality. At school you can learn from the best history textbook, but apart from school lessons of history have a current life, more impressive historical narratives. In the East, saying: "How many times do not repeat paste, the mouth is not sweet." The theory has always been considered the best practical guidance, however, in normalized circumstances activities. Heading into the illegal and semi-legal status, manufacturer, and alienated from the quality, of course, on the quality of the theory. Next there is a substitution of quality pseudo quality and increasing costs of advertising props. The quality of human activity reflects a complex of its characteristics, which to the greatest extent to the ideal conception of success. [one]

The object of the control is human activity in the totality of its factors, characteristics and features. But man, any activity is a set of actions aimed at solving any problem, allowing to achieve the goal. Therefore, we can talk about the quality of management as the management of those characteristics of human activities that make this such an activity, which is necessary for reliable and real achievement.

any process management in the end results in an impact on some of their characteristics: Performance, reliability, timeliness, design, efficiency, etc. The complex of these characteristics reflect the quality of work. That is why we can talk about the quality of management as a special approach.

In management there is a goal and the means to achieve it. And between these two factors are set well-defined relationship. This relationship specificity, interdependence, direct interaction, adjustment, flexibility, adjustment.

In most cases, our domestic governance is considered nothing more than a means to an end. If we

consider that goal, as a rule, inadequate definition, and the means of achieving them have the same property. Quality control is present as a general description of the product, achieved through regulations, standards, technical control.

World experience of management indicates a change in the quality status of the system and management processes. The strategic plans of many companies quality is regarded as the main goal of management that defines and profits and image, and stability, and confidence in the competition, and the prospect of development. This is evidenced by at least the experience of Japan.

Modern management requires the setting of quality problems as a control target, and the achievement of this goal requires a well-defined resources. The management of quality is very important realization that quality can not be achieved without taking into account all its components, without the organization of cooperation in the quality management system criteria. Many previously established quality management systems, the main role was played by the characteristics of the product, the properties of the produced object, rather than a complex of certain characteristics that reflect the social and economic process of functioning and development of production, the quality of the socio-economic system in general.

Product quality is the result of many factors -. The quality of personnel, quality of the organization of production, the quality of engineering and technology, quality management, design development, etc. All this seems obvious, however, in actual practice, quality management does not become even a special type of control.

The problem of quality in management should have the status of the objectives and management of the subject. It is difficult, but necessary, because we have a different approach to the definition of the content addressed in the management of problems, evaluate them very complex factors. The quality of products can be seen, evaluate, understand. But the quality of the company's activity, giving good product quality, identify and difficult to assess, especially to evaluate the potential of quality. Not everything can be measured by the final result, not all are equally explicitly includes the final result. Much as it falls in the course of its production, formulation, it is transformed into other properties. That is why the quality of the products and the quality of activities - it's not the same, but the latter is much more important to control the analysis of its organization, to set goals and management guidelines, the choice of means and methods of management.

Here here and there and it intensifies a real need for a systematic approach, not just in his declaration. In practice, in the formulation of the problem, in the disclosure of its content, we often exclude the very

possibility of a systematic approach to problem solving.

We should not think that the quality is determined only by the technological content, there are factors that go beyond technology. These are factors working culture, aesthetics, production, market conditions, social consciousness, production infrastructure and so forth.

The systems approach methodologically requires to take into account not only the fact that there is available in this product, as a finished product, but also the fact that there was in the process of its production or formation. In many cases, it was difficult and time-consuming process in which something disappears, turns into something else, something to change the status. But nothing goes unnoticed, and everything stays in one way or another as. Especially valuable and quality notion that it focuses on a systematic approach, if considered as a management objective that it requires to take into account the factors of procedure or structure, existence and development of the factors for a particular environment, human interests, values, social life and so on.

Today, not only the state standards and quality requirements necessary for quality management. They may reflect a minimum level of quality, which is to defend the state. All state requirements for quality - is the administrative system of quality management. No standards and state requirements will not be able to keep up with the changing human interests, market competition process, the change in the system of values and way of life. And it is they who determine the quality and understanding of the need for flexible, social and economic quality control. [2]

As a necessary criteria, reflecting the dynamics of socio-economic processes. Quality should be determined by market situation characterized by the processes of supply and demand dynamics, needs and values. After all, only through market mechanisms of supply and demand, competition, pricing, and other processes can reveal the true quality of the product, to show that it is necessary to take into account its characteristics. State requirements if they are to be able to guarantee a minimum of quality, which is constructed by the system of protection of the consumer from the very low-quality products. This quality dynamics can only be understood in economic terms of supply and demand, competition, pricing, product functionality, its effect on lifestyle and role in changing the lifestyle of the person.

Quality - is not only a set of product features, and it is the initiative and activity of manufacturers in achieving these properties, search for and achieve their specific combinations.

Quality - a concept of socio-economic type, it is not a static system properties, it's a man's attitude to his work, to society, to the management.

Clarivate
Analytics indexed

In terms of quality mark assignments, we have always been in a state of growth. But the true dynamics of the quality we felt in spite of this indicator. It is natural to conclude that - or underestimated the criteria, or just incorrectly compiled and used these indicators. Quality mark did not show the true quality. This can be seen even on the export of products. The volume of products with the quality we have grown, and demand for our products in the world market declined due to the poor quality of its non-compliance with international standards.

Now there are processes of structural adjustment of our production, and it is important to lay the control system fundamentally new quality management framework, to focus on the production of quality management as the goal, and the foundation of successful operation of production. Quality - this type of development, this new approach to the regulation of product life cycles, the creation of new types of products, the assessment of obsolescence and physical deterioration, taking into account the principle of universality.

Quality management requires appropriate that purpose information support system. Relying solely on the meager data of domestic accountability, can not sometimes make a true picture of the quality of the state, especially to find the reasons for his change, or to assess the processes of formation. But the main thing is to manage the quality of the sources and trends change.

The quality control problem is reduced traditional representation mainly to the quality control problem. It is a sign and a factor administrative approach to quality management. But the experience, both domestic and foreign, show that the main quality of a comprehensive quality motivating factors of management, in which the leading role is played not control, it can be minimized, and the image of the productive worker, which are connected and function, and goals, and means of self-affirmation, and interests, and attitudes toward the company, and communication skills, and socio-economic activities of the atmosphere. Management should be focused precisely on the image of the activity corresponding to a certain type of quality activities.

This eventually gives the product quality and without a hard type of administrative control, and control of both the analytical evaluation system.

The "mark of quality" of the market economy - the price of the product, its reputation, the demand, the company's image, which generally produce low-quality products can not.
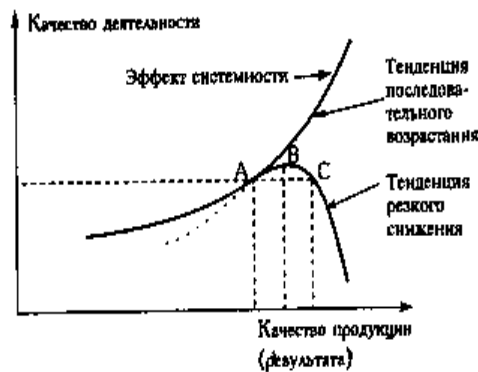
Figure 1. Changing priorities and management role in the achievement of quality, seven steps into the future

Figure 2 - The quality of work and product quality: the interdependence of tendencies

Achieving quality requires a certain cost. The value of the quality of the cost - the most important characteristic that reflects the quality of management. But the cost of quality is not yet characterize the potential to achieve quality. Costs can be very high, but lower quality because the costs not always have immediate and direct impact. They sometimes serve only the sequence of formation of quality building, such as the qualification of the cost of employees, production infrastructure. [2]

Therefore, great importance to quality management is the formation of the quality of building, which includes cultural activities, social and psychological atmosphere, qualifications and education of employees, technology, technical equipment, the type of organization.

Quality does suggest serious costs, but it ensures a stable market position. Working on the quality, the manufacturer creates confidence in its future and national. Properly structured understanding of the quality guarantee term, even in the conditions of domestic sex market].

We will try to introduce in order to formulate a theory practically significant fundamental positions:

Quality can not be reduced to the amount of goods being important for the properties; it is - a kind of combination, which was built on the basis of generally two features - a more general and more specific. For example. Shoes - "clothes for the feet," the hat - "for the head dress" scarf - "clothes for the nose and neck", etc. Consequently, the central attention should be paid to them.

Quality allows changes that do not lead to loss of quality, but reduce or increase its customer value; quality - quality set of states satisfying in varying degrees backbone characteristics. "Backlash" quality allows you to maneuver in the process of creating a product with a given quality, depending on the specific features of producer and consumer.

Quality not quantity is there - they are dialectical opposites, their opposition is only valid within the unity, which implies that by creating quality, it is necessary to lay in the qualitative characteristics of quantitative expressions in respect of certain properties of the product, and the number of commodity products. AK Savrasov, finding themselves in a difficult situation, made a few copies of his famous painting "The Rooks Have Arrived". As a rule, author's copies have a high level of skill and are well paid. And paid to the artist. When asked P. Tretyakov: he would buy a copy of the artist's paintings, AK Savrasov, happen that the original? The answer turned out to be P. Tretyakov forecast for categorical - no! Quality requires not only skill, but also inspiration. Inspiration replays burns.

The quality and quantity of links the measure, which is most often overlooked. Meanwhile, the defining quality, you need to think simultaneously about its dimension, and from the standpoint of the market conjectures, and in terms of quality-signs themselves. "Quality" is specified in the idea of "quality." "Quality" - a concept that reflects the image of the product lineup, "goodness" - determines the quantitative limits of reality and the quality of intelligence (physical and moral goods status).

The quality and presentation of the quality related to the phenomenon of stability, however, the time change and. Initially identified quality with value. quality criteria were the subject of the usefulness and value of the relationship. With the development of consciousness and the practical possibilities of developed base of comparison and choice. Quality is relatively segregated from quantity. Committed differentiation of utility, is reinterpreted as part of quantitative traits. Evolution of understanding of quality is directly due to the embodiment of creativity in business. The discrepancy in the intensity of advancing individual skills, interests of those who are called to clear the way of talent and mass

consciousness complicates the understanding of quality and quality management process. Of particular importance is the quality of interpretation of concreteness, in particular, its basic feature such as objectivity. General theory of being built on the basis of natural history - an outline of its inherent nature and the historical pattern created man. In the natural environment, all signs, including synthetic such as quality - products of spontaneous movement. In society, every phenomenon passes through activities includes in its quality of mental and physical labor of man. Determining the quality of the phenomena created by human activities, it is impossible without the social and cultural specificity. In this connection, the updated two questions: what is the status and the extent to which consciousness is part of what is traditionally called the quality of things (with the clarity of the services more)? General theory of being built on the basis of natural history - an outline of its inherent nature and the historical pattern created man. In the natural environment, all signs, including synthetic such as quality - products of spontaneous movement. In society, every phenomenon passes through activities includes in its quality of mental and physical labor of man. Determining the quality of the phenomena created by human activities, it is impossible without the social and cultural specificity. In this connection, the updated two questions: what is the status and the extent to which consciousness is part of what is traditionally called the quality of things (with the clarity of the services more)? General theory of being built on the basis of natural history - an outline of its inherent nature and the historical pattern created man. In the natural environment, all signs, including synthetic such as quality - products of spontaneous movement. In society, every phenomenon passes through activities includes in its quality of mental and physical labor of man. Determining the quality of the phenomena created by human activities, it is impossible without the social and cultural specificity. In this connection, the updated two questions: what is the status and the extent to which consciousness is part of what is traditionally called the quality of things (with the clarity of the services more)? In society, every phenomenon passes through activities includes in its quality of mental and physical labor of man. Determining the quality of the phenomena created by human activities, it is impossible without the social and cultural specificity. In this connection, the updated two questions: what is the status and the extent to which consciousness is part of what is traditionally called the quality of things (with the clarity of the services more)? In society, every phenomenon passes through activities includes in its quality of mental and physical labor of man. Determining the quality of the phenomena created by human activities, it is impossible without the social and cultural specificity. In this connection, the

updated two questions: what is the status and the extent to which consciousness is part of what is traditionally called the quality of things (with the clarity of the services more)?

The answers to both questions must be sought in the philosophical theory of alienation. The theory of alienation directly related to the quality of the theory does not. In her the keys to the methodology of the quality theory. From the above discussion it is clear arranged that the authors - not idealistic rather on the brink of pessimism and optimism. They perceive the modern critical approach pragmatic liberal marketeers to scientifically and philosophically grounded theory. Lite version of the theory, when torn from the general theory moiety is converted into the theory and customize a design for the sake of perverse market speculators, economic theorists and suppliers of high-quality substitute for domestic counters satisfied. How long will the Russian economy will maintain this configuration, we (and only we) can not know, but the world economic development experience in different stages of economic relations shows that the transitional periods are, and eventually economic life comes to its normal state.

The trajectory of human creativity in the process of alienation that exists outside it, should the need to preserve and enable the ability to create. In contrast to the life of nature, the human being is not substantively. It is not self-sufficient and can take place only through interchange initially with nature, in consequence of a society through which human relations are built to each other and interact with nature. Tool that provides human being - work, higher quality of work is shown in operation.

Quality work, on the one hand, the index of quality of life (as it should be!), On the other - high-quality work is embedded in the quality of what he translates. The quality of the "first" (natural) nature is formed itself as a set of objectively related natural signs, spontaneously. The quality of the "second" (reconstructed, adapted by man for their own interests) Nature Synthetic. It is a double helix formed by the natural attributes of a natural material (possibly - in people's attitudes, knowledge, expressed indirectly) and qualitative characteristics of human activity - knowledge, emotions, will, values, craftsmanship. As a result, quality of the product as opposed to the quality of the product embodies the personality.

Personality alienated as and because, in principle, the alienation of natural and does not inhibit a person. The negative consequence of the alienation caused by the disproportionate compensation for lost energy activities. Finding no quality goods, hidden marriage of production, fraudulent actions of the seller, the buyer is upset normal, primarily due to the poor quality of their own solutions. Other losses of the transaction often reimbursed. There is a feeling of imperfection own taste and knowledge.

The quality of everything that is created activities, including property activities, both practical and spiritual in objectified (a microscope or functional) terms. The conclusion of the need to shape and guide the development of mass consciousness the ability to quality assessment of goods: some experience in the Soviet era and has been shown to be effective, "circles", "school", "university", including those initiated by the TV and radio. Place the system of education the mass consumer, professional assistance in the development of a culture of quality selectivity, today the air clogged aggressive advertising, the quality of which is not controlled or control is not commensurate with the size of the fraud. Who should be the main educator? Manufacturer and he alone, because only it fully, according to the logic of formation of understanding, you should know what quality is. To undertake the production of goods, not having comprehended particular quality of this product, it is a professional failure in the market.

Release of the same product with sham quality pursued by the law, however, formally and ex post facto. On the last and hope pseudo suppliers of quality goods.

For objectivity's sake let's say: the true creators of quality products will be in our market outcasts until such time as peace officers are confident in their impunity for corruption. Nevertheless, it is necessary to go forward. History ugly, but still moving towards conservatism order manufacturing technology, but also in the period of municipal government severely tested the quality of products, as well as the ability of the candidate to the producers operated official position, approved by the authorities of the city or the country. Agricultural products controlled by the users themselves.

The Industrial Revolution has simplified the production process, has established the mass production conditions. It took adequate quality control measures. As the leveling of social architectonic and greater accessibility to the range of products, changing perceptions about the quality in the direction of its quality - quality components. At the same time formed the possibility of falsification of quality. Further and de facto and de jure, it remained just a step to the substitution of brand qualities. Going abroad action paves the way for legal violations and moral crisis, up to no limit.

On the way to a consensus arises seller, the subject of relations, which, in essence, to the quality of the goods is irrelevant, but it was he - a key figure in a market economy. We had all the necessary gain. He - a monopoly and as such dictates the terms of the relationship through the price and size of interest income. In Russia, for twenty years, not a single branded light industry, on the contrary, declare an array of retail brands. Trading numbers multiply, and consumers are assured that the production of goods unprofitable. The culture of the organization of trade

replace the concept of "selling quality". Trade Culture measured range, price and physical availability of the product, high-quality advisory support, the lack of queues, the observance of hygiene, appearance and behavior of staff, servicing. "The quality of trade" is determined by proportionality of prices and quality of goods corresponding to the goods sold its certificate, demonstration of goods. Size seller profits must not exceed the manufacturer's profit. Both do not have to wait for increase in consumer activity only by increasing the wages of consumers, and create the most favored for the buyer (without entering into an agreement with another market predator - the banks). [2] and create favorable conditions for the buyer (without entering into an agreement with another market predator - the banks). [2] and create favorable conditions for the buyer (without entering into an agreement with another market predator - the banks). [2]

Only in Russia, and only liberals - marketeers every chance remember how bad it was to the people before the onset of true democracy - starved, went ragged lived is unknown where and how. Monitoring the quality of life - through the quality of consumption opportunities - is appropriate within the existing time. One criterion - increasing consumer basket and thereby it increases?

The size of the inflation - a necessary but not a sufficient indicator of the quality of life. The government took over the main reference point decline in inflation. Figure actually socio - economic significance, it testifies to the culture of the market and indirectly on the production status. Less of this index - the lack of quality in it. Quality of life is determined by the amount of consumption of products in terms of money. Qualitative composition remains constant and can only be of a qualitative as blurs quality. Quality shoes, clothing, cereals, fish, vegetables, fruit within the common name is very significantly different. Provision of quality manipulation is significant. The main thing to understand the quality, not the name, and the system characteristic of the product, reflecting the range,

The quality system is essential for a product's performance - it is commonplace and well known than actively use. Substituting properties or their consistency in product quality. Essential properties - those that are not just inherent in the product, they are responsible for its functionality. These properties are usually disclosed in the "work" of the goods to the destination, they are hidden from the view of non-professional user. The "pure" market - the mediator and to the quality of products must not have interest. market problem in the theory of the organization of commodity production - organization of exchange between producer and consumer. Market development stimulates the production capacity in the interests of consumers within the infrastructure market status.

Monopolization of production has led to the accumulation of financial capital, autonomisation of the latter and control the market. As a result of the market intermediary has become a key subject, the indicator function - to show the demand for goods - trying to replace the role of the organizer of economic activities in general, which distorts the economy system. [2]

Economy of commodity production have created the product production and the need for mass product. Systemically important factor here is the production of the commodity as a product required for consumption by others, ie the process of alienation of consumption. When the production of natural quality of the product is unlikely to have been an actual problem. The quality of "dissolved" in the conservative engineering and technology, the traditional range. I raised the question of a consumer when the fair had the opportunity to compare. The market, which has grown from fair gatherings, Executive status gradually enriched advertising business by taking control of the relationship of producer and consumer. levers - fiscal policy, direction - basic - two: the impact on the quantity and quality.

Product quality has gained importance in the production of commodities. It became clear that in understanding the present sensory quality and rational thinking (the latter in the form of calculation). The subjective factor is objectified and fetish. The objective properties of the goods market directly (using their own mechanisms) is not able to act, but on the objectification of subjective ideas might very well. Since manipulation quality first included in the function of the market, then it became an element of economic policy.

A robust and sound economic policy is designed to work on improving quality in two interrelated areas: technical and technological, unfinished rigid legal provision unit, and socio-cultural - to provide their full support to the establishment of the subjective perception of the quality of environment, to block the negative effects of advertising exposure for a long time and thoroughly become an attribute of market speculation quality importance for the buyer. Having a choice and paying capacity not serve as a basis unquestionable quality acquisition.

At current market price and the quality are separated even at auction, famous for organizational culture care. The buyer is converted to an expert and this grimace market is not as bad as it is illogical. Market forces the consumer to evolve as a person. From the layman with a purse we are not to be suckers, unwittingly tried to learn more about the subject of interest, raise their "purchasing skills." The term is not new, it is used by journalists, but for them it is the entrance, a verbal number and is not a new combination of words commonplaces for us, the most

important concept without which modern quality theory has no systemic holistic view.

"Purchasing qualification" includes, along with the certain knowledge that help determine the location of the store, the range of prices for goods requires basic information about the manufacturer, product quality attributes, the market reputation of the manufacturer, the firm traditions, level of activity. Today, the consumer market naive buyer runs the risk of allowing beyond all measures being a victim not only of deception, but also their own carelessness, therefore, without any right to compensation.

The buyer in Russia is formally protected. In real life has to be guided by the well-known rule, "the rescue of drowning (" buy ") - the handiwork of drowning, read" Buy. " Increasing the "purchasing qualifying" if there is the desire for a mutually beneficial business state, activating the cultural heritage of national and patriotic mood of the mass consumer. Although there is a path other than the tried and tested under Mao in China - "the worse, the better."

Imported consumer goods - not Chinese - in 1980-90-ies. we had a great success! Impressive range of products, packaging, external features of the product. And in the end? After 10 years of Soviet brands manufacturer returns naturally in the absence of effective control, not the Soviet quality.

We are able to make high-quality products and it is able to regain "our" market. The issue is not even the price, the problem is a loss of control over the consumer (not only the consumer, according to the malfunction of missile technology, operation of aircraft, etc.) markets. We explain: we need economic policies. That's right, but it is a half-truth. If necessary, take. The authorities should have the power to not rated. It is time to understand that the economy has always been the policy of economic theory - political economy. [3]

Economic movement is self-movement, but it is not happening in a vacuum. Economy - the basis of a social movement. The Company provides the conditions for economic movement, and the state has the right to vigorously included in the economic self-movement mechanisms and direct the development of the economy in the public interest.

It's amazing. When it comes to future technological progress, the futurologists of all stripes are moaning that the autonomy movement techniques lead to the domination of robots over a man, but it is better not to interfere with the development of economy. For someone better? Only one conclusion: not to break the self-movement of the economy in the interests of those who privatized the economy, and in whose service are "border guards", prohibiting the control of economic processes through policy.

None of convertible currencies not provide a quality trademark and the equivalent "free" movement of the currency continued under the guise of policy.

Financial self-movement creates opportunities for chaos in the consumer market. Sluggish state protects the legitimate interests of domestic producers, even when the product - the product of inter-ethnic integration. No political aggression, policy lags in the train instead of the economy, to keep ahead of its development on the basis of objective socio-economic trends. Politicians want to believe the explanation regarding the success of the WTO accession. Well, they were trading, creating a legal "safety cushion" for the domestic producers of consumer goods. The problem: they are concessions to the WTO is now seize?

The time for political action - not making - the most favorable. Datura nineties and zero like ebbed. Returned understanding of qualitative advantages of many Soviet products of light and food industry. There is a revival in consumer cooperatives that can stimulate the production of agricultural products in rural areas. Growing distrust of consumer imports, including by reason of its mass produced in China. Stabilize migration flows.

Tough assessment of the socio-economic situation and direct indication of the government's responsibility for the failure of presidential orders in 2018 in the Message V. Putin, associated with a determination to "tighten the screws" to the movement went on track. Explicit activation in international economic relations within the Customs Union, to restart strategic relationships with a focus on China, India, Iran, Latin America. Real possibility of full cooperation with Egypt, Syria and Iran in the same - in the Middle East and African key states of the north - all of this unique international scope to restore the balance in the domestic market of consumer goods.

Domestic manufacturers need a "distinct" economic policies. By "distinctness" they understand: clarity, consistency, warranty tracking, which allows to cut diverse arbitrary administrative authorities and the "guardians" of order. Responsible for the quality of all. And those who produce and those who are called to ensure the rights of producers. The Customs Union is lit green light on the path of national products on the market Pact. Thus creating equilibrium real market competition, which assessed the natural rather than the quality of advertising. By the way, a great research topic - "as real and" advertising ", ie created by advertising.

No less important, and to analyze the quality problem in the coordinate system of the national mentality and ethnic integration. Integration consciously replaced by globalization, despite the evidence to the difference between these phenomena. Both tendencies are objective and are characteristic of the modern history.

Integration - interethnic interpenetration of the various activities of socio - economic, cultural and humanitarian scale. It can be inter-ethnic dimension, an example - "The Union State (Russia and Belarus);

local - the Customs Union; Regional (SCO, EEC). Globalization refers to the global scale of the phenomenon. Among the global problems are those that have arisen as a consequence of the general, but not necessarily integration, processes, and require a consolidated solution.

Global problems, in contrast to the problems associated with the integration of potentially relevant, are of strategic significance. For example, how to protect life on Earth from large meteorites. When the time of the event postponed, but it goes beyond it relevant in importance, the resulting gap actively rush speculators, including financial oligarchs come from trying to remove uncertainty.

Quality due to globalization, but practically not so important. With the integration of the same quality is directly connected.

Consider the "quality of consumer goods" problem in a coordinate system the "national" and "inter-ethnic". First of all, we must find an answer to the question: can supersede national integration as a component?

Integration processes are built on common standards and metrological characteristics of the production, which corresponds to the objective reality. Technical progress is based on science, scientific knowledge are imperative in terms of normativity. However, the total not being self-sufficient. General requirements are implemented through special development, due to the particular circumstances of the action. In other words, as it were, standardized production of goods was not, still it will manifest the uniqueness of the production conditions.

Specific conditions - regional, national inherently present in the raw materials, climate, traditions, culture consciousness performers. And in all this the strength of production, determines the quality of the nuances of the product, creating a special interest in it of the consumer. Tea is grown in our time all over the world, but the uniqueness of the tea plantations in Sri Lanka, the national attitude to tea, Ceylon ensure the quality of the product leadership position. The same can be said of Kenyan coffee, Bulgarian and chilli, French cognac and champagne, Ukrainian lard, Bavarian and Dutch beers, Scottish whiskey, Russian linen, Egyptian cotton, silk, Chinese, Argentine leather, Greek olive oil and much more. Specific environment to be valued and to provide preferences of its reproduction. The basic treaties

Customs Union establishes inter-ethnic division of labor, which was built in the XX century, it contributes to the expression of the objective and subjective sides of the development of production, mutually enriching market, facilitating access to producers. But all this - the theory. The theory develops into reasonable practice not only because it is right. Practice theory does work, and to get the

desired result, the activities must be systematic and consistent.

Interest in the quality of the goods, in theory should begin not in production. Its initial position on a normalized market, more precisely at the meeting the producer and the buyer. Normal market - an indicator of quality of the goods. Demand pulls behind it the industrial chain. But it is not a spontaneous demand is abandoned to their fate buyers. Demand - a state of consciousness due to purchasing power, however, can not be reduced only to the amount of money, especially when strongly stimulated lending by banks. Demand, farmed out to intermediaries, lobbyists, speculators - a deadly disease to Russia's national producer. Demand should take control and shape, the buyer need to educate. Consumer education costs a lot. But it is worth it, if you look to the future.

Market liberalism corresponded to the flourishing economy of mass production of the first type, focused on the provision of free access and choice of products. Such production perceives the consumer as an abstract entity relations in the system "producer - the seller - the buyer." Seller play the role of an active mediator, but no more. He provides a cultural meeting place of the manufacturer to the consumer. The system also should be functionally active, suggesting no presence of its constituent components, and their participation. The perfection of the system is determined not aesthetics - sign design. It manifests itself in to maximize the capabilities of the system of relations which it stands. Perfection of system design - in the ultimate realization of the potential relationships, creates system.

Buyer is perfect as the subject of systematic interaction between its purchasing training. He is not the size of the payment ability. His participation is determined by the knowledge of the commodities and the economic situation. The consumer - not the application object actions of the seller and manufacturer. Consumer - market participant and in his (and others too) interest to be informed not advertising community and professional sources. Then counterfeit and "lohizm" cease to populate the market. Product quality begins in the mind. To impose an idea of the quality - bad for all legitimate economic actors. It should be brought up again by all: the manufacturer, the seller by the buyer and the institutions of civil society, if the state is passive.

The transition to mass production of the second type - "smart," "zealous" economy activates the system relations. The new light appears the market function. Together with the manufacturer, the seller is guided by the knowledge of consumer tastes. By the perfection of the system remains to make just one, but not a simple step - the whole world to undertake the formation of a consumer culture.

The current generation of the charge of the consumer attitude to life is not quite fair. Consumption - the ultimate goal of production. Problem - the lack of mass market, the trouble really sociocultural size of consumer culture. Another consequence of financing the cultural progress. Why one power after another, but the culture is still in power in the last stage of the political relevance? Time to realize that not only the science has become a direct productive force. Culture - is also a factor of development of production, and factor versatile and highly effective.

The market has a great potential to manipulate the products and prices in the absence of a clear thought-out and organized interaction in system of relations of producers and consumers. Liberal political economy focuses on the freedom of the market, without having to worry about the content of the concept of "freedom". Arbitrarily interfering in the responsibilities of the philosophy, the Liberals pretend to solve their problems, misleading professional thinking and social consciousness. Not all economists, theorists and practitioners versed in philosophical reflection. Using a similar position, growing its market liberals' notion of "freedom, trying to free the market from the necessity of submission to any of its terms. In fact, economic liberalism, proclaimed by Adam Smith in a specific format, transformed into a banal market anarchism. In countries, with strong democratic traditions, downloaded humanistic values and social responsibility, liberalism loses its political positions, but it does have a serious roof in the face of a thriving financial capital, fatliquoring by the market. We do not want to deprive the subject of the status of market development of cultural production. The market is no doubt it is, but to put the market in a number of common subjects of production, therefore, ignore the evidence of different treatment for the most important indicators of the development of production - the ability to increase the cost of labor. freedom of the market comparable to the freedom of the judges on the football field. Judges do not play, they provide the game under the current rules. They can slow down the pace of their actions, bring down the pressure, play along, but it all happens in the mind, under public supervision and professional and will be prosecuted in accordance with established procedure. Exchange market function objectifies his only important thing to remember about how to display objectivity. Material form of objectivity - is the technological objective of production, the physical reality of the goods - really is primary and is subject to the natural basis of social life; objectivity of production and economic relations, including the organization and division of labor - "secondary" objectivity created with the creative participation of the subjects of labor - it's natural and historical objectivity. There are, apparently, a third, a transitional level of objectivity, indirectly controlled by the objective nature of the production. The market belongs to the third level. Hence, such a different reality of the market, Organizer Features manipulated quite arbitrarily within the market and in the interests of the market. Engels explained E. Dühring: "In a

society where commodity production is the dominant mode of production," the market has always been very well-known abroad ... among the "business people." Due to its specific reality "in transition" from being tightly regulated production according to the relativity of the terms of exchange of natural and historical specificity, the market actually combines adequate actions with specific properties, organizing of the last their infrastructure. They hide behind the "marketeers" "Iron argument" - market "barometer" of production conditions. In this position, all the actions that, according to the classification of Hegel, not valid are allowed as needed-conditioned. Quite logically Petzold, who saved Machism solipsism by introducing a " relationship 'potential member formula being. Petzold not personified the "potential member", but it was not difficult to understand that it must be something universal, standing on a subjective form of consciousness. Marketeers, absolutizing the situation of the market, more precisely, the exchange through the market, achieve control over production. Interest marketeers again reminds us of the power of money.

Of its objective position the market should not earn more than the manufacturers. Otherwise, production stops, and with it, and social progress. Now the situation is critical, and the first cause of the crisis is the policy of the financiers, the second - the market speculation. Prices of real goods in the market for a long time does not correspond to the value of their real production costs of delivery and sale. The problem is to liberals in one - form a mass. All the same, on the street XXI century. Therefore, the world politics in the sphere of modernization of education aimed at its "market" division. The vast majority of graduates doomed to be clerks, a small minority, mostly of their own, plus those who are especially talented pool of senior managers. It's not the name of the university, and in the interest of you, very rarely dependent on you. The heyday of the market and its infrastructure due to the birth of mass production. On the first level of mass production market has been the most regulated task to deploy the product in the implementation of the scale of production to reproduction was dynamic. Above all dominated by the need for the production of working capital, as the benefits of mass production is the ability to reduce costs, thereby reducing costs and increasing the competitiveness of goods. A key factor to make the time of sale of goods. "Time is money". Mass production has given rise to trade principle: the user can not find what he's looking! Universal Megastore offers almost the entire product range of the product in all its possible variety, including the price. Soon cleared that the lack of certainty associated with the high cost of raw materials, energy, maintenance of premises, a large number of unsold goods, especially the limited shelf time. Market with its function has not managed as planned. Was an important event, it has not received the deserved estimation may not want to lower the reputation of the market rating. Production workers "went to the people" - to study the demand in view of social stratification. Case is troublesome, reaching definitions are not as accurate as we would like, but even on a provisional level, it serves as a basis for production planning orientation. [3] has not received the deserved estimation may not want to lower the reputation of the market rating. Production workers "went to the people" - to study the demand in view of social stratification. Case is troublesome, reaching definitions are not as accurate as we would like, but even on a provisional level, it serves as a basis for production planning orientation. [3] has not received the deserved estimation may not want to lower the reputation of the market rating. Production workers "went to the people" - to study the demand in view of social stratification. Case is troublesome, reaching definitions are not as accurate as we would like, but even on a provisional level, it serves as a basis for production planning orientation. [3]

Information work market - is universal. It is included in the essence of the functioning of the market and changed throughout the history of the market. Is no less obvious that the market information is often developed faster the base of the market, has formed a separate segment of the market reality that has as its main reason for the increased competition between manufacturers - becomes a commodity in the market more and more, and growing number of manufacturers. The market itself will eventually become the subject of competition, actively involving advertising and dissemination tools.

A quality product that meets the immediate needs of the consumer, needs no advertising. Advertising market was the name of the manufacturer, in Russia and in Europe recognized manufacturers added to the logo of their trade mark "supplier of the court," the ruler of the state. Trade was part of the production and carried out under the control of the owner. Take, for example, Ivanovo manufactory, bakeries Filippova Moscow, jewelery Faberge. Advertising has been a consumer rating, by the way, the ideal of advertising as an objective information activities and should be an assessment of the product of public opinion. Today, the ideal criteria for advertising practices do not write and do not speak. Advertising not only separated from the data stream constructed on the objective data, made purely commercial event, defining it narrowly pragmatic quality in the interest of the seller. Seller has replaced the manufacturer by the wayside. As for the buyer, in the stormy sea of advertising it is akin to Ivan Aivazovsky depicted the people in the painting "The Ninth Wave", tied to the mast debris and trust in the help of God. The best advertising slogan - "Do not be fooled - you do not sell!" Based on the "qualitative analysis" of advertising, we introduced the concept of "quality of advertising" by opposing his real quality. "Real quality", in turn, is not a simple problem.

International instruments in order to achieve consensus notion of "quality" deliberately simplify defining either as a set of specific properties of the goods, services; or as a high level of ability to meet the needs of the user. Hence the desire to formalize the quality, to bring it to quantitative characteristics to the end of the process to receive the technical problem. Plurality of representation of quality is a prerequisite for the quality of the manipulation, the highest of which is the demonstration of the "work" with the quality of advertising craftsmen. Production only makes sense as a way to meet the needs of the user, thus the quality of the product reaches a peak characteristic in recognizing the user's name, even though the quality of objectivity is revealed by the manufacturer as a specialist. In the old days the shop and manufacturing production problem of mutual understanding and bilateral meet rested exclusively in the high cost of production. The clock in the time of Huygens - the creator of the pendulum mechanism - were available only to very rich buyers. Huygens made the clock gave the king of France. Louis asked, how long they will serve? Huygens answered them with a constant degree of accuracy will satisfy your descendants. Metal tableware calculated for generations. This product did not have to demonstrate the range was also limited. Relationship producer and consumer, as a rule (when it came to consumer durables), provide direct information was objectively given, guaranteed by the manufacturer and the product taken for granted.

Advertising felt freedom and on the quality and objectivity of the responsibility for the implementation of the advertised product, when market information is lost direct contact with their subject base ceased to be essential, go to phenomenal level - won the art of "file" item. It is interesting to trace the nature of the evolution of the fine arts and the art of advertising. Realism in painting at the junction of the XIX and XX centuries gave way to Impressionism popularity. If the realist sought to recreate the objective reality in the context of human aesthetic feelings - the landscape was intended to show the beauty and power of nature, portrait - to reveal the spirit of the individual, based on the originality of the depicted object, the subject of the Impressionists made their play of light, creating new technologies in art. The reality of the depicted object are saved, it is easy to see, but the viewer sees an object through interaction with light, the effect of which is transferred to the innovative technology show. From Impressionism, a new concept in the painting - "plein air".

The transformation of the information is similar to the evolution of painting and advertising commensurate with the approach to the subject that gave rise to an open-air art. Product advertising can not be excluded. Elements characteristic of the advertised product, must be present in the advertising of such items from the Impressionists, but to depict the product? It already belongs to the creator of the advertising of the product, the market of mass production "consumer" society, practically does not limit the freedom of fancy advertising. The difference in the form of risk. Impressionist risked himself - could remain without a buyer, and go bankrupt, advertiser, in the worst case, lose time on some of the confidence in their competence. Information the beginning of the organization of market relations clearly showed Z. Nozhnikova - cultural historian, collected in his monograph "The Curious Moscovia" notes Western ambassadors, visited in Russia in XV-XVII centuries [6]. The vast majority of Europeans who visited Muscovy official visits as part of embassies, were surprised by the consumer culture, construction, order and ... prices in the market. Many made his fortune, he returned home, on the differences in prices of goods bought and sold in Russia at home. Then the information about the quality of Russian products and their actual price was strictly objective, as it should be the information received for it, as they say, from "first hand" - from merchants or producers. And those and others have acted within the rules established by the authorities under the supervision of the king's orders. Based on documentary sources (P. Petreius, P. Allepskogo, I.-F. Kilburgera et al.), Z. Nozhnikova concludes: "The most interesting thing many foreigners seemed markets. In the markets was something to see (ie, product advertised himself better than any customized ads. In walking through the market could successfully combine important business of studying trading state in Muscovy ... ask the price for future purchases, which, as gifts to relatives and friends, you should buy before the return trip, and - perhaps most importantly - to marvel at the wonders of wonders, as he called Moscow Airman market .. Markets in Moscow and Arkhangelsk worked as an advertisement of itself Muscovy, were its hallmark for the Europeans, who did not know Russian. It is highly unlikely that the current Europeans from Russian markets have experienced the same feelings with which their ancestors had left the market. In Central Asia, there is a saying: "No matter how many say halva, halva, halva, sweet in the mouth will not be." It perfectly describes our politicians, liberals, alleging market achievements of the Russian Federation. It remains to add to the above that the market, as economic phenomenon, reflecting both a political reality. The market can be released to float freely, or to introduce him political control in the interests of the social spectrum, it is our national toy "roly-poly", will remain an indicator of the quality of political management of the economy. And ads here performs the same function as the concertmaster of the symphony orchestra - adjusts the sound. Normal market, that is really free and fair organized by the trade, regardless of the size and position of the seller, with the need to provide the information required. All

other information is superimposed on objective and intended to elevate objectively, cultivate the original objective information product. "Attractiveness" of the advertising category is transformed into an economic, or rather - a market brand. Theoretically and methodologically even "appeal" refers to "through" concepts that characterize the activity and its products. It is unlikely that there are opponents of this statement. The essence of the consideration of "attractiveness" in the light of our problems is not in the definition of "appeal" as such, but in its concrete historical manifestations. Activity - a way to implement the idea, is the idea of practice will not go beyond the element of consciousness is knowledge and is likely to lose after a time value. Relevance, meanwhile, lies not in the activity and in the process of realization of the idea, a method of the same activity is regulated by the space-time coordinates, and revealing relevance limiting mode of action. History is made up of actual historical periods - the actual stories. Historical phenomenon, regardless of its nature - material or ideal, it is not when accomplished, but only if included in the historical chain of events. In the dialectic of social development so described by a pair of categories, "historical logic", and historical phenomena can "fall out" from the logic of the historical process that is natural. Otherwise, the development involuntarily forced to think about the divine creation of social history. when it included in the historical sequence of events. In the dialectic of social development so described by a pair of categories, "historical logic", and historical phenomena can "fall out" from the logic of the historical process that is natural. Otherwise, the development involuntarily forced to think about the divine creation of social history. when it included in the historical sequence of events. In the dialectic of social development so described by a pair of categories, "historical logic", and historical phenomena can "fall out" from the logic of the historical process that is natural. Otherwise, the development involuntarily forced to think about the divine creation of social history.

"Attractive" in the broader context always stimulated activity. In recent history, this concept has acquired a new meaning and a new value, respectively. It turned out to be at the center of economic contradictions in the market. It actively exploit the advantage of all those for whom the market - the main source of speculation, they will go on "Breaking Bad." It sees salvation consumers are those who preserve the honor of the professional manufacturer. The question arises: why is it so stable position on the market speculators? The issue is divided into two parts. The first part - at whose expense they have their "margin"? The answer is simple - they are fed producers and consumers, of course, not willingly, of necessity, obeying the order of regularities. The second part - why it is so

prescribed by law and that takes power on all its levels, to be the power of the people - democracy. At this point we have to stop asking. Prompt response statistics. In quantitative terms, compared with the Soviet period, the government significantly strengthened by branching, increased from two to three times the number of its employees, the financial capacity to ensure their well-being and fusion with legal marketing business. It would seem likely to "appeal" to draw in the interest of production and consumption is small. So it is, but objectively they exist. [3] It would seem likely to "appeal" to draw in the interest of production and consumption is small. So it is, but objectively they exist. [3] It would seem likely to "appeal" to draw in the interest of production and consumption is small. So it is, but objectively they exist. [3]

Let us try to approach the problem systematically and comprehensively. Dissemination of scientific knowledge in the modern systematic and comprehensive approaches are successfully combined with each other, making it possible to look at the subject of study in two basic projections: from the outside (on the side) and from the inside. An integrated approach to production planning is necessary to analyze all the facets of the subject operation to achieve not just limit the objectivity of knowledge, but also get the "bulk" of knowledge about the subject matter, exclude the possibility of omission of any significant manifestations of it. We often hide behind the accident. It usually happens when we forget the origin of the accident. Randomness is born at the intersection of necessities. Prevention of unwanted random events is based on the active involvement in the learning process and management of an integrated approach. Systematic approach reveals the inner secrets and gives the "keys" to the management of the subject itself. In XX century the concept of "system" fell in a number of key methodological concepts of philosophy of science. "System, a plurality of elements in the relations and relationships with each other, which forms a certain integrity and unity." The systemic nature of the construction of knowledge (or phenomenon of reality) is defined as follows: the object of analysis is conventionally divided into components, if the sum of the properties of all parts of the system does not match with the sum of the properties of the system itself, it is the system in front of us. The relationship of parts of the system cause synergistic effects, which is the reason for the discrepancy amounts of property values. The system is also characterized by a special factor forming system, it is defined as a system. System-forming factors may be monistic - so, for example, grows a crystal on the same factor D. Mendeleev built Periodic system of chemical elements, the first to understand the significance of differences in the atomic weights, or duality. For a long time we could not decipher the systemic basis of

genetic function of DNA until the thought came to bifurcate its chain. It seems that the DNA strand is born relationships between two bases, functionally interdependent - and element properties. They seem to be "attached" to one another, thanks to which there is a double helix of DNA. Marx, as we have already noted, the construction of the system revealed the product, presenting the product as alienated product having exchangeable and consumer costs. System status of the goods determined the order of relations in the commodity market, but not immediately. Adam Smith understood why the increase in labor productivity is not accompanied by an increase in workers' wages. Political economy, as a science that penetrates into the logic of the system of relations that determine the existence of the wound, but not its reality. reality of the market - it is a different system, different from the existence of the system of commodity production. Market due to the socio-political reality, so the market and there is that does not enter into the logic of commodity production, however, is actively functioning infrastructure. Formal logic is simple: historically requires the mutual satisfaction of interests of producers and consumers. Only then the story will be the same "reasonable story" "reasonable person." The real story of it appears to be irrational.

A factor which the construction of the concept of product attractiveness, in our opinion, should be the ability of the product to cause the need for an urgency. Buyer's little interest, the interest is necessary to give form to an actual need for the proposed product. Need - a key indicator of psycho-physiological mood of the person. "The needs - the need of a living organism in something that is necessary for its life and development needs ... create motives." In the scientific literature there are several attempts to classify human needs. Unfortunately, none of those that are known to us, not the system. Most often it refers to the "pyramid of needs" Maslow.

Maslow believed that based on the analysis of the degree of satisfaction with the above requirements, you can build an effective management of the company. Some authors, such as BS Aleshin, LN Alexander, VI Kruglov, AM Shalom confirmed that "for the time of its use has been made a number of refinements," and in general, it "has become an essential tool for the activities of the manager." In our understanding, "Maslow Pyramid" is interesting as a general approach to the configuration needs. It lacks cultural - moral and aesthetic needs, knowledge and skills needs, in physical development and health. Physiological needs are traditionally incorporated into the base design, which obviously limits their functionality. human needs, the system should be built on the principle of duality of human nature. Dualism of human nature somehow manifests itself not only in terms of base and superstructure, but also operates at all levels of private and public life of the individual.

Besides it is necessary to emphasize the socio-temporal and socio-spatial specific needs, the value of their relevance.

The concept of "attractiveness of goods" partially revealed in the term "value of the goods." It is defined as "a set of expected parameters the required quality consumer goods to him and their values satisfying consumer demands" In the literature "value goods". value of the goods scanning is called "the tree of customer satisfaction." To the value of the goods has caused customer satisfaction, it is important to not only be concerned about the quality of the goods, but also remember that the mind of the consumer is not constant, it moves, is maturing. The term "client is ripe" describes the process of interaction between producer and consumer. The consumer in this reaction is represented by mental activity first. Sources mental readiness to accept the offer as a producer coinciding with its own concept of the attractiveness of the product uniform. Normally, it is referred to:
• authority of the manufacturer;
• information from sources believed to be reliable;
• consumer communications, networking;
• product presence in the past experience of the buyer;
• the relevance of the purchase to the buyer.

If the goods are psychologically attractive image as formed, the phase relationship of the abstract possibility of moving to a real possibility. The next step - a real transformation of opportunities into reality the acquisition of liked the product will depend on the ratio of producer and consumer costs. For the first, it is a question of the relationship between costs and prices, for the second - the price and quality of the product. J. Juran emphasized the special place in the structure of consumer demands quality services.

Summing up the analysis of the concept of "product appeal", its relationship with its immediate economic concepts, methodological expedient to arrange the relationship of these concepts systematically. In order to judge us - who is right and who is not - the authors have decided to take advantage of clarifying the status of the appeal of the product concepts with the help of leading experts, teachers, and students who are on their activities closest to the customers in their communication - merchandisers.

In the current market conditions, the competitive environment and the direct interaction of Russian and foreign manufacturers addressing a combination of state and market competitiveness of governance is becoming a strategic resource economy SFD and North Caucasus Federal District regions. The world economy took place price competitiveness competitiveness levels of quality, which will enhance its relevance to Russia's entry into the WTO. The increase in the quality factor performance of the domestic production of shoes in the strategy of competition on the world markets is a long-term trend.

In Russia, as in most Russian regional entities, there are all necessary conditions for the development of production in the national interest. If somewhere something is not enough, it does not serve as the basis for the recession and downturn.

In the mid-2010s the country was in an economic situation like the end of 1920 - beginning of 1930. Then there was a question: to be or not to be a new social order, I wish the people (for "chosen" is always adapt to any situation). The response was not hidden in the maze, and LM Kaganovich did not need the Ariadne's thread to get in search of the key solutions to the problem of the secret source. He needed the blessing of the leader. And I.B. Stalin agreed that "cadres decide everything". From myself to clarify - "professionally trained and politically responsible for the result." Explanation important because democratic reforms in Russia miraculously removed the first thing the professional responsibility for obvious defects in the policy.

All policy and has always been understood as an activity in the public interest. Political responsibility in a democratic society-furnished - the highest form of expression of professionalism. Failure of political promises and declarations - indicates either a failure to engage in politics, or the use of political governance in the private interest. 85 years ago for obvious consciousness and it was as such in practice. In vain, speaking of cruelty IV Stalin, forget that every flaw in the policy is reflected in the position of the people, not the politicians, managers, consultants, advisers.

In the interests of restructuring of the economy on a path to increase in commodity production, the share of added capital - essentially modern industrialization, we must begin not with the economic and with the scientific and technical activities - a political renaissance. Of course, the new time requires different tools than the action of the second half of the 1930s, but the essence has to be invariant. Political efficiency - higher professional criteria. Interpret this finding to the contrary better. Not reached until actual reality claimed change - retirement community managers followed characteristic depending on specific conditions and the size discrepancies.

In Soviet times, it was distributed to the party Slang - "put in a position of responsibility"! No one knew exactly what and how to do it, but everyone knew, if not complete, it will be bad. We have the same reason, the responsibility shifted to the market. Responsibility for the implementation of specific policy areas, losing a personalized view, ceases to be a liability. Duma we would never respond. The Government is responsible to the President and the Duma. Personal responsibility before the people only the President. Hence, the only decent rating national survey. Undoubtedly, it helped President patriotic policy - consistent, active. But, it seems that the main factor, although not clear, the President's popularity in

contrast to all in positions of authority, is its practical capacity,

Unfortunately knots tied economic incapacity and impunity, will untie the President, and responsible for solving the problems facing society, will continue to openly pull time under the guise of uncertainty of interpretation of modernization, our general task "to get off the dependence on raw materials" - 55% of tax revenues It will not be solved.

Personification of responsibility does not mean the search for the person who is responsible for everything. Personification involves delegation of responsibility for obtaining the desired result. Here it is essential to realize that the "team" - not the company of like-minded colleagues, partners; "Team" - the chain of responsibility, due to the specifics of objects and solve the problems of its modernization. for the outcome of the responsibility should not be preprinted in the bowels of the team. Responsibility even for the team result always has a personal expression that focus not want to recognize our high managers. That's according to the desire - "to push" all the specifics of the control object, the unpredictability of demand, currency volatility, it is unclear tariff changes and the like, can be attributed to the pressure "from above", by which prove to us that the management - the professional direction,

A curious fact, however, is not the history of the "light" industry. DI. Mendeleev in the early XX century, was given the task of the Government to deal with the modernization of the secret of gunpowder in Germany. Not having direct access to German technology, chemist requested monitoring the movement of freight trains in the areas where the powder is produced from tracking the beginning and end of the route. He deciphered the German recipe and developed recommendations for the Russian Government on the basis of the information received. Would have been in his place economist clean, modern top manager, the result would be completely different. He would have stuck in the statistical and financial calculations of costs, revenues, and far away from the political, scientific and technological components. The most serious methodological error - economic policies to reduce economic analysis.

Economic science emerged and developed in the context of politics, as political economy. Today, economists in the policy are not guided by political economy and economic policy. Instead of investing in the development of production are hiding money in foreign banks, reduced funding for education and self-education, increasing the number of the poor, do not index pensions, denied aid to farmers, etc. "Manilovs' nineties changed" Plyushkin "tenths.

Basic and invariant superiority of Russia lies in the geographical position, combined with the absence of the danger of overpopulation of our space due to natural increase. We have a natural and solid margin of safety for centuries. Rather than pressure the past

Clarivate
Analytics indexed

for irrationality in politics and economics, should pay for the actual merits of our ancestors, who managed to gather Russian and nations around Russia. Concerned not so much the decline in production, squandering of what has historically manifested its national identity, national traditions, as the possibility of loss of employment talent Russian peoples alarming inefficiency of the system of economic policy.

Progress does not happen without a derogation, the slowdown in the movement of recessions. Policy aims to active, targeted actions to help to overcome the obstacles encountered in the development. Politicians must stay ahead of the economic movement and guide it, to stimulate domestic economic factors political leverage, to clear the way to economic efficiency. Instead, the politicians continue to bind development plans to the price of oil, the ruble amount of European and American currency, referring to the integration trends in the world and globalization.

Integration of transnational relations - an objective reality, but for all its objectivity, it does not deny the specifics of national economic progress. Moreover, the integration objective is designed to contribute to national development. Why do we then do not get how it should be? This question arises from the logical comparisons policy in strengthening the defense, restore the international prestige of the country in the most difficult circumstances, the formation of a new world architectonic to the fact that year after year the Russians observe and fully feel the in the rest of the economy - we do not accidentally the two governments? The second "shakes gas and inhibits" simultaneously.

Prolonged recession in the Russian economy has: two ways of explanation. The first - the people have lost the ability to work well, squandered "human capital", the second - control helpless. The media claim that politicians know their stuff, keep things under control, take the necessary measures and promise to change for the better in the near future. Hence, the reason is the poor performance of the performers and the unfavorable world market conditions.

How much you have to be naive to planning economic policies, based on sincerity, selflessness, compassion competitors? The Russian president has long said that our Western partners do not want to strengthen Russia, they need obedient Russia, such as the Baltic republics of the former USSR. I did not want to sadden the politicians responsible for the economy, but, according to Aristotle, forced to admit: "Friends of the East too canny" - meaning "Plato is my friend, but truth is more expensive." They will help us at least benefit from such assistance itself.

It is time to realize that all the economic and political alliances in the modern world space - is an attempt to achieve national win in an environment of transnational relations, ie, partners can count on until

it is advantageous cooperation. Which implies the conclusion - you need to stand face to its economy. Only in this way, even with a lot of stress, it is able to solve their problems. There is, for example, these objective reasons that would justify the decline in production for over a quarter century in the light industry.

Light industry is closely related to agriculture, really dependent on the work of the latter. Only to such interactions must be approached historically specific, relying on scientific and dialectical analysis. There are old meteo calculations showing that of the 10 calendar years in Russia 5 unfavorable for the development of agricultural production (2 + 3 and 3 + 2). In determining the "Five-Year Plan" as a planning measures were based on this law. [4]

The problems of agriculture and light industry is not in their specificity, they have always been political. In the United States, Europe, farmers have a lot of our problems. The difference is that there is a farmer - a national problem among the most important, fundamental. Its important for consideration of the existence of politicians. On how the policy is to promote a settlement, estimated public places policies. Farmer and politician linked economic policy. They balance on one taut economic stress "rope" viability.

Nothing similar in Russia. Recall the story of the last of Agriculture Ministers. In the Soviet Union there was the Ministry of Light Industry, which emphasized the importance of the industry. What prevents the importance in terms of import declarations and to develop its own production to restore equality in industrial control. "Calico edge" without light industry still that his own nature without birch groves or lyric poetry without creativity Esenin. [four]

Reformers 1990 fate Homeland domestic and industrial care less identity. They lined up on the ease of business to maximize profits and walrus placed away from their ancestral lands. Light industry has traditionally been a difficult problem to manage. Managers need to be, above all, patriots, or light industry did not raise. understanding of "long money" national importance it is also necessary. Compensating the difficulties to become demand stability.

What is the policy ineffectiveness in the economy end of last and the beginning of the new century? This question №1, and we are talking not so much about who is to blame. We are interested in the essence of the political paradigm, developed by those who turned out to be "at the helm". Question №2 - that should be changed and how, apparently, it is necessary to do to raise the national industry, clothing, footwear, leather goods, textiles, accessories, not least?

The answer to the question №1 simple - no one was going to develop a paradigm of economic policy aimed at a radical transformation of the basis. reforming method (not without help from) decided to

choose from ready-made designs. For a model is proposed to take the Swedish experience, the Polish "shock therapy" reforms in Portugal, Argentina. So innovators, scientists brave and wise organizer as Gaidar, Chubais, Koch, Burbulis not come up with the idea, which usually begins to charge the owner - than I have, something to copy ..

Politics is not done according to the state of feeling. Like it or not - the level of consumer perception of the world. With this approach to the "political kitchen" be harmful. Economic policy does not fit the "good" or "bad", "effective" or "ineffective". She has a right to be called a "useful" or "harmful". Too high price of such policies, respectively, and the responsibility is not limited to professional form. Politics is politics. Apolitical and unprofessional to make politics a source of income of their own.

Whatever the economic situation did not develop extremely dangerous absolute value of economic criteria, give them the property of universality. Engels sharply opposed the attempts to bring the teachings of Karl Marx on the social development of "economic materialism", "economic determinism." Economic basis - the basis of social organization, but not system-forming factor of its improvement.

Society - system of human relationships that take place in the dynamics of economic activity. Activities - social life means people. Activities necessitating different kinds of relationships - the way of manifestation and human development. Relationships are designed to ensure that human development. About the fact that the form of property to be changed at the end of the XX century did not speak only dumb, but that relationship, born ownership, pulled by a distribution of the manufactured product, or its cash equivalent, that the exchange can not fully trust the market, control functions need to be kept by the state converted democratically, that perversely bureaucratic form of government is a generator of corruption, tried to keep silent, knowing the sensitivity of property reform.

Most people have no relevance as to who the owner is, not everyone wants to try on the role of the owner - to turn, to spin, to fight, to risk. Distribution on the contrary, applies to all, and the poor and the nonpoor.

Reliability and versatility - attributes of quality of knowledge. Reliability to minimize risks, flexibility relieves tension with the search for new solutions to the problem - "from the good deed goes unpunished." For quality comes at a price. Board, as is commonly believed, has a financial relationship, but it does not always look right. In the history of civilization, there are two outstanding achievements at the level of revolutions, is clearly not an equivalent assessment, namely:

price discovery knowledge, comparable to the cost of human things, "knowledge - force"; awareness of the special significance of theoretical knowledge in the form of concepts and related forms of abstract thought - judgment, reasoning. This naturally led to the need to develop a specific technology of production - methodology knowledge of the essence of relations existing phenomena. The visible part of the world "designed" to the consumer, unseen - on the manufacturer. manufacturers competition can be formalized as a simple technical problem - to get through a lot of chaotic phenomena of the visible part of the world in its hidden part, to understand it, to come back and understand chaos as the order of co-existence and development of the phenomena. Order and there is regularity. Laws exist only in textbooks on their own, separately.

Economic science in the XX century came in a difficult situation, which is the end of the century, had become critical. The theory of Adam Smith and Karl Marx method does not fit into the contours of the developed capitalist ideology. In Europe and North America, the very idea of capitalism historicity perceived as heresy. The history of capitalism has a beginning, but the presence of the start can not be the basis of the output of the limbs. Math - an exact science, it allows infinity to one side. The dialectical interpretation of infinity - the metaphysical, abstracted from real history. Rescue of economic science can not be found in the historical and formal-logical sense of reality, that is in mathematical calculus, statistics.

We will stop dipping into the philosophical, rather, in the methodological foundations of science, but not because it is necessary to plunge quickly into practical business, and due to the importance for the successful realization of the production of goods understanding that all production implies reproduction, along with commodity relations. Production begins with the achievement of certain relationships and leads to the development of these relations - between producers and consumers. To understand such a complex production can only be built with the involvement of the scientific analysis on the basis of conceptual thinking.]

That is why the start of the comparative analysis of the new concept of "attractiveness" in the application of its specific terms "product appeal", we have a theory of logical exercises. An alternative way is, but without the light source, groping in the dark.

Current knowledge about the concept; his ascent from the abstract to the concrete, followed by the prospect of the creation of new product concepts as content development, laid Hegel. Conceptual thinking, according to Hegel - dialectical process. The doctrine of the world-famous philosopher, was based on a fundamentally new interpretation of the development, which was based on the idea of an internal source movement, represented by the opposite attitude, being in unity. Preceded by Hegel, Aristotle, logic thinking built on the concept of the principle of identity itself, its immutability. The

Clarivate Analytics indexed

mechanical theory of this approach is reflected in the "static" section, and the specialist knows that in this way the situation is artificially simplified private interests. But then come the most interesting topics in practical terms "dynamic" and "kinematics". They describe is not the time movement - generally interpreted as something that is not me, resting in his state, and the movement as a change in the broadest sense. Until the dynamics and kinematics of the more thinking in the context of the content of the concept of motion Aristotle got it primarily interested in abstraction and generalization of the technology in the form of knowledge. Aristotle's logic so often referred to as "formal".

From the point of view of Hegel, Aristotle's logic was merely a special case, having the value of that knowledge in order to integrate into the process and to make a general reconnaissance of important, albeit conditionally, to stop the change. Aristotle sacrificed content of concepts in order to achieve regularity of formal relations. Simply put, the view of Aristotle's logic is akin to the expression "the general plan" for the time being. Past and future concepts of Aristotle was not interested in that, once again, in general, consistent with the nature of historical time. Karl Jaspers called the era described by the "axial age", stressing the role of culture as an axis around which to spin the beginning of the ancient civilization, but it is hardly necessary to see in his estimation the actual historical scale of the changes taking place, and the concept of time itself Greeks were cyclical. In short, Aristotle in his logic reproduced the spirit of the age in which he lived and worked. Another thing Hegel, worked in the conditions of modern times heyday with its political, scientific, technical, industrial and cultural revolutions. Hegel was necessary to understand the spirit of the time in the context of radical social change, to fill the contents of the concept of motion.

After Hegel himself has left a lot of questions, therefore, paying tribute to his dialectical discovery, one should remember that the Hegelian legacy that hindered the spread of the dialectic.

By limiting the scope of the dialectic of spiritual activity, he admitted being self-sufficient spirit and took the rest in the form of other-being of spirit, of course, is the dialectical development. The triad of Hegel "thesis - antithesis - synthesis" was not the universal development of the formula. Non-spiritual the existence of forms of life - physical human reality, nature, society, he explained the objectification of spirit, referring to derivatives of the spirit. The merit of Marx and Engels consisted precisely in the fact that, based on the natural-scientific discoveries and the movement of the bourgeois mode of production, they first turned the understanding of dialectics "upside down", and then removed the restrictions on her and made universal way development [5].

A reaction to the rationalism of Hegel were positivism and irrationalism, but they suffered the same "disease" as "sick" - one-sided approach. Positivism is clearly experiencing the limitations of empiricism, irrationalism was closer to the time of the bourgeois activity, not burdened with intellectual reflection, the idea of willpower, desire for power, received some support in developing society, in spite of the number of areas of reasoning in terms of cultural traditions.

Proof of this is the next surge of interest in Europe by Karl Marx Economic Research at the end of the zero years in connection with the financial crisis. Europeans do not know that there is another major monograph VI Lenin's "Imperialism, the Highest Stage of Capitalism," in which the author first analyzed the outperformance of financial capital and said it outright desire for political influence on public life.

Dialectical thinking did not come into the economy immediately, it began with individual ideas, mainly the development of ideas. Italian economist A. Serra first drew attention to the division of labor (PT) and looked at this feature of economic activity in the dynamics. Statistically it is proven that the country's wealth grows, depending on the depth and spread of the Republic of Tatarstan. W. Petty and Adam Smith launched a withdrawal angle A. Serra on a transnational scale. As a result, Adam Smith was in an impasse undialectical thought - when RT coverage of the economy around the world, the development will stop? Adam Smith and David Ricardo capitalism perceived identically in world history, were convinced that capitalism appeared to be endless. Economic thought buried in a limit, because could not find the beginning of a political economic equivalent. Marx predicted,

It is no accident in the XX century, the political aspect of economic science vigorously squeezed, naively believing it will be possible to limit the purely economic analysis. Very "refined" economic science divided into macro and micro-economics, and to XXI century generally presented as a ekonomiksizm. "The new economic" science "writes ML Khazin, was created precisely as an ideological alternative to the political economy ... For this it was necessary to turn the construction of a science on its head: if political economy is based on macroeconomics (ie general economic laws, which include the deepening of the RT, and the scale of markets and the volume of aggregate demand) to microeconomics (ie, the behavior of the individual and businesses), the ekonomiksizme the opposite, ie, ekonomiksizma specificity is an attempt to withdraw from microeconomics global macroeconomic patterns. "

Now imagine the scene - specialists manipulate the historical science, instead of improving its methodology to produce new theoretical studies, to finish building and rebuild through a systemic

approach proven ideas. Why you ask? Who needs it? The theory of knowledge on these questions the answers are not provided. The absurdity of the negation of the logical path of the obvious, but there are precedents. Famous Scientists have repeatedly stated incoherence achieve the discoveries, but they talked about the final heuristic link logically and methodically constructed a chain of knowledge. Incoherence, or rather illogic of the final results only confirm the rational perspectives thinking logically organized in both versions - Aristotle and Hegel.

In scientific concepts huge development potential. Systemic relations of concepts contribute to the emergence and actualization of new concepts. New concepts may well grow in the backbone. On the other hand, even Hegel considered important for the correct orientation in the real world, to distinguish the real, necessary and real- not necessary. The first contains the seeds of the operation and development, so that such phenomenon he called "intelligent" or "valid", the second and also has served or inhibits movement or opposes it. [5]

It seems that the science of economics and in the West and in Russia under the influence of authority of Nobel Prize winners, agreed that with the death of Hegel and Marx died, and political economy. But the impression is false. Noticing the priority of production in the construction of the economic system on the market factor modern academic economists have changed owners. In place of F. Taylor, A. Fayolle, G. Ford, A. Sloan came to market speculators type Zorroza and political guidance from economic theory are preserved.

It should be put on the history of capitalism as an ideal model of production. Formally, the combination of advanced forms of political democracy and its legal support by the state, the freedom of business gives rise to a claim to the ideal. Only let us not forget that all of the above makes it ideal in comparison with the political and legal model of absolutism, dictatorship and other anachronisms. The history does not end with financial and oligarchic capitalism with its showcases demonstration of mass consumption society. "Casting" model of social and economic models is ongoing and will go until the current model is available for the seventh part of humanity. Six and a half billion of the same homo sapiens can still afford to buy the best tickets to the cinema and see the sweet life of their own kind.

The World Conference of the elite of the scientific world in Rio strongly recommended to change the course of a business of greed on sustainable development, warning that to aggravate in the human contrasts join a global conflict with nature. Instead noosphere future generation born now will receive gas masks and protective suits, and light industry have to change the direction of development, to ensure that endangered species of mammals personal protective equipment.

Features dominant mode of production is certainly manifested in the development of economic science, but they do not cancel its political status. Moreover, economic science before you commit to another round of progress required to objectively determine the political preconditions recovery mode of production to a new level. Try to figure out what more left no heirs Adam Smith, David Hume, R. Owen, G. Sismondi, Marx, J. Mill, Spencer, T. Malthus. Socio-political philosophy or economic knowledge. In their works passed into the social history of political and policy they left as means and ends of economic promotion programs in solving problems of social development. TBN bourgeois alternative method of manufacturing an objective yet not ripened. The desire to share the history of communism, political economy in two steps and start with a socialist was blocked on one side of the politicization of the capitalist economy in the direction of strengthening of socially significant milestones on the other - an aggressive economic policy designed to protectionist conspiracy, and ordinary political deception excessively credulous Communist leaders convince socialist economic insolvency. Truth remains particular - political resources economics are due to objective historical time the mode of production in which she was born. Economic science is one of its objectivity, but its objectivity reflects historical periods and therefore has a view of the circuit composed by separate specific historical links, naturally interconnected. Perhaps temporarily such links coexist. Similarly experience had a calculated VI NEP Lenin advocated by them in dealing with colleagues and caused the rise of the country's economy, and the official political doctrine of China: one country - two lifestyle.

The modern history of economic science, in spite of the numerous tricks opponents is former politic course, the depoliticization of economic theory seems absurd in economic practice. Just look at the movement in exchange rates, stock market news to follow in order to assess the effect of political influence on economic activity.

Along with the evolution of economic science and economic concepts are changing, some are reset and filled with new content, others pushing the application area, others moved to new positions, the fourth lose the former importance at the time, as the fifth there, demonstrating the modernization of economic reality. Moving from concept to concept, you can repeat the historical logic of the ascent of production, determine the quality historic racing.

The market has become the basis of metabolic processes, and fair his complement. The nature of the market due to the need of reproduction. It entered the market in the production process, and all his attempts to get over the production of unnatural. But the very existence of the market as a way to meet the conditions of reproduction is absolutely natural that

allows the market within certain limits be its rightful position in the industry. Exercise the same self, as we all know, can be different, especially as the market connects the interests of different subjects of production, each of which wants to be a winner.

Production combines not only technical and technological actions, their objective affiliates, it includes the "human factor", which in recent years often called "human capital" - this sounds nicer instills pride in the right to be a "homo sapiens", moreover, almost capitalist. "The human factor" more accurately describes what is happening directly in the production, since production can be decomposed without residue on the basis of the concept of "factor" on the components of "didactic" unit. "The human factor" brings to the production goal, if you're lucky with the "human capital" - a professional management culture of the target can "grow" expediency, that is systematically organized relationship goals, means, methods and forms of its achievements, to optimize the production process. In general, the production looks like a work of turning goals into results. The correct choice of the purpose of production is considered the first victory, the "good beginning" that folk wisdom is equated with "half of the case."

And yet, the "end - around the crown of the case." The goal is realized, it produced the desired result. It begins a new story. The result was not produced for own consumption. That production is not stopped, and the victory was Pyrrhic not, the resulting product is in the rank of the goods to be exchanged on the necessary conditions for the continuation of production. The case turns on the market, whose task is to attach the goods - to find a buyer. The buyer, of course, their own interests, perhaps not entirely private, in contrast, primarily manufacturing. To some extent the market - it is also the production, it makes the organization of mediation services. This production, however, is more like a erzatsproizvodstvo, for it is not the function of creating a value-added product, but an active influence on the change in price of goods. The concept of "price" - the market of origin, therefore it has an indirect relation to the fundamental concepts of production "cost" and "value" of the goods. Price provides income market and the market - stakeholder pricing process. Here begins another interesting story for the buyer. The market has a great potential to manipulate the products and prices in the absence of a clear thought-out and organized interaction in system of relations of producers and consumers. Liberal political economy focuses on the freedom of the market, without having to worry about the content of the concept of "freedom". Arbitrarily interfering in the responsibilities of the philosophy, the Liberals pretend to solve their problems, misleading professional thinking and social consciousness. Not all economists, theorists and practitioners versed in philosophical reflection. Using a similar position, Liberals grow

their market, "the concept of" freedom, trying to free the market from the necessity of submission to any of its terms. In fact, economic liberalism, proclaimed by Adam Smith in a specific format, transformed into a banal market anarchism. In countries with strong democratic traditions, downloaded humanistic values and social responsibility, liberalism loses its political positions, but it does have a serious roof in the face of a thriving financial capital, fat liquoring by the market.

We do not want to deprive the subject of the status of market development of cultural production. The market is no doubt it is, but to put the market in a number of common subjects of production, therefore, ignore the evidence of different treatment for the most important indicators of the development of production - the ability to increase the cost of labor.

Freedom of the market comparable to the freedom of the judges on the football field. Judges do not play, they provide the game under the current rules. They can slow down the pace of their actions, bring down the pressure, play along, but it all happens in the mind, a public and professional control and prosecuted in accordance with established procedure.

Exchange market function objectifies his only important thing to remember about how to display objectivity. Material form of objectivity - is the technological objective of production, the physical reality of the goods - really is primary and is subject to the natural basis of social life; objectivity of production and economic relations, including the organization and division of labor - "secondary" objectivity created with the creative participation of the subjects of labor - it's natural and historical objectivity. There are, apparently, a third, a transitional level of objectivity, indirectly controlled by the objective nature of the production. The market belongs to the third level. Hence, such a different reality of the market, the possibility of the organizers rather arbitrarily manipulated within the market and in the interests of the market. Engels clarified E. Dühring: "In a society where commodity production is the dominant mode of production," the market has always been very well-known abroad ... among the "business people" Due to its specific reality "in transition" from being tightly regulated production according to the relativity of the terms of exchange of natural and historical specificity, the market actually combines adequate actions with specific properties, organizing of the last their infrastructure. They hide behind the "marketeers" "Iron argument" - market "barometer" of production conditions. In this position, all the actions that, according to the classification of Hegel, not valid are allowed as needed-conditioned. Quite logically Petzold, who saved Machism solipsism by introducing a " relationship 'potential member formula being. Petzold not personified the "potential member", but it was not difficult to understand that it must be something universal,

standing on a subjective form of consciousness. Marketeers, absolutizing the situation of the market, more precisely, the exchange through the market, achieve control over production. Interest marketeers again reminds us of the power of money.

Of its objective position the market should not earn more than the manufacturers. Otherwise, production stops, and with it, and social progress. Now the situation is critical, and the first cause of the crisis is the policy of the financiers, the second - the market speculation. Prices of real goods in the market for a long time does not correspond to the value of their real production costs of delivery and sale. The problem is to liberals in one - form a mass. All the same, on the street XXI century. Therefore, the world politics in the sphere of modernization of education aimed at its "market" division. The vast majority of graduates doomed to be clerks, a small minority, mostly of their own, plus those who are especially talented pool of senior managers. It's not the name of the university, and in the interest of you, very rarely dependent on you.

The heyday of the market and its infrastructure due to the birth of mass production. On the first level of mass production market has been the most regulated task to deploy the product in the implementation of the scale of production to reproduction was dynamic. Above all dominated by the need for the production of working capital, as the benefits of mass production is the ability to reduce costs, thereby reducing costs and increasing the competitiveness of goods. A key factor to make the time of sale of goods. "Time is money". Mass production has given rise to trade principle: the user can not find what he's looking! Universal Megastore offers almost the entire product range of the product in all its possible variety, including the price. Soon cleared that the lack of certainty associated with the high cost of raw materials, energy, maintenance of premises, a large number of unsold goods, especially the limited shelf time. Market with its function has not managed as planned. Was an important event, it has not received the deserved estimation may not want to lower the reputation of the market rating. Production workers "went to the people" - to study the demand in view of social stratification. Case is troublesome, reaching definitions are not as accurate as we would like, but even on a provisional level, it serves as a basis for production planning orientation. has not received the deserved estimation may not want to lower the reputation of the market rating. Production workers "went to the people" - to study the demand in view of social stratification. Case is troublesome, reaching definitions are not as accurate as we would like, but even on a provisional level, it serves as a basis for production planning orientation. has not received the deserved estimation may not want to lower the reputation of the market rating. Production workers "went to the people" - to study the demand in view of

social stratification. Case is troublesome, reaching definitions are not as accurate as we would like, but even on a provisional level, it serves as a basis for production planning orientation.

Shoe fit and came to the time of Cinderella in the fairy tale, and it's because it was the second shoe, however, market research really significantly important for all subjects. Manufacturers are cutting costs, consumers get better guarantees to purchase the desired commodity brokers are losing the old freedom to manipulate the products and prices. But also to get involved in the assessment of transformation is not appropriate. The market for three hundred years history of the development of industrial production gained a protective and compensatory mechanism of the "arrival" and below - producers, and on top - the rulers; but the saddest thing is that the market through the power of lobbyists rooted, consolidated its interests in the formulation of laws and their interpretation. His second pillar became the media, going without hesitation to any violation of the regulatory limits on commercial advertising,

Information work market - is universal. It is included in the essence of the functioning of the market and changed throughout the history of the market. Is no less obvious that the market information is often developed faster the base of the market, has formed a separate segment of the market reality that has as its main reason for the increased competition between manufacturers - becomes a commodity in the market more and more, and growing number of manufacturers. The market itself will eventually become the subject of competition, actively involving advertising and means of dissemination

The new economic reality has developed in the 1970s under the direct influence of the technological revolution. Increased technical complexity of the product, has increased the warranty period. The changes made to abandon the simplistic model of quality costs. She was born the concept of quality cost, based on the decrease due to better management of funding costs on the quality and reduce the total cost of production of the product. We are trying to make the economy leaner. Emphasis in quality management has shifted towards solutions to common problems of development of production, its standardization. G. Taguchi generally called a measure of the quality of its cost and resulted in the following calculations: one wash a shirt costs 250 yen, usually during the service shirt washed 80 times. Expenses for laundry up 20,000 yen. If you can sew a shirt, shrinkable and pollutes two times slower, the consumer savings of up to 10,000 yen. Suppose a new shirt manufacturer will cost 1000 yen more, and sales increased by 2000 yen, then the producer will receive income 1,000 yen, 8,000 yen would benefit the consumer. The society will have a savings of 9000 yen plus reducing the environmental focus of expenditures, as will be less waste from washing.

We are not against the quality of manipulation. In certain limits, this is a forced measure that demonstrates the limitations of cognitive and other capabilities. Theory should not be conservative, but the quality of the manipulation - the tactical level of management, in contrast to the strategic value and significance of quality management. Manipulation - a management tool, and it must remain private, changing business in Quality Management System.

The second thing to keep in mind the prospect of analyzing the quality of the private self. Private initiative is due to the overall political and economic situation. Socialism could be built in one country, to ensure the competitiveness of socialism was at this historic time impossible. Capitalism is still strong. The same situation and waiting for private producers. Quality product it will release. It can work steadily in an environment that is not ripe for such practices.

Of course, in our market there is a certain niche, it enjoys the most respectable part of the middle class. Niche insignificant due skinny social class and instability in a volatile economy. Nevertheless, the sector is, and at his request the manufacturers of quality products, for example, at 1,500 rubles per kilogram of sausage, shoes for 5000 and more costumes from 15,000, also exist. But what does this have to do with the market an exclusive characteristic of our economy as a whole? Is, is thus an exception to the rule that only their support. The problem of quality goods manufacturer status - on a national scale and potential of the individual, relatively well-off strata applies to it as the fate of the passengers fleeing in a boat after a storm that made their big ship.

BS Aleshin leads costs diagram of quality developed in TQM (Fig. 1).

Represented by the scheme should be read in two versions - the European-American-Japanese and Russian. They market more than three hundred years. During this time, there was a balance of market forces, and manufacturers have adapted to it. Possible correlation of factors and not perfect, but it reflects an objective position in the market, the manufacturer, seller and buyer. About our market we have said, not all, but most importantly identified. We have the power of the market by intermediaries and speculators, often appear in the same person. It is connected with them, corrupt officials. Therefore, the proportions shown in the right-hand side of the diagram, in our market look different. Especially with regard to the costs of products sold. This part - Klondike for all feeding in the market, and a headache for these workers. Simply because of its advantages no one has refused. The main reasons for the lack of a civilized market of consumer goods are:

- poor development of market infrastructure, inter-regional and inter-commodity distribution network and commercial relations with the countries of near and far abroad;

- imperfection of legislation in the field of production, export and import of Russian products. Given the complex and multifaceted nature of the problems of this group, drastic measures are needed to address them, including government support, as is done in other countries. For example, the recognition of the governments of China, Turkey and some other light industrial nations a strategic industry enabling them to quickly turn pretty outdated in modern production and encourage strong development in these countries, commodity, chemical and machine-building complexes.

In Russia in recent years, the state has taken some steps to normalize the situation in the light industry. The Russian Government has provided a number of preferences of the industry. For the third year in the country of import of technological equipment at zero import duty and VAT. It is a mechanism of subsidizing interest rates on loans for the purchase of raw materials. Since 2014 this arrangement extended to loans obtained for the upgrade. It provides support and promotion of manufacturing exporters by reimbursement from the federal budget of the cost of interest on loans obtained for the production of export products. Although not large, funds are allocated from the federal budget for R & D in favor of light industry.

The effectiveness of preferences: - each ruble invested in the industry in the form of subsidies on loans, provide additional revenues to the budgets of all levels and state non-budgetary funds from 6 to 7 rubles, and for some businesses - from 20 to 30 rubles.

Carried out preventive operations "Counterfeit" interdiction light industry goods. In particular, in 2018 the result was revealed more than 700 crimes, of which the material damage on criminal cases amounted to more than 3.4 bln. Rubles. During the investigation of criminal cases seized property worth more than 164 mln. Rub., Seized property, money, valuables and voluntarily repaid the damage in the amount of more than 92.3 million. Rubles.

Many of the Russian Federation and operates a wide range of benefits, including property tax, land and others.

However, the existing preferences and solved in varying degrees, problems of the industry at the federal and regional levels are still insufficient to eliminate the impact of negative factors on the development of the industry and turn it into a competitive and self-developing sector of the economy and domestic producers strengthen its position in internal market and to compete on the world market not only with the EU countries and the US, but also with the Chinese manufacturers, Turkey, India and other countries.

Hence, the key task - to express qualitative modernization of the industry and its supporting infrastructure with the use of the cluster approach, the wide application of the best world and domestic

achievements in the field of engineering and technology of textile, apparel, leather and footwear industry, including nanotechnology and nano products.

Social and human problems caused by the state of qualitative component of personnel potential, which in many companies is in the area of critical values, and some - already behind them.

The deteriorating situation in vocational and professional training of the workforce, low wages and labor prestige lead to an annual reduction in the number of mostly young and promising workers aged 30-40 years. Only during the decade (1990 to 2008), the number decreased by 3 times, and over the next ten years -2.8 times which led to a drop in production volumes. In this case, the measures taken by crisis management unprofitable enterprises from the government and management have not been able to influence the course of development of the structural imbalances in the industry.

Not a solution to the problems of this group will significantly affect the industry's ability to lift its economy and to increase the production of competitive products in the volumes necessary to ensure national security.

In addition, all of these problems are compounded by the impact of the global financial crisis. In a crisis, the light industry, as no one starts to feel the action of his. Even those companies that in recent years have achieved positive results in the innovative development, paying considerable attention to the modernization of production, has forced and will be forced in the next few years to reduce production and to abandon the long-term investments. This is due to difficulties encountered related to the involvement of bank loans (the proportion of borrowed funds in the working capital in recent years has reached 40 per cent), on the one hand, the increase in the volume of official imports, counterfeit and contraband products, the fall in demand and a slowdown in the implementation of many types of goods, reduction of workers and professionals - on the other hand. At some enterprises began to emerge late payment of wages from 2 weeks to 1.5 months, the suspension of the start time and according to the experts by the end of 2017 the number of employees may be reduced by 10-15 percent. This is especially true of four federal districts - the Central Federal District, Volga Federal District, Southern Federal District and the North Caucasian Federal District, is the most significant in social terms. The capital structure of the industry, being concentrated in these districts, making them the most critical areas in terms of the effects of the deepening slump in production, which increases the importance of the social consequences resulting from the production stoppage. The share of Russian goods on the domestic market will decrease even more and could reach in 2019 at least 20 percent. At some

enterprises began to emerge late payment of wages from 2 weeks to 1.5 months, the suspension of the start time and according to the experts by the end of 2017 the number of employees may be reduced by 10-15 percent. This is especially true of four federal districts - the Central Federal District, Volga Federal District, Southern Federal District and the North Caucasian Federal District, is the most significant in social terms. The capital structure of the industry, being concentrated in these districts, making them the most critical areas in terms of the effects of the deepening slump in production, which increases the importance of the social consequences resulting from the production stoppage. The share of Russian goods on the domestic market will decrease even more and could reach in 2019 at least 20 percent. At some enterprises began to emerge late payment of wages from 2 weeks to 1.5 months, the suspension of the start time and according to the experts by the end of 2017 the number of employees may be reduced by 10-15 percent. This is especially true of four federal districts - the Central Federal District, Volga Federal District, Southern Federal District and the North Caucasian Federal District, is the most significant in social terms. The capital structure of the industry, being concentrated in these districts, making them the most critical areas in terms of the effects of the deepening slump in production, which increases the importance of the social consequences resulting from the production stoppage. The share of Russian goods on the domestic market will decrease even more and could reach in 2019 at least 20 percent. began temporary suspension of work, and according to the experts by the end of 2017 the number of employees may be reduced by 10-15 percent. This is especially true of four federal districts - the Central Federal District, Volga Federal District, Southern Federal District and the North Caucasian Federal District, is the most significant in social terms. The capital structure of the industry, being concentrated in these districts, making them the most critical areas in terms of the effects of the deepening slump in production, which increases the importance of the social consequences resulting from the production stoppage. The share of Russian goods on the domestic market will decrease even more and could reach in 2019 at least 20 percent. began temporary suspension of work, and according to the experts by the end of 2017 the number of employees may be reduced by 10-15 percent. This is especially true of four federal districts - the Central Federal District, Volga Federal District, Southern Federal District and the North Caucasian Federal District, is the most significant in social terms. The capital structure of the industry, being concentrated in these districts, making them the most critical areas in terms of the effects of the deepening slump in production, which increases the importance of the social consequences resulting from the production stoppage. The share of Russian goods on

the domestic market will decrease even more and could reach in 2019 at least 20 percent. This is especially true of four federal districts - the Central Federal District, Volga Federal District, Southern Federal District and the North Caucasian Federal District, is the most significant in social terms. The capital structure of the industry, being concentrated in these districts, making them the most critical areas in terms of the effects of the deepening slump in production, which increases the importance of the social consequences resulting from the production stoppage. The share of Russian goods on the domestic market will decrease even more and could reach in 2019 at least 20 percent. This is especially true of four federal districts - the Central Federal District, Volga Federal District, Southern Federal District and the North Caucasian Federal District, is the most significant in social terms. The capital structure of the industry, being concentrated in these districts, making them the most critical areas in terms of the effects of the deepening slump in production, which increases the importance of the social consequences resulting from the production stoppage. The share of Russian goods on the domestic market will decrease even more and could reach in 2019 at least 20 percent. stemming from the production stoppage. The share of Russian goods on the domestic market will decrease even more and could reach in 2019 at least 20 percent. stemming from the production stoppage. The share of Russian goods on the domestic market will decrease even more and could reach in 2019 at least 20 percent.

Change the situation can only be developed and implemented anti-crisis measures aimed at strengthening innovation, increase production efficiency in the new technical and technological level, and to create favorable conditions to ensure stable from year to year growth in production volumes of competitive products.

It is encouraging that a meeting was held August 24, 2017 in Ryazan 'on the development of light industry "with participation of representatives of government, business leaders and scientists trade with the personal involvement of President Vladimir Putin forced them - the participants - to provide answers to the president uncomfortable questions about the reasons for the poor state of the light industry, and of the failure of the tasks that were formulated in 2013 in Vologda on a similar meeting and almost with the same participants. Hopefully, at the municipal, regional and federal branches of government will decrease the deafness syndrome and desire to boycott the performance of the proposed tasks, as required to verify the president and ask about the reasons for their failure. In any case, this confidence appeared in the majority of the participants in this meeting, because the president of the Eastern Economic Forum, which took place on 8-9 September 2017 in Vladivostok in a closed meeting in a rigid form, demanded that those responsible for the failure of similar events in the Far

East, which caused the dismissal and the dismissal of those officials who are most We did not implement their tasks. Such confidence we have due to the fact that the position of the light industry arch bad and can lead to disaster, not only economic, but also social. All experts objectively expressed their views on the questionnaire he proposed to the factors to answer the main question in the headline - "To be or not to be light industry?". Another thing is that their vision on this issue can be subjective and, of course, has a right to be. But, researcher itself should decide on the findings of the a priori ranking, guided by the opinion of other scholars and researchers on issues of identity, comparing them with those obtained and taking a decision on the eligibility of their inclusion in the study object. Such a decision requires the competence not only of responding experts, but also a deep knowledge of the problems by the researchers themselves.

Encouraged by the fact that all the experts respondents are unanimous in assessing the role of assortment policy and the need for effective and innovative technological solutions, to ensure producers manufacturing these products, which would have been demanded by consumers of the Southern Federal District and the North Caucasian Federal District regions and would ensure they receive effective technical and economic indicators of the results their activities and products - its demand not only in domestic, but most importantly, in overseas markets. To reaffirm the fact that we have every reason to trust the results of the a priori ranking, developed by the authors and software for evaluating the competence of participants in the survey - long life. Especially justified is the use of software in evaluating the competence of the expert respondents, invited by the Customs Committee for their work in custom commissions. Customs executives get an objective assessment of each respondent's expert as a result of their participation in the work of the customs committees, as in this case, the expert can not but agree with obtain an objective assessment of his competence and customs committees receive method of ranking, giving preference to the most qualified and objective experts, to ensure receipt in the domestic market of products of the highest quality, and ensure the safety of the consumer.

I would like to warn the customs committees of hasty decision-making competence of the experts, if they do not have the objective characteristics obtained by highly qualified specialists. All this implies not only correct attitude to his duties, but also to the invited experts, creating an atmosphere of trust and interest in obtaining positive results of the examination. If we sum up the results of the software efficiency to assess the competence of the respondents participating in the survey, the researcher has a tool to select those respondents whose opinion has a high degree of confidence, confirmed the value of the

coefficient of concordance (W), which tends to unity. Thus, summing up the results of the effectiveness of a priori ranking and the software developed by the authors,

"Road map" realization of light industry development strategy until 2025

The plan provided for implementation of the Strategy through measures implemented during the strategy period:

❖ support for the creation and development of the Russian brand of clothing and footwear;

❖ the fight against illegal and illicit trafficking of goods of light industry;

❖ export promotion in the competitive light industry segments;

❖ preservation of leather raw materials for its own production of leather and footwear;

❖ formation of personnel potential of the industry;

❖ stimulating R & D and technology transfer;

❖ information and marketing support of the development of the industry;

❖ monitor the effectiveness of the strategy and the adjustment plan

In addition, a number of strategic initiatives will be implemented in stages:

Step 1: The main activities implemented in the period 2015-2017 .:

▪ preparation for the implementation of the strategy;

▪ stimulating the development of a synthetic textile (synthetic fabrics);

▪ stimulating the growth of technical textiles consumption;

▪ the creation of the eco system of the enterprises for the production of technical textiles and nonwovens in clusters / industrial parks;

▪ stimulating demand for special and protective clothing and footwear;

▪ creation of favorable conditions for contract sewing and shoe production;

▪ reorientation of clothing production on competitive products with the presence of low-cost access to content and a low proportion of manual labor;

▪ support for the creation of an industrial infrastructure within the footwear industry cluster;

▪ providing favorable access to functional components manufacturers of clothing and footwear;

▪ stimulating the production of automotive leather and improve the degree of localization of auto components.

Stage 2. The main activities implemented in the period 2018-2022:

▪ forming demand for chemical fibers;

▪ support projects on localization of production of chemical fibers;

▪ encouraging recycling of the leather industry and the introduction of new technologies to improve the environmental safety of production.

Step 3: Monitoring results and the implementation of cross-cutting initiatives for the period 2023-2025.

If purchasing satisfaction formed by the producer level, that is, its test level formed affordability goods which serves assortment close naturally quality, and due to the level of the consumer, i.e., its test level presupposes the existence of a culture of customer service, attractive products, consumer satisfaction, and, of course, the solvency of the consumers of the respondents who participated in the survey believe that consumer satisfaction is ensured with the reliability of the product, its affordability, the availability of buyers possible make purchases, ie their ability to pay. The natural quality of the products, a variety of product range, attractive design solution, ie fit fashion, products must be sufficiently long warranty period, and interestingly, all respondents were unanimous in saying that the producers fought for respect for him customers to win their trust and willingness to make a purchase just the products of these companies, ie brand and image are always in demand, all of which solves the basic problem-provides consumers with domestic products in the framework of import substitution.

Criteria for evaluation of the light industry enterprises competitiveness through the software developed by the authors for the first time made it possible to formalize the role of experts - respondents on the basis of their competence to the problem. The need for such an approach is due to the desire to have an objective assessment of competence, taking into account not only the views invite experts respondent party to participate in the survey, but also through the evaluation

The results of a survey of experts to assess the competitiveness of enterprises and the competitiveness of the goods of light industry (Table 2), although the value obtained coefficient of concordance (W) in the range 0.4-0.6, but excluding the heretics, that is, those respondents whose opinions do not coincide with the views of the most other experts, we found a pleasant fact that the opinion of the respondents, and those whose credibility is not in doubt, and those who carried the program to heretics, have a unique and intimate view that the factors that characterize their impact on enterprise competitiveness and the competitiveness of the goods are identical, and they can be used in further studies in the estimation of the most competitive enterprises, suggesting that he was able to produce for import-substituting products for consumers SFD and North Caucasus Federal District regions. Wherein, manufacturers have every reason to these criteria, namely: the ratio of the quality of goods and the cost of production and marketing; the growth rate of sales

volume; the cost of innovation; labor productivity; level partnerships stakeholders production of import-substituting products; the cost of 1 ruble of products sold, and the main criterion; weighted average of product lines of competitive goods treated as withdrawn.

But all respondents experts were unanimous in saying that the company's competitiveness will be sustained over time, if the share of the enterprise market demand is stable. In any case, it will not diminish over time, if it is guaranteed return on investment and, of course, provided a steady return on total assets of Light Industry, engaged in the production of import-substituting products. It justified the opinion of experts, which affects the competitiveness of enterprises and sustainable trade based on direct contractual relations with implementers of those products most enterprises. [6]

Conclusion.

We agree with them on the question of the role of highly qualified staff, which of course, although it is reflected in the questionnaire as a single criterion - the rate of employee turnover - but did not cause the experts, with regret, concern due to the elimination of high schools, colleges, on the basis of which was prepared by highly skilled workers and middle managers - craftsmen, technicians, engineers, technologists engaged in service for outputting not only the innovative technological process, but also innovative equipment. And it is sad that almost stopped training technical personnel, motivating all this lack of demand for them, although the leaders of enterprises at a loss. There is another side to this situation, namely, that the leaders opted out of the preparation of the most highly qualified professionals through targeted training in colleges and universities, unwilling to bear the costs of this same preparation, forgetting the Russian proverb: "miser pays twice." Distressing is the fact that the majority of business leaders believe that all by itself will be resolved, but if a shoemaker, seamstress, machine operator, skornyazhnika you can prepare in the workplace, then prepare a lead engineer - leader and organizer of production of filled processes with effective innovative solution unlikely.

Once again I want to recall another Russian proverb: "As long as the thunder breaks out, peasant will not cross." Do be sure to step on a rake, to receive a severe blow to the forehead and yell - "Ugh, remember the name of this tool, it is a rake." Funny and sad, and still believe in the common sense that truth is more expensive, and the truth will prevail - we will be able to revive this very light industry, which has been proved the experts - respondents showing unanimity on the basic criteria for assessing the competitiveness of enterprises of light industry. It is important that it was the desire of all stakeholders to the unconditional implementation of the planned measures for the rehabilitation of the light industry enterprises in Russia.

References:

1. Prohorov. V. T., et al. (2014). *Quality Revolution: quality through advertising or through real quality*: monograph. under the total. Ed. prof. VT Prokhorov (Eds.). ISOiP (branch) DSTU.(p.384). Novocherkassk:YURGPU(NPI).
2. Prohorov, V. T., et al. (2017). under Concept import light industry: background, objectives, innovations: monograph / the total. Ed. Dr. tehn. Sciences, prof. VT Prokhorov (Eds.). Institute of Entrepreneurship and Service sector (branch) of the Don State Technical universiteta. (p.334). Mines: ISOiP (branch) of Dagestan State Technical University.
3. Prokhorov, V. T., et al. (2018). The competiti veness of enterprises and the competitiveness of products - the key to a successful import of goods demanded by consumers SFD and North Caucasus Federal District regions: collective monograph / under the total. Ed. Dr. tehn. Sciences, prof. VT Prokhorov (Eds.). Institute of Entrepreneurship and Service sector (branch) of the Don State Technical universiteta. (p.337). Novocherkassk: Leake.
4. (2018). Quality management through motivation of behavior of light industry enterprise team leader: Monograph / under total. Ed. Dr. tehn. Sciences, prof. VT Prokhorov (Eds.). Institute of Entrepreneurship and Service sector (branch), Don State Technical University. (p.336). Novocherkassk: Leake.
5. Golovko, A. V., et al. (2019). On the possibilities of regulatory documents developed by the Quality Management System (QMS) for the digital production of defect-free import-substituting products: Monograph / under the total. Ed. Dr. those. Sciences, prof. VT Prokhorov (Eds.). Institute of Entrepreneurship and Service sector (branch), Don State Technical University. (p.227). Novocherkassk: Leake.
6. Golovko, A. V., et al. (2019). Quality Management System - the basis for the production of technical regulation import-substituting products: monograph / under the total. Ed. Dr. tehn. Sciences, prof. VT Prokhorov (Eds.). Institute of Entrepreneurship and Service sector (branch), Don State Technical University. (p.326). Novocherkassk: YURGPU(NPI).

Contents

p.

Clarivate
Analytics *indexed*

International Scientific Journal
Theoretical & Applied Science
www.T-Science.org

«ISJ Theoretical & Applied Science, USA» - Международный научный журнал зарегистрированный во Франции, и выходящий в электронном и печатном формате. **Препринт** журнала публикуется на сайте по мере поступления статей.

Все поданные авторами статьи в течении 1-го дня размещаются на сайте **http://T-Science.org**.

Печатный экземпляр рассылается авторам в течение 2-4 дней после 30 числа каждого месяца.

Импакт фактор журнала

Impact Factor	2013	2014	2015	2016	2017	2018	2019
Impact Factor JIF		1.500					
Impact Factor ISRA (India)		1.344				3.117	
Impact Factor ISI (Dubai, UAE) based on International Citation Report (ICR)	0.307	0.829					
Impact Factor GIF (Australia)	0.356	0.453	0.564				
Impact Factor SIS (USA)	0.438	0.912					
Impact Factor РИНЦ (Russia)		0.179	0.224	0.207	0.156		
Impact Factor ESJI (KZ) based on Eurasian Citation Report (ECR)		1.042	1.950	3.860	4.102	6.015	8.716
Impact Factor SJIF (Morocco)		2.031				5.667	
Impact Factor ICV (Poland)		6.630					
Impact Factor PIF (India)		1.619	1.940				
Impact Factor IBI (India)			4.260				
Impact Factor OAJI (USA)						0.350	

INDEXING METADATA OF ARTICLES IN SCIENTOMETRIC BASES:

International Scientific Indexing ISI (Dubai, UAE)
http://isindexing.com/isi/journaldetails.php?id=327

Cl.An. // THOMSON REUTERS, EndNote (USA)
https://www.myendnoteweb.com/EndNoteWeb.html

Research Bible (Japan)
http://journalseeker.researchbib.com/?action=viewJournalDetails&issn=23084944&uid=rd1775

Scientific Object Identifier (SOI)
http://s-o-i.org/

РИНЦ (Russia)
http://elibrary.ru/contents.asp?issueid=1246197

Google Scholar (USA)
http://scholar.google.ru/scholar?q=Theoretical+t-science.org&btnG=&hl=ru&as_sdt=0%2C5

Turk Egitim Indeksi (Turkey)
http://www.turkegitimindeksi.com/Journals.aspx?ID=149

Directory of abstract indexing for Journals
http://www.daij.org/journal-detail.php?jid=94

DOI (USA)
http://www.doi.org

CrossRef (USA)
http://doi.crossref.org

Open Academic Journals Index (Russia)
http://oaji.net/journal-detail.html?number=679

Collective IP (USA)
https://www.collectiveip.com/

Japan Link Center (Japan) https://japanlinkcenter.org

PFTS Europe/Rebus:list (United Kingdom)
http://www.rebuslist.com

Kudos Innovations, Ltd. (USA)
https://www.growkudos.com

Korean Federation of Science and Technology Societies (Korea)
http://www.kofst.or.kr

AcademicKeys (Connecticut, USA)
http://sciences.academickeys.com/jour_main.php

Sherpa Romeo (United Kingdom)
http://www.sherpa.ac.uk/romeo/search.php?source=journal&sourceid=28772

Cl.An. // THOMSON REUTERS, ResearcherID (USA)
http://www.researcherid.com/rid/N-7988-2013

RedLink (Canada)
https://www.redlink.com/

Cl.An. // THOMSON REUTERS, ORCID (USA)
http://orcid.org/0000-0002-7689-4157

TDNet
Library & Information Center Solutions (USA)
http://www.tdnet.io/

Yewno (USA & UK)
http://yewno.com/

RefME (USA & UK)
https://www.refme.com

Stratified Medical Ltd. (London, United Kingdom)
http://www.stratifiedmedical.com/

THE SCIENTIFIC JOURNAL IS INDEXED IN SCIENTOMETRIC BASES:

Advanced Sciences Index (Germany)
http://journal-index.org/

SCIENTIFIC INDEXING SERVICE (USA)
http://sindexs.org/JournalList.aspx?ID=202

Global Impact Factor (Australia)
http://globalimpactfactor.com/?type=issn&s=2308-4944&submit=Submit

International Society for Research Activity (India)
http://www.israjif.org/single.php?did=2308-4944

Clarivate Analytics **indexed**

CiteFactor (USA) Directory Indexing of International Research Journals
http://www.citefactor.org/journal/index/11362/theoretical-applied-science

JIFACTOR
http://www.jifactor.org/journal_view.php?journal_id=2073

Eurasian Scientific Journal Index (Kazakhstan)
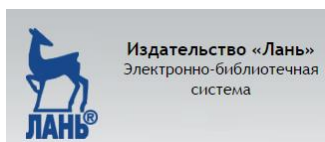http://esjindex.org/search.php?id=1

SJIF Impact Factor (Morocco)
http://sjifactor.inno-space.net/passport.php?id=18062

InfoBase Index (India)
http://infobaseindex.com

Электронно-библиотечная система «Издательства «Лань» (Russia)
http://e.lanbook.com/journal/

International Institute of Organized Research (India)
http://www.i2or.com/indexed-journals.html

Journal Index
http://journalindex.net/?qi=Theoretical+%26+Applied+Science

Open Access Journals
http://www.oajournals.info/

Indian citation index (India)
http://www.indiancitationindex.com/

Index Copernicus International (Warsaw, Poland)
http://journals.indexcopernicus.com/masterlist.php?q=2308-4944

Clarivate Analytics **indexed**

Clarivate Analytics indexed

Printed «Theoretical & Applied Science»

Clarivate
Analytics **indexed**