ISSN: 2181-4147

Scientific Journal

Scholar

Volume 1, Issue 26

Google Scholar

CiteFactor Academic Scientific Journals

zenodo

2023/26

September

Scientific Journal Impact Factor

TOGETHER WE REACH THE GOAL

ISSN 2181-4147

VOLUME 1, ISSUE 26

SEPTEMBER 2023

https://researchedu.org/index.php/openscholar

"SCHOLAR" SCIENTIFIC JOURNAL
VOLUME 1, ISSUE 26, SEPTEMBER, 2023

EDITORIAL BOARD

THE FUTURE TEACHERS' ROLE IN EDUCATION SYSTEM

Bahodirova Ozoda Jamshidovna
Junior Student at Samarkand State Institute of Foreign Languages
Supervisor: **Kilichov Jasur Pozilovich** (SamSIFL, deputy dean of scientific research and international relationship)

"A good teacher is like a candle it consumes itself to light the way for others."
Mustafa Kemal Atatürk.

ABSTRACT

In this article, there is being demonstrated several foreign countries teaching system and their teachers' significant role in their Education system of European countries; the UK and American countries; the United States. As well as that our traditional teaching system in the Republic of Uzbekistan and its developing modern teaching system among the upcoming teachers in country. Correspondingly, what kind of educational differences between the foreign countries and the Republic of Uzbekistan, differing from teaching system in high schools, as well. Typically, which abilities demanding to be a good teacher, simply stated that the well-qualified instructors are the future generation of our current education system as opposed to our older generation used methods in education system. Furthermore, there will be discussed about the amount of salary of teachers should be in higher prices as financial support because that they are giving energy to teach young teachers in high schools, especially in pedagogy field.

Key words: *teaching system, education system, European countries, USA educational theories, traditional teaching system, Uzbekistan developing education system, future generations, future teachers, financial benefits, Pedagogical theory.*

In this world, there are countries like America and the United Kingdom which are well-developed countries, in the case of, educational theories in their universities. Mostly, the international students of European countries are mentally stronger than any other country, to clearly define that the individuals of foreign universities can study better and get their qualifications easily in social works. Additionally, the students who study abroad can get well-paid jobs easily, in public theory, and so, this thought commonly lead our national students to study in foreign countries, including: the USA, the UK, Finland, Poland, Russian and Japan. Admittedly, the teaching system in high schools of foreign universities has more merits rather than studying in national areas. Honestly, our education system need more intellectual citizens, so nowadays, our president: Shavkat Miromonovich Mirziyoyev, has recently organized meeting with the president of America: Joe Biden, over the 5 Asian countries' presidential performance contained. Altogether, our future education system is up to our young teachers who teach future generations in Uzbekistan.

Even, mentioned in quote of Nelson Mandela: “Education is the most powerful weapon you can use to change the world.” Education is our greatest opportunity to give an irrevocable gift to the next generation. We need to teach the next generation of children from day one that they are responsible for their lives. Mankind's greatest gift, also its greatest curse, is that we have free choice. Clearly, every successful position will be achieved by learning how to deal with solutions, not focusing on issues.

From my perspective as a future teacher, every teacher must educate the students from their heart. Purely, in example of having positivity about the environment of studying, including several most demanding capabilities: significant soft skills; time management skills, leadership skills, having a strong work ethic, problem solving abilities, high emotional intelligence, and possessing the knowledge and adaptability needed to employ a variety of teaching modes and methods. On the condition that, if teachers can't handle with their jobs, the students also grow weak-minded as it is harmful for our education system. Mainly, in every dilemma about

educating students depends on well-educated teachers, at first. Then, there might be no other issues in order to learn how to study well, except the salary of educators and apart from students' mindset.

“Both fools and smart people are beautiful, but only half-fools and weak-minded people are harmful.” - I. Goethe. In the international bestseller book of James Clear named ‘Atomic Habits’ mentioned about marvelous consequences by in hint of changing actions. In this book, he explains widely available methods to build amazing habits by breaking evil behaviors. [1] To clear that for the purpose of having a good personality and becoming the best self-teaching studious, students should read the book for the room improvement of their mind. Coupled with, any students can come across with local libraries to find a great condition to educate themselves as government operationally constructed it. With this in mind, students can find books about, consisting of, pedagogy, science and education, especially in old books, published in around 1990-1995. In that books written widely explanation for being well-qualified instructors. Importantly, books tell more information about everything related to teaching, studying and even the Samarkand State Institute of foreign languages' high-educated teachers would recommend to work on ourselves in terms of being aware of all the ancestors used methodology and Pedagogy. From the book named ‘Pedagogy’ published in 1990, that there explicitly stated about young teachers who are LITTLE BREAKERS: “If there is only one tape recorder, it is assigned to a student of the parallel class to listen to the recordings on it outside of class. This honor work is entrusted to good students only once during the academic term. The time of consumption is 15-20 minutes. If there are two tape recorders, the students of the parallel class will listen to the recordings during the lesson when the written work is canceled. On such a day, students will be given "five automatic grades" for written work, which are different from the grades given on the information sheet, which clearly shows the grade of knowledge. Sometimes the teacher listens to some notes. Experience has shown that children are very strict judges, and in all the years it has never been observed that they have been liberal with

the mistakes of their siblings.” And, it is just a peace of knowledge from huge theories.

When it comes to teachers' salary that I can fearlessly convey about the increasing the amount of income. Nowadays, government is solving the issue about financial benefits for teachers in association with the other fields like; doctors, especially in nursing health insurance, retired professionals. As folks can see, in schools as well as in higher education, the teachers ask for requirements to pay higher income that is the reason why, teachers need also financial benefits for their family members, offsprings, for their health problems as educating pupils requiring more energetic mood to teach well. For this situation, only if teachers can't afford to educate effectively whenever they have personal problems related to their salary. After that, without an energetic mood or happy satisfactory income, teachers might not want to educate students, as possibly, they share with only instructions with no additional explained information. Then what might will happen, certainly non-existent educational theories. In current life, the expectancy for living longer and happily also related to the education and learning. In case of that people stand on the same position for a long time, there will be no developmental theories. Association with this point, I have to mention about the bestseller book of Napoleon Hill named 'Think and Grow Rich' which all about money consciousness and success conscious-minded theories. Especially, in Chapter 5, there is given information about Specialized Knowledge, including personal experiences or observations. In purpose of becoming the better one, that anyone can take advantages of these book, in example of sentences: “Knowledge will not attract money, unless it is organized, and intelligently directed, through practical plans of action, to the definite end of accumulation of money. Knowledge is only potential power.” [3] The researchers can understand from this viewpoint that knowledge is the most powerful thing that only human beings can acquire it by reading books. The Brain of the humanity works more intelligently than any wild animals.

In summary, teachers can get demonstrated abilities for working well-paid jobs easily if they have enough experience, critical thinking skills and managing classroom abilities as well as with strong knowledge and mindset. Although this may be true about the salary of teachers should be in higher prices as that they are giving energy to teach young teachers in high schools, especially in pedagogy field.

REFERENCES

1. James Clear “Atomic Habits”. ‘Tiny Changes, Remarkable Results’. ‘An Easy & Proven Way to Build Good Habits & Break Bad Ones’. - an imprint of Penguin Random House New York.

2. M. Khairullaev, I. Iskanderov, K. Hoshimov, (deputy rans) O. Mirzaev S. open (secretary) A. Akhmedov, A. Honorable "ANTHOLOGY OF UZBEK PEDAGOGY" EDITORIAL BOARD. 1995.

3. NAPOLEON HILL "THINK and GROW RICH". THE LANDMARK BESTSELLER- NOW REVISED AND UPDATED FOR THE 21ST CENTURY.

4. Sh.A. Amonashvili, S.N. Lisenkova, I.P. Volkov, V.F. Shatalov, E.N. Ilyin, T.I.Goncharova, A.B.Reznik, I.P.Ivanov, E.Y.Sazonov, A.A.Dubrovsky "PEDAGOGIST RESEARCH". 1990.

Internet resources:

1. https://cyberleninka.ru/article/n/pedagogik-amaliyotda-talabalarning-shaxsiy-faoliyatini-rivojlantirish-usullari

2. https://readywa.org/

3. https://t.me/USAUzbekistan/3903?single/

4. https://www.ourkids.net/

DEVELOPING STUDENTS' LANGUAGE LEARNING SKILLS AND INCREASING THEIR MOTIVATION THROUGH GAMIFICATION

Solijonova Madinabonu Bahromjon qizi

Master of theory and history of pedagogy, Fergana State University

madinaikromjonova1@gmail.com

Annotation: *This article provides information on the development of language learning skills (speaking, writing, reading, listening comprehension skills) of schoolchildren through gamification and various educational and pedagogical games and increasing students' motivation through these games*

Key words: *language learning skills, speaking, writing, reading, listening comprehension skills, gamification, educational games, pedagogical games, motivation.*

Games are fun activities that promote interaction, thinking, learning, and problem solving strategies. Often, games have an aspect that permits the players to produce information in a short time period. Some games require the players to engage in a physical activity and/or complete a mental challenge. “Games are effective tools for learning because they offer students a hypothetical environment in which they can explore alternative decisions without the risk of failure. Thought and action are combined into purposeful behavior to accomplish a goal. Playing games teaches us how to strategize, to consider alternatives, and to think flexibly”. That quote summarizes my beliefs about using games to teach, practice and reinforce a foreign language. Games provide a constructivist classroom environment where students and their learning are central. “Learning through performance requires active discovery, analysis, interpretation, problem-solving, memory, and physical activity and extensive cognitive processing”. Students draw their own meaning from these

experiences while learning from their mistakes and also from each other. The students also build upon their previous knowledge and use their new knowledge in a situation separate from the activity in which they learned it. Furthermore, the teacher is now able to make observations on each student and see what areas the class or individuals are struggling with or excelling at as well as the social dynamics of the group. Montessori classrooms are world renowned for implementing constructivism successfully. Their teachers are trained in theories which promote learning through experience. They remind us that when small children learn, trial and error is a part of everyday life. “The learning process should be interesting, easy and it should be fun to learn. It also should fit with an everyday task and the working environment in order to achieve optimum results”. Games allow for creativity, independence and higher order thinking. Usually, questions posed by the classroom teacher are fact based and have only one answer, not allowing for creativity, personal expression, or testing hypotheses. The answer is either right or wrong, but games can allow for multiple answers. They improve participation, self-esteem, and vocabulary usage and allow the learners to see that there are many ways to solve the same problem. Additionally, it is more like real life. For instance, most conversations start with open ended questions: “How are you?”, “What did you do yesterday?”, “How can I help you?”, and “What would you like for dinner?” As foreign language learners, it is important that they are provided with scenarios that are as realistic as possible.

Teaching English to school children is not an easy job; it requires a lot of work and preparation. Language learning is hard work. Effort is required at every moment and must be maintained over a long period of time.”

As games are so much approved by researchers, let us so more deeply to the study of games as motivating means in learning. First of all, we should define the term “game”. Definition of Terms According to The Longman Dictionary of Language Teaching and Applied Linguistics, games are defined as “an organized activity that has the following properties: a particular task or objective, a set of rules, competition between players, and communication between players by spoken or

written language". Language games are not aimed to kill time or break the ice between teachers and students. Hadfield said games are "an activity with rules, a goal and an element of fun".

The benefits of using games in language-learning can be summed up in nine points.

Games:

- ✓ are learner centered.
- ✓ promote communicative competence.
- ✓ create a meaningful context for language use.
- ✓ increase learning motivation.
- ✓ reduce learning anxiety.
- ✓ integrate various linguistic skills.
- ✓ encourage creative and spontaneous use of language.
- ✓ construct a cooperative learning environment.
- ✓ foster participatory attitudes of the students.

How to use games in language teaching. It could seem to use the games in almost every lesson and in all classes. It is wrong presumption, though. Not all classes enjoy games and not all lessons are appropriate for incorporating of the games. There is no rule for using the game thus. Teacher can use the game for example as a warm up activity or revision of the previous lesson at the beginning of the lesson or as a summary of the skills at the end. However, games can be used during the whole lesson as well. Thus, this variety corresponds with the ability of the teacher to use the game in the right moment. Paul speaks about the alternative to divide a lesson into "studying" and "fun" sections. But the problem can appear here because children will always tend to compare those two sections. In comparison integrating games smoothly to teaching/learning process allow us using games without distinguishing between "fun" and "study".

It can also happen that class, that normally enjoys games in lessons, can refuse the game from time to time. That is why teacher must be very attentive to students'

reactions and the atmosphere of each lesson. The very important point here is that “no one should be forced to play games.” The same author advises to “let him be an observer….”

Carrier emphasizes another important factor: “The teacher must prepare the game thoroughly. Games may be good fun but they need to be carefully **prepared and well organized**. Before a game is used with a class the teacher must be sure that the necessary facilities (for example the overhead projector) are available. …. When materials are used which have been prepared on previous occasion (including commercial cards or board games), the teacher must make sure the contents are complete.”

Before using games in the classroom teachers should consider several aspects.

Preparation. Being well-prepared for the lesson is a half of success. Teachers should think of the activity they want to use. Is it good for their pupils? I asked the following questions before

Does it cover the grammar level? Does it need any special materials, space?

Does the activity need group work, pair or individual work? If it is group work, how large will the groups be?

Does it need preparation in the classroom or any copies of the worksheets?

Organization. Before the activity, I announced what pupils were expected to do. I explained all rules carefully and ask pupils if they understood. Then they were supposed to change seating or make groups if it was necessary. Whilst pupils were playing the game, I watched and helped if it is needed. We finished the game at a fixed time.

Expectation. Being prepared for unexpected is really important. At any time something could go wrong. The activity could be difficult for children or they do not understand the rules, they have problems within the game, problems whilst making groups, problems in the group etc.

In the experience during my practice at school, I came to such a conclusion that grammar lessons become really motivating when games are applied. It is granted that

without games or fun activities pupils get bored, especially, if they are at their beginning or elementary level.

In conclusion, games can be used by learners of all ages because everybody likes them. They have many advantages, especially enhancing cooperation and motivation. Adding to that, they provide successful, joyful and enthusiastic learning.

All in all, it has been stated that language can be taught and revised through games. That means that games can be a vital part of teacher's everyday repertoire as language games give fun and relaxed atmosphere accompanying the activities facilitated students' learning. But this is not the only possible explanation of such an outcome. The use of games during the lessons motivates students to work more on the language knowledge on their own.

REFERENCES

1. Azar B. Sh. Fun with grammar. New York. 2000. 23 p
2. Deesri, A.Games in the ESL and EFL class. The Internet TESL Journal (September 9), (2002) 335 p
3. Elvin, Chris. High Motivation Listening Games, Blockbusters. Retrieved on 3 December. 1993. 345 p
4. Hadfield, Jill. Intermediate Communication Games. England: Longman.(1990) 98 p
5. Lewis, Gordon and Günther Bedson. *Games for children*. Oxford University Press. Oxford, 1999. 657p
6. *Macmillan English Dictionary for Advanced Learners: International Student Edition*. Oxford: Macmillan Education.2002. 89 p
7. Paul, David. *Songs and Games for Children*. Macmillan Publishers Limited. Oxford, 1996. 93p.
8. Wright, A, Betteridge, D., &Buckby, M . Games for language learning. Cambridge: Cambridge University Press. 2009. 93 p

COMPREHENSIVE STUDY OF UZBEK FOLK TALES IN PRIMARY SCHOOL EDUCATION

Ergasheva Durdona Safarali qizi
FSU, student
durdonaergaseva372@gmail.com

Abstract: *This research delves into the educational potential of Uzbek folk tales as invaluable pedagogical tools in primary school education. Rooted in Uzbekistan's cultural heritage, these age-old narratives convey traditional wisdom, moral values, and historical insights. The study aims to assess their impact on cognitive, social, and ethical dimensions within the contemporary classroom context. Through a multidisciplinary approach, encompassing qualitative interviews, classroom observations, and standardized assessments, we uncover the transformative capacity of Uzbek folk tales in enhancing critical thinking, cultural awareness, and character development among primary school students.*

Key words: *Uzbek folk tales, primary school education, cultural heritage, pedagogical tools, cognitive development, moral education, cultural appreciation, language proficiency, ethical reasoning, inclusive education.*

INTRODUCTION

In the realm of primary education, the selection of teaching materials is a critical determinant of a child's cognitive development and holistic learning experience. In this context, the incorporation of cultural heritage and indigenous narratives holds a distinctive promise for enriching the educational journey. Uzbekistan, with its diverse ethnic mosaic and centuries-old tradition of storytelling, presents a unique reservoir of folk tales that encapsulate the essence of its cultural

identity. These narratives, handed down through oral traditions across generations, stand as veritable repositories of wisdom, ethics, and historical consciousness.

The significance of folk tales in education is widely acknowledged in academic circles. Universally, they have been recognized as a potent means of imparting moral lessons, stimulating imaginative thinking, and fostering emotional intelligence in young learners. However, the specific pedagogical potential of Uzbek folk tales remains relatively uncharted territory within contemporary scholarship. This study endeavors to bridge this gap, embarking on a comprehensive investigation into the multifaceted contributions of Uzbek folk tales to the primary school curriculum.

As we delve into this exploration, we recognize the dynamic interplay between culture, education, and identity formation. Uzbekistan's rich tapestry of ethnicities, languages, and traditions has long been a source of national pride and global intrigue. By integrating these indigenous narratives into the educational framework, we aim not only to preserve cultural heritage but also to nurture an inclusive environment that celebrates diversity and fosters a sense of belonging among the nation's youth.

The overarching objectives of this research are twofold. Firstly, we endeavor to dissect the cognitive benefits of incorporating Uzbek folk tales into the primary school curriculum. Through rigorous empirical analysis and qualitative assessments, we seek to delineate the impact of these narratives on critical thinking, linguistic proficiency, and comprehension skills among young learners. Secondly, we aim to explore the social and ethical dimensions of this pedagogical approach, examining its influence on empathy, moral reasoning, and cultural appreciation.

In pursuit of these objectives, this research employs a multi-disciplinary methodology, drawing from the fields of education, cultural studies, psychology, and folklore. Through a combination of qualitative interviews, classroom observations, and standardized assessments, we endeavor to present a holistic understanding of the transformative potential that Uzbek folk tales hold within the realm of primary education.

In the subsequent sections, we will embark on a comprehensive journey through the historical roots of Uzbek folk tales, their thematic diversity, and their potential applications within the contemporary classroom context. By unraveling the educational tapestry woven by these narratives, we aspire to illuminate a path toward a more enriching, culturally conscious, and inclusive primary education experience for Uzbekistan's burgeoning generation of learners.

LITERATURE REVIEW

1. Folk Tales as Educational Tools

Folk tales have long been recognized as powerful educational tools, transcending geographical and cultural boundaries. They serve as repositories of cultural knowledge, conveying moral lessons, and fostering cognitive development in young learners (Betts, 2017; Karimov, 2019). Research in various contexts has highlighted the efficacy of folk tales in enhancing critical thinking, language skills, and emotional intelligence among primary school students (Bamberger, 2015; Nassaji, 2019). These narratives provide a unique platform for engaging students' imagination and facilitating deeper understanding of complex concepts (Zipes, 2009).

2. Cultural Significance of Uzbek Folk Tales

Uzbekistan's cultural heritage is deeply intertwined with its rich tradition of storytelling. The country's diverse ethnic makeup, including Uzbek, Tajik, Karakalpak, and other minority groups, contributes to a rich tapestry of folklore (Khalid, 2016). Uzbek folk tales serve as mirrors reflecting the values, beliefs, and historical experiences of its people. They encapsulate themes of honor, hospitality, resilience, and communal harmony, which are central to Uzbek identity (Maktabi, 2018). Integrating these narratives into the educational curriculum offers a means of preserving cultural heritage while promoting a sense of pride and belonging among young learners.

3. Cognitive Development and Language Acquisition

The cognitive benefits of utilizing folk tales in education have been well-documented. These narratives stimulate imaginative thinking, enhance problem-

solving skills, and promote linguistic proficiency (Moss, 2017; Kispál, 2020). By engaging with the diverse characters, settings, and plotlines of Uzbek folk tales, students are exposed to a linguistic landscape that expands their vocabulary and comprehension abilities. Additionally, the complexities and moral dilemmas presented in these narratives encourage critical thinking and analytical skills (Tziboula-Clarke, 2018).

4. Moral and Ethical Development

Uzbek folk tales are replete with moral lessons and ethical quandaries that resonate with universal human experiences. Through encounters with virtuous heroes, cunning villains, and allegorical creatures, students grapple with questions of right and wrong (Anderman, 2018). Analyzing the actions and consequences within these narratives fosters moral reasoning and empathy, nurturing the development of a strong ethical foundation in young minds (Smith, 2016).

5. Cultural Appreciation and Inclusivity

Integrating Uzbek folk tales into the primary school curriculum not only deepens cultural appreciation but also promotes inclusivity and intercultural understanding. By exposing students to the diverse cultural expressions within Uzbekistan, educators create an environment that celebrates diversity and fosters a sense of global citizenship (Banks, 2018). This inclusivity is crucial in today's interconnected world, where fostering mutual respect and understanding among different cultures is imperative.

RESEARCH METHODOLOGY

1. Research Design

This study employs a mixed-methods research design, integrating both qualitative and quantitative approaches. This comprehensive methodology allows for a multifaceted exploration of the educational value of Uzbek folk tales in primary school education.

2. Participants

The study involves primary school students, teachers, and parents from diverse regions of Uzbekistan. A purposive sampling strategy will be employed to ensure representation from urban and rural areas, as well as a mix of socio-economic backgrounds.

3. Data Collection

a. Qualitative Data Collection

- Semi-Structured Interviews: In-depth interviews will be conducted with primary school teachers and educators who have experience incorporating Uzbek folk tales into their curriculum. These interviews will probe into their experiences, strategies, and perceived impacts on students' cognitive and socio-emotional development.

- Focus Group Discussions (FGDs): FGDs will be organized with primary school students to gather their perspectives on the use of folk tales in the classroom. These discussions will provide insights into their engagement levels, comprehension, and reflections on the moral and cultural lessons conveyed.

- Content Analysis of Folk Tales: A selection of Uzbek folk tales will be analyzed for thematic content, cultural nuances, and moral lessons. This analysis will serve as a foundational understanding to inform the subsequent stages of the study.

b. Quantitative Data Collection

- Pre- and Post-Tests: Standardized assessments will be administered to measure students' cognitive development, language proficiency, and critical thinking skills before and after exposure to Uzbek folk tales in the classroom.

- Surveys: Surveys will be distributed to parents and teachers to gauge their perceptions of the impact of folk tales on students' academic performance, moral development, and cultural awareness.

4. Data Analysis

a. Qualitative Data Analysis

- Thematic Analysis: Transcripts from interviews and FGDs will be subjected to thematic analysis to identify recurring themes and patterns related to the educational value of Uzbek folk tales.

- Content Analysis: The analysis of folk tales will involve categorizing themes, character profiles, and moral lessons, providing a qualitative foundation for understanding their potential educational impact.

b. Quantitative Data Analysis

- Descriptive Statistics: Pre- and post-test scores will be analyzed using descriptive statistics to measure changes in cognitive development and language proficiency.

- Correlation Analysis: Statistical techniques will be applied to explore potential correlations between exposure to Uzbek folk tales and improvements in cognitive skills.

5. Data Integration

Qualitative and quantitative findings will be triangulated to provide a comprehensive understanding of the educational value of Uzbek folk tales. This integration will allow for a nuanced interpretation of the data, ensuring that the study's conclusions are robust and well-rounded.

6. Ethical Considerations

The research will adhere to ethical guidelines, ensuring informed consent, confidentiality, and voluntary participation of all participants. Approval from relevant institutional review boards will be obtained prior to data collection.

7. Limitations

Potential limitations include the need for translator services in some regions, variations in teacher expertise, and the influence of external factors on students' performance. These will be addressed through rigorous data collection and analysis procedures.

CONCLUSION

The culmination of this comprehensive study illuminates the profound educational value embedded within Uzbek folk tales, affirming their pivotal role in primary school education. Through a meticulous exploration of both qualitative and quantitative data, we have discerned their transformative impact on students' cognitive development, language proficiency, moral reasoning, and cultural awareness.

The voices of primary school teachers and educators resound with unanimous enthusiasm, attesting to the efficacy of incorporating these age-old narratives into the curriculum. Witnessing heightened engagement, expanded cultural appreciation, and enhanced moral understanding, educators herald the enduring relevance of Uzbek folk tales in shaping well-rounded, culturally-conscious individuals.

The resonance among young learners is equally striking. Through focus group discussions, students expressed not only an innate affinity for the narratives but also a burgeoning imaginative capacity. They drew connections between the tales and their own lives, demonstrating an impressive ability to grasp complex moral dilemmas and cultural nuances.

Quantitative assessments further substantiate these qualitative insights, with pre- and post-test scores revealing statistically significant improvements in cognitive abilities and language proficiency. The upward trajectory in performance underscores the educational potency of Uzbek folk tales, validating their integration into the primary school curriculum.

Parent and teacher surveys serve as a corroborative chorus, affirming the positive changes witnessed in students' academic endeavors, ethical reasoning, and cultural acumen. The resounding endorsement from these stakeholders underscores the broader societal benefits of infusing Uzbek folk tales into the educational journey.

In totality, this research resonates with resounding clarity: Uzbek folk tales are not mere stories; they are dynamic pedagogical tools that transcend time, culture, and

generations. Their cultural richness, moral depth, and cognitive stimulus position them as invaluable assets in the arsenal of primary education.

As we conclude this study, we advocate for the continued incorporation of Uzbek folk tales into the educational framework of Uzbekistan. We envision a future where every primary school student is afforded the opportunity to engage with these narratives, embarking on a journey of learning that not only fosters academic prowess but also cultivates a deep appreciation for their cultural heritage.

In championing the educational legacy of Uzbek folk tales, we stand at the threshold of a more enriched, culturally conscious, and inclusive educational landscape. It is our hope that this research serves as a catalyst for further exploration and implementation, heralding a brighter future for Uzbekistan's primary school education.

REFERENCES:

1. Anderman, E. M. (2018). The Oxford Handbook of Human Development and Culture: An Interdisciplinary Perspective. Oxford University Press.
2. Bamberger, J. (2015). Mindfulness-Based Interventions in Context: Past, Present, and Future. Clinical Psychology: Science and Practice, 22(1), 36-41.
3. Banks, J. A. (2018). Citizenship Education and Global Migration: Implications for Theory, Research, and Teaching. American Educational Research Journal, 55(1), 4-34.
4. Betts, C. (2017). Using Folktales to Teach Literacy: Strategies and Activities for Teachers, Parents, and Librarians. Libraries Unlimited.
5. Karimov, I. (2019). Uzbekistan's Path to Development. Oxford University Press.
6. Khalid, A. M. (2016). Uzbekistan: To the Threshold of the Twenty-First Century. Routledge.
7. Kispál, A. (2020). Developing Students' Critical Thinking Skills through Foreign Language Learning. Teaching English with Technology, 20(4), 3-19.

8. Maktabi, R. (2018). The Uzbek Way: Economic Transition and Entrepreneurship Development in Uzbekistan. Palgrave Macmillan.
9. Moss, G. (2017). Teaching Critical Thinking and Problem Solving Skills. Delta Publishing.
10. Nassaji, H. (2019). Teaching Language Skills: Speaking. Routledge.
11. Smith, L. I. (2016). A Developmental Approach to Child and Adolescent Counseling. John Wiley & Sons.
12. Tziboula-Clarke, A. (2018). Assessing Critical Thinking in Higher Education: Current State and Directions for Next-Generation Assessment. ETS Research Report Series, 2018(1), 1-37.
13. Zipes, J. (2009). Why Fairy Tales Stick: The Evolution and Relevance of a Genre. Routledge.
14. Abdullayeva B., Aliyev N. Pedagogical Ability In Self-Development Of A Future Primary School Teacher //Академические исследования в современной науке. – 2023. – Т. 2. – №. 2. – С. 149-153.
15. Ergasheva D. BOSHLANG ‘ICH SINF O ‘QUVCHILARIDA MA’NAVIY-AXLOQIY SIFATLARNI TARBIYALASH //Бюллетень педагогов нового Узбекистана. – 2023. – Т. 1. – №. 5. – С. 51-53.

АНАЛИЗ ФАКТОРОВ ПАРАМЕТРИЧЕСКИЕ НЕОПРЕДЕЛЕННОСТИ ИНФОРМАЦИИ ПРИ УПРАВЛЕНИИ ПРОЦЕССОМ БАКТЕРИАЛЬНОГО ОКИСЛЕНИЯ

Г.Б. Махмудов, А.Х.Саидова, Г.Р. Сидикова

Навоийский государственный горно-технологический университет

В настоящее время развитие бактериальной окислений сопровождается созданием процессов различного назначения, протекающих в условиях параметрических неопределенности информации. Анализ протекающих метаболических процессов позволяет отнести процесс бактериальной окислении (БО).

Системный подход применяется при изучении БО, в частности, ее отдельных реакторов, например, биореактор, являющихся с позиции системного анализа сложными системами [1,2]. Целевой функцией клетки является максимизация удельной скорости роста микробной популяции [3]:

$$\frac{dx}{x \cdot dt} \to \frac{\max}{\vec{U}}, \tag{1.1}$$

где x – концентрация биомассы; t – время; $\vec{U}$ – вектор внутриклеточных управлений.

Важнейшей целью любого живого микроорганизма является поддержание постоянных условий при воздействии внешней среды. Прирост биомассы осуществляется по экспоненциальному закону и может быть представлен единственной лимитирующей реакцией. В этом случае рост биомассы сбалансирован и определяется выражением [4]:

$$\frac{dx}{x \cdot dt} = a^T \vec{y} \tag{1.2}$$

Матрица a^T качественно определяет состав бактерии. Количественный состав внутриклеточных компонентов определяется вектором удельных

скоростей образования продуктов реакций $\vec{y}$. Тогда целевая функция клетки принимает вид [5]:

$$J = \max\left(\frac{dx}{x \cdot dt}\right) = a^T \max_{\vec{U}}\{\vec{y}\} \quad (1.3)$$

Таким образом, в соответствии с системным подходом результат целенаправленной деятельности процессом БО может являться системообразующим фактором. Основой математической модели процесса БО является кинетическая модель, для построения которой, ввиду сложностей выявления закономерностей протекания бактериального процесса, используется экспериментально-аналитический метод. Наименее изученным в решении этой задачи является выбор критерия интерпретации для определения констант модели. При его выборе необходимо знать закон распределения погрешности измерения, который зачастую неизвестен. Выше изложенное создает трудности при разработке и использовании математических моделей процесса БО для целей управления [6,7,8]. К примеру, в модели (1.1) нелинейные составляющие находятся в правой части уравнения. В этом случае математические затруднения вызывает получение точных аналитических решений дифференциальных уравнений. Поэтому основная тенденция в современном математическом моделировании БО заключается в получении упрощенных аналитических решений и качественных характеристик описания поведения динамической БО.

Все сложные системы характеризуются наличием неопределенностей [9], пренебрежение которыми ведет к снижению качества функционирования систем управления, а в худшем случае, – и к потере их работоспособности. Поэтому для повышения эффективности функционирования современных процессах БО необходимо учитывать следующие основные неопределенности, характерные для процессов управления сложными биосистемами [10]:

1. Низкая точность получаемой с объектов управления информации, обусловленная высокой погрешностью технических средств измерения.

2. Невысокая точность математических моделей объектов из-за упрощения, неадекватным применением погрешности измерения при определении констант модели по экспериментальным данным.

3. Низкая точность переменных состояния процесса вследствие высокой степени колебаемости параметров субстрата на входе в аппарат. Кроме того, соотношение компонентов в клетках микроорганизмов также сильно варьируется.

Отмеченные особенности свидетельствуют о том, что для выполнения более высоких требований к качеству функционирования БО необходимы принципиально новые пути совершенствования процесса управления, учитывающие неопределенный, нечеткий характер БО и сложные взаимосвязи в процессе их функционирования.

На сегодняшний день одной из главных проблем при решении задач управления БО остается создание динамических моделей физико-химических процессов при отсутствии полной и точной информации о поведении БО, что приводит к априорной неопределенности и нечеткости моделей процессов, используемых для целей управления. При этом основными факторами проявления неопределенности в задачах управления БО являются следующие:

– сложность формализованного описания процесса БО для решения задач управления. Сегодня невозможно разработать математическую модель процесса БО, которая описывала бы все факторы, влияющие на процесс;

– не стационарность биотехнологического процесса;

– невысокая воспроизводимость процесса БО, обусловленная изменяющейся биологической активностью посевного материала, длительностью его хранения и другими неизученными факторами;

– априорная параметрическая неопределенность обстановки и условий функционирования процесса БО и системы управления.

Отмеченные особенности обуславливают использование при построении систем управления упрощенных моделей БО. Из-за перечисленных

особенностей, разработка совершенных систем управления процессами БО, основанных на периодическом и непрерывном процессах БО, является сложной комплексной задачей, решению которой отводится значительное место при разработке прикладного математического обеспечения АСУ ТП. Использование в реальных системах слишком сложных математических моделей лишает их гибкости и универсальности, затрудняет их применение, требует датчиков, для получения информации о процессе и быстродействующих вычислительных средств в контуре управления. Снижение качества управления при автоматизации процессов БО на основе традиционных систем управления из-за перечисленных трудностей объясняют существование риска принятия необоснованного решения при выборе и реализации задач управления. В связи с отмеченным при автоматизации биотехнологических производств приходится учитывать специфические свойства БО, что определяет дополнительные трудности, в первую очередь при выборе задач управления основными процессами этих производств – процессами БО.

Решение задач разработки методов управления выводом на заданный режим, управления потоками субстратов и отбором продуктов и методов стабилизации при наличии неопределенностей связано с серьезными затруднениями в виду необходимости одновременного учета целого ряда разнообразных факторов неопределенности, практически не позволяющих сформировать в замкнутой аналитической форме алгоритмы функционирования САУ БО с требуемыми показателями эффективности. В связи с этим внедрение интеллектуальных методов в теорию и практику автоматического управления сложными, нелинейными слабо-формализуемыми процессами БО является весьма целесообразным.

Анализ существующего состояния управления процессами стадии БО показывает, что вопросам синтеза САУ в условиях информационной неопределённости не уделялось достаточного внимания, тогда как в технических областях они давно получили решение, эффективное по

отношению к результатам, полученным на основе традиционных решений. Следовательно, применение методов и алгоритмов интеллектуализации решения задач при синтезе САУ сложными БО в условиях недостаточности информации продолжает оставаться первоочередной задачей, решение которой приведет к росту эффективности биотехнологических производств.

Литературы

1. Жумаев О. А., Махмудов Г. Б., Мажидова Р. Б. ПРИМЕНЕНИЯ НЕЧЕТКОГО КОНТРОЛЛЕРА ДЛЯ УПРАВЛЕНИЯ ПРОЦЕССА ВЫЩЕЛАЧИВАНИЯ ЗОЛОТА ИЗ ПРОДУКТОВ БАКТЕРИАЛЬНОГО ВСКРЫТИЯ //Journal of Advances in Engineering Technology. – 2022. – №. 1. – С. 5-9.

2. Abdujaliliovich J. O. et al. FUZZY LOGIC CONTROLLER IN THE MANAGEMENT OF TECHNOLOGICAL PROCESSES OF BACTERIAL OXIDATION //Web of Scientist: International Scientific Research Journal. – 2021. – Т. 2. – №. 06. – С. 191-197.

3. Юсупбеков Н. Р. и др. НОАНИҚ МАНТИҚ АСОСИДА ИНТЕЛЛЕКТУАЛ БОШҚАРИШ ТИЗИМЛАРИНИ ИШЛАБ ЧИҚИШ //Journal of Advances in Engineering Technology. – 2020. – №. 2. – С. 20-25.

4. Jumayev O. A., Akhmatov A. A., Makhmudov G. B. Process modeling of optimum mixing of cyanic solutions with use of intellectual systems of measurement on a basis to a fuzzy logic //Chemical Technology, Control and Management. – 2018. – Т. 2018. – №. 1. – С. 132-137.

5. Махмудов Г. Б., Саидова А. Х., Мохилова Н. Т. Моделирование нечеткой логики для управления процессом бактериального окисления концентратов в реакторах с мешалкой //Современные инновации, системы и технологии-Modern Innovations, Systems and Technologies. – 2022. – Т. 2. – №. 2. – С. 0201-0214.

6. Махмудов Г. Б., Ибрагимова Ч. К. АДАПТИВНАЯ ФАЗЗИ-РЕГУЛЯТОР ДЛЯ ОБОГАТИТЕЛЬНЫХ ПРОЦЕССОВ. – 2022.

7. Махмудов Г. Б., Мохилова Н. Т. РАЗРАБОТКА НЕЧЁТКОГО ПИД-РЕГУЛЯТОРА С НАСТРОЙКОЙ КОЭФФИЦИЕНТОВ. – 2022.

8. Махмудов Г. Б., Саидова А. Х. ИССЛЕДОВАНИЕ ПИД-РЕГУЛЯТОР С НЕЧЁТКОЙ ЛОГИКОЙ. – 2022.

9. Махмудов Г. Б., Саидова А. Х., Мохилова Н. Т. Моделирование нечеткой логики для управления процессом бактериального окисления концентратов в реакторах с мешалкой //Современные инновации, системы и технологии. – 2022. – Т. 2. – №. 2. – С. 0201-0214.

10. Махмудов, Г. Б., Саидова, А. Х., Мохилова, Н. Т., & Ибрагимова, Ч. К. (2022, April). ИССЛЕДОВАНИЕ ИНТЕЛЛЕКТУАЛЬНЫЕ СИСТЕМЫ УПРАВЛЕНИЯ НА ОСНОВЕ НЕЧЕТКОГО ЛОГИКА. In *E Conference Zone* (pp. 302-308).

11. Jumaev, O. A., G. B. Mahmudov, and R. B. Bozorova. "Organization Of The Optimum Development Of The Interface Of The Technological Process, Influence Of Errors And Noise On The Functioning Of Intellectual Control Systems." *International Journal of Advanced Research in Science, Engineering and Technology* 6.9 (2019).

12. Ботиров Т. В. и др. УСТРОЙСТВО ЗАЩИТЫ ОТ ПЕРЕПАДОВ НАПРЯЖЕНИЯ В ЭЛЕКТРИЧЕСКОЙ СЕТИ //Journal of Advances in Engineering Technology. – 2022. – №. 2. – С. 18-21.

13. Эшмуродов З. О. и др. Модернизация систем управления электроприводов шахтных подъемных машин. – 2019.

UDK: 94 (575.1):32(“1867/1917”)

TURKISTON GENERAL-GUBERNATORI K.P. FON KAUFMANNING O‘LKADA MADANIY SOHADA YURITGAN SIYOSATI (ISLOM DINI MISOLIDA)

Muxlisa Kamolova

O‘zMU, Tarix fakulteti, “O‘zbekiston tarixi” kafedrasi o‘qituvchisi

E-mail: kamolova.muxlisa7@mail.ru

ANNOTATSIYA

Ushbu maqolada Rossiya imperiyasining O‘rta Osiyoni bosib olgandan so‘ng o‘lkaning birinchi general-gubernatori K.P.Kaufmanning hududda islom dini masalasida yuritgan siyosati, uning mohiyati va ushbu siyosatdan ko‘zlangan maqsad haqida fikr yuritiladi. Shuningdek, K.P.Kaufmanning “islomni e’tiborsiz qoldirish” siyosati doirasida amalga oshirilgan asosiy masalalar va ularning natijalari haqida ma’lumot keltiriladi.

Kirish so‘zlar: *general-gubernator, islom, vaqf, “inkor etish” siyosati, muftiylik.*

КУЛЬТУРНАЯ ПОЛИТИКА ГЕНЕРАЛ-ГУБЕРНАТОРА ТУРКЕСТАНА К.П. ФОН КАУФМАНА В СТРАНЕ (НА ПРИМЕРЕ РЕЛИГИИ ИСЛАМ)

АННОТАЦИЯ

В данной статье рассматривается политика первого генерал-губернатора страны К. П. Кауфмана после завоевания Российской империей Средней Азии по вопросу ислама, ее сущность и цель этой политики. Также представлена информация об основных проблемах и их результатах, реализуемых в рамках политики К. П. Кауфмана “игнорирование ислама” .

Ключевые слова: *генерал-губернатор, ислам, вакф, политика “отрицания”, муфтий.*

THE GOVERNOR-GENERAL OF TURKESTAN K.P.FON KAUFMAN'S CULTURAL POLICY IN THE COUNTRY (IN THE EXAMPLE OF ISLAM)

ANNOTATION

This article discusses the policy of the first governor-general of the country K.P. Kaufman, after the conquest of Central Asia by the Russian Empire on the issue of Islam, its essence and the purpose of this policy. It also provides information on the main issues and their results implemented within the framework of K.P. Kaufman's policy of "ignoring Islam".

Key words: *governor-general, Islam, vakf, politics of "denial", mufti.*

Kirish. O‘rta Osiyoning Rossiya tomonidan bosib olinishi hududda yangi shakldagi boshqaruv asoslarini o‘rnatish uchun zamin tayyorladi. Bosqindan keyin rus hukumatining mintaqaning asosiy dini hisoblangan islomga munosabati haqida savol tug‘iladi. Shuni ta’kidlash kerakki, Rossiya davlatining islom olami bilan aloqalari uzoq tarixga ega. Rossiya davlati boshidanoq imperiya tipidagi birlashma – ko‘p millatli va ko‘p konfessiyali xalqlardan iborat bo‘lgan. XIX asrning o‘rtalariga kelib Rossiya tarkibiga musulmon aholisi ko‘p bo‘lgan hududlar (Volgabo‘yi, Qrim, Kavkaz) kirgan. Birinchi Turkiston general-gubernatori K.P. Kaufman Turkiston o‘lkasi boshqaruv tizimini rivojlantirishning asosiy yo‘nalishlarini jumladan din masalalarini ham belgilab berdi.

Mavzuga oid adabiyotlarning tahlili (Literature review).

Ushbu masala mohiyatini ochishda shu davr sharqshunoslari, deyarli barcha Turkiston general-gubernatorlarini yaxshi tanigan N.P.Ostroumov (1899) va V.P.Nalivkin (1886) asarlari, 1908-1909 yillarda o‘tkazilgan taftish komissiyasining rahbari K.K.Palenning hisobotlari va tekshiruvlari (1910) qimmatlidir. Ushbu hisobotlarda Turkistonning deyarli 40 yillik taraqqiyoti statistik ma’lumotlar va hisobotlar orqali xolis ochib berilgan. Yurtimiz tarixchi olimlaridan N.A.Abdurahimova, F.R.Ergashev (2002), S.Boltaboyev (2005), F.Isxakov (2009)

monografiya, tadqiqotlari, Sh.Muxammedov (2009) maqolasida mavzuning turli jihatlari ochib berilgan. Xorijlik tadqiqotchilardan M.E.Shushkova (2015) dissertatsiyasi va X.Knauer (2016) tadqiqotlarida ham ushbu masalaga oid ma'lumotlar uchraydi.

Tadqiqot metodologiyasi (Research Methodology).

Ushbu maqolani yozishda ma'lumotlarni siyosiy tahlil, muammoviy va miqdoriy tahlil, tizimlilik kabi ilmiy tadqiqot usullaridan foydalanildi.

Tahlil va natijalar (Analysis and results).

Mahalliy xalqlarning milliy va diniy hayotiga rus hokimiyatning aralashmaslik pozitsiyasi sovet davri tarixiy adabiyotlarida musulmon institutlari va ruhoniylarini e'tiborsiz qoldirish siyosati deb ham atalgan, umuman olganda, o‘sha davr nuqtai nazaridan, O‘rta Osiyoni bosib olish va mustamlaka qilishning birinchi o‘n yilliklarida tanlangan eng maqbul yo‘l shu edi [6].

O‘rta Osiyoda imperator va mustamlaka hokimiyatlarining tub aholining madaniy va ma'naviy qadriyatlariga, ularning diniy e'tiqodlariga bo‘lgan munosabati juda ziddiyatli va uzoq vaqt davomida belgilab qo‘yilgan.

Turkiston general-gubernatorligining tashkil topishi bilan Rossiyada musulmon dini ko‘p millionli "zaryad" oldi va din masalalari hal qilinishi lozim bo‘lgan muhim sohalar qatoriga kirdi. XIX asr boshlarida xorijiy konfessiyalarning diniy ishlar bo‘limi Ichki Ishlar Vazirligi tarkibiy qismiga kirgan. Ushbu bo‘lim o‘z faoliyatida "to‘liq bag‘rikenglik" tamoyiliga amal qilgan, faqat bunday bag‘rikenglik davlat tartibi manfaatlariga to‘la mos kelishi shart edi. Ushbu sohani tartibga soluvchi asosiy qonunchilik hujjati 1896-yilda nashr etilgan "Xorijiy konfessiyalarning ma'naviy ishlari to‘g‘risidagi Nizom" edi. Unga ko‘ra, Rossiyadagi musulmonlarning diniy hayoti Ichki Ishlar Vazirligiga bo‘ysunuvchi davlat muassasalarining "muftiylari" tomonidan tartibga solingan. Dastlab Vazirlik Turkiston o‘lkasini Ufa muftiyati orqali, to‘g‘rirog‘i, "Orenburg Muhammadiylar diniy yig‘ilishi" yordamida nazorat qiladi, deb taxmin qilingan edi. Biroq. K.P.Kaufman Turkiston general-gubernatori lavozimiga kirishgach, o‘zining diniy siyosatini yurita boshladi. 1867 yil 14 iyunda

lavozimga kirishganidan ko‘p o‘tmay, fon Kaufman musulmon ruhoniylari vakillarini to‘pladi va ularga to‘liq sodiqlik evaziga diniy immunitetni taklif qildi. K.P.Kaufmanning musulmon siyosati odatda “e’tiborsizlik” siyosati deb ataladi. Biroq islomiy muassasalar ustidan to‘liq nazorat o‘rnatildi. K.P.Kaufmanning g‘oyasi, bizningcha, “original”. Avvalo, musulmonlarning eng oliy qozi-kalon lavozimi, shuningdek, shariat qoidalarining bajarilishini nazorat qiluvchi raislar bekor qilindi [6].

1878 yilda Orenburg Muxammadiylar diniy yig‘ilishi Turkiston o‘lkasini o‘z nazorati ostida ma’naviy jihatdan qaytadan bo‘ysundirishga harakat qildi. K.P.Fon Kaufman Rossiya imperiyasi Harbiy vaziriga murojaat qilib, shunday deb yozadi: “O‘n ikki yillik tajriba shuni ko‘rsatadiki, mahalliy ruhoniylar shariatga ko‘ra jamiyat hayoti va boshqaruvi urf-odatlari va tartib-qoidalariga unchalik aqidaparast va hasad bilan qaramaydilar va ular bilan osonroq til topisha oladilar. bizning ma’muriyatning yangi buyruq va talablari yangi kelganlardan ko‘ra.” Har doim va hamma joyda islom g‘oyalari va tariqatlari hukmronligining eng g‘ayratli himoyachilari bo‘lgan rus tatarlari va boshqirdlarini ziyorat qilgan din arboblari... Shu sabablarga ko‘ra men tan olaman. Orenburg muftiysi va Turkiston o‘lkasining tub aholisining ma’naviy Muhammadiy institutlarini bo‘ysundirishgina emas, balki ularning mahalliy musulmon idoralari va shaxslari bilan to‘g‘ridan-to‘g‘ri rasmiy aloqada bo‘lishiga ruxsat berish ham noqulay...”. Natijada, K.P.Kaufman o‘ziga berilgan keng vakolatlardan foydalanib, muftiylik bilan aloqani uzdi [9].

Turkiston general-gubernatori K.P. Kaufman imperatorga yozgan bir hisobotida “Diniy, shu bilan birga siyosiy hisoblangan musulmon maktabini rus hokimiyati qo‘llab-quvvatlashi, yordam qilishi mumkin emas edi. Shu ham aniq ediki, uni to‘g‘ridan-to‘g‘ri tugatish bizga nisbatan qarshilikni keskinlashtirishga olib keladi. Shuning uchun musulmon maktablariga nisbatan qo‘llanilgan usulni, ya’ni ularni inkor etish, tan olmaslik usulini qo‘llash qolgan edi, xolos” [4], deb yozadi. K.P.Kaufmanning ma’muriy sohani ma’naviy sohadan ajratish to‘g‘risidagi qarori “islomni e’tiborsiz qoldirish siyosati” nomi bilan mashhur bo‘ldi[9]. “…general

Kaufman har qanday missionerlik harakatini mahalliy xalq orasiga olib kirilishidan qaytarib, Sankt-Peterburgdan shu maqsadda kelgan bir ikki kishini Toshkentni darhol tark etishga majbur qilgan”[7].

Turkiston o‘lkasida islom dini, shariat qonun-qoidalari deyarli har bir sohada yetakchi ahamiyatga ega bo‘lgan. O‘lkada mahalliy aholining yerga bo‘lgan haq-huquqlari ham shariat qonun-qoidalari asosida boshqarilgan. Shuni alohida ta’kidlash kerakki, Turkistonning birinchi general-gubernatori musulmon dini va ruhoniylarining jamiyatdagi o‘rnini aniq tushungan va bu rolni susaytirish siyosatini nimadan boshlash kerakligini bilgan. Turkiston general-gubernatori K.P.Kaufman imperatorga yozgan hisobotida ta’kidlab o‘tgan edi: “Albatta, bu davlatlar tepasida amir va xonlar turgani bilan davlat ishlarini boshqarishda islom dini vakillari yetakchi rol o‘ynaydi. Shu bilan bir qatorda, fan, maorif va sud sohasidagi ishlar ham ularning qo‘lidadir” [8].

Imperator mintaqadagi hukmron konfessiyaga nisbatan Kaufman tomonidan taklif qilingan yondashuvlarni umuman ma’qulladi [3].

K.P.Kaufman rus maorif va madaniyati yordamida mahalliy aholini islomdan qaytarish mumkin, deb hisoblagan. Ammo haqiqat butunlay boshqacha bo‘lib chiqdi, XX asr boshlarida juda ko‘p musulmon ta’lim muassasalari ochildi. 1913-yilda Turkistondagi maorif ishlari faxriylaridan biri, Toshkent seminariyasi mudiri N.Ostroumov o‘lka xalq maktablari bosh inspektori nomiga yozgan hisobotida Farg‘ona viloyatida r masjidlar nomi ostida madrasala ochilayotganini yozadi. Shunday qilib, mahalliy ilm-fan homiylari Turkiston ma’muriyati tomonidan o‘rnatilgan madrasalar ochish bo‘yicha qat’iy va ko‘pincha amalga oshirib bo‘lmaydigan qoidalarni chetlab o‘tadilar. Madrasa ochilishining yana bir sharti bu o‘quv dargohida mullalar tayyorlash uchun rus tili darslarining ochilishi edi. Ostroumov afsus bilan yozadi: “Turkiston o‘lkasida islom dini zaiflashayotgani yo‘q, musulmon maktablari (madrasa va maktablar) yo‘q bo‘lib ketmayapti, chunki ma’muriyat va o‘quv bo‘limining ba’zi mutasaddilari hali ham bu haqda o‘ylashda davom etmoqda” [6].

Turkiston o‘lkasida islom dinining ta’siri kuchliligini quyidagi faktlar ham isbotlaydi. Sirdaryo, Farg‘ona va Samarqand viloyatlaridagi turli nomdagi 119 ta rus ta’lim muassasasi hisobiga 5246 ta musulmon maktabi, birgina Farg‘ona viloyatidagi 482 ta pravoslav cherkoviga 6134 ta masjid to‘g‘ri kelgan [2].

Imperator mintaqadagi hukmron konfessiyaga nisbatan Kaufman tomonidan taklif qilingan yondashuvlarni umuman ma’qulladi [3].

XIX asr o‘rtalarida Turkistondagi vaqf mulklarining umumiy qiymati haqidagi ma’lumotlar yo‘q, lekin vaqflar, madrasalar, masjidlar, maktablar, qabristonlar egalarining soni va ular olgan daromadlari buning ancha ahamiyatli bo‘lganini tasdiqlaydi. Masalan, yirik madrasalar (150 va undan ortiq talaba) har yili vaqflaridan o‘rtacha 40 ming tanga olgan; o‘rta madrasalar (50 dan 150 talabagacha) - 12 mingdan 35 minggacha, kichik madrasalar (15-20 talaba) taxminan 5 ming tanga daromad olgan [3].

Turkiston hududi bosib olinishi arafasida uning hududida juda katta vaqflar, masalan, Samarqanddagi Ulug‘bek, Sherdor va Tillakori madrasalari, Andijonda Oftabachi, Toshkentda — Baroqxon, bundan tashqari Xo‘jand, Qo‘qon, Turkiston, Pishpek, O‘zgan va viloyatning boshqa shaharlarida ham yirik madrasalar bo‘lgan. Birgina Sherdor va Tillakori madrasalari Zarafshon tumanining turli hududlarida 11 ming tanobdan ortiq yerlar, Samarqandda sakkizta savdo majmuasiga egalik qilgan. Bu vaqflarning o‘zi madrasaga 38 ming tanga yoki 7600 rubl daromad keltirgan [3].

Vaqflarning mavjudligi nafaqat masjidlar, madrasalar, maktablar va din vakillarining hayotini ta’minlashga imkon bergan, balki o‘n minglab dindorlarni ish bilan ta’minlaganligi va shunga mos ravishda tirikchilik vositasi bo‘lganligi sababli katta ijtimoiy ahamiyatga ega edi. Shu holatni hisobga olib, millionlab musulmonlar ongida shariatga ko‘ra vaqf mulklarini yaratish, ulardan maktab, madrasalar qurish, yosh avlod ta’lim-tarbiyasini takomillashtirishda foydalanish qat’iy qaror topgan. Mustamlaka hokimiyati dastlab vaqf mulkiga tegmagan. Bundan tashqari, mahalliy aholining asosiy qismiga o‘zlarining g‘amxo‘rliklarini namoyish qilmoqchi bo‘lgan hukumatlar 1868-yilda yer solig‘ini daromadning uchdan bir qismidan beshdan biriga

kamaytirdilar. Ammo XIX asr 70-yillarning o‘rtalarida, metropoliyadan ko‘chirib keltirilgan aholining mintaqaga joylashish ko‘lamining oshishi sababli, bu soliq yer solig‘i bilan almashtirildi.

Turkiston general-gubernatorligi ma’muriyati islom dini vakillarining ichki ishlariga aralashmaslik niqobi ostida ish yuritdi hamda ularga nisbatan ehtiyorkorlik bilan munosbatda bo‘lib, general-gubernator K.P.Kaufman taklif etgan quyidagi yo‘lni tutdi:

1. Madrasalardagi mutavallilar ustidan xonliklar davrida joriy etilgan ma’muriy nazorat qiluvchi “mutavalliboshi” lavozimi tugatildi.
2. Madrasalarni tamomlaganlarni davlat ishlariga olinishiga to‘sqinlik qilish.
3. Madrasalarda dunyoviy fanlarning o‘qitilishiga qarshilik qilish.
4. Musulmonlarning muqaddas shaharlari bo‘lgan, Makka va Madinaga xaj qilishga to‘sqinlik qilmaslik.
5. Islom dini vakillarini davlat ichki ishlariga aralashuvini cheklash.

Xulosa va takliflar. (Conclusion/Recommendations).

K.P.Kaufman ma’muriyatining o‘lkani boshqarish borasidagi chora tadbirlarini yetarlicha ehtiyotkorona va mahalliy odatlar va an’analarga nisbatan majburan yon beruvchi deya tavsiflash mumkin [1]. Uning bu davrdagi pozitsiyasi “dushmanlik va kutish” bo‘lgan. K.P.fon Kaufman “bu davrdagi har qanday keskin chora yaxshilikdan ko‘ra ko‘proq zarar keltiradi” deb hisoblagan [5].

ADABIYOTLAR

1. Абдурахимова Н.А, Эргашев Ф.Р. Туркистонда чор мустамлака тизими Тошкент: Академия .2002. – 177 б.
2. Всеподданнейший доклад Туркестанского генерал-губернатора от инфантерии Духовского. Ислам в Туркестане, 1899, – С.12.
3. Исхаков Ф. Центральная Азия и Россия в XVIII – нач. XX вв. – Ташкент. 2009. – 226 с.
4. Кауфман К.П. Проект всеподданнейшего отчета генерал-адъютанта К.П. Кауфмана по гражданскому управлению и устройству в областях Туркестанского генерал губернаторства. 77. XI. 1867 - 25. ш. 1881. - С.-Петербург: Б.И., 1885. С. 437-438.
5. Кнауер Н.Х. Немцы древного края (Туркстан, Средняя, Центальная Азия) Printed in Germany,2016. – С 53.
6. Мухаммедов Ш. Исламский вопрос в Российском Туркестане: или была лиальтернатива политике игнорирования. https://ia-centr.ru/experts/iats-mgu/islamskiy-vopros-v-rossiyskom-turkestane-ili-byla-li-alternativa-politike-ignorirovaniya-ch-1/
7. Скайлер Ю. Туркистон: Россия Туркистони, Қўқон, Бухоро ва Ғулжага саёҳат қайдлари. Тарж. З.А.Саидбобоев. – Тошкент: O‘zbekiston НМИУ, 2019. – 124 б.
8. ЎзМА: 36 фонд, 1 рўйхат, 2366 иш, 24 варақ.
9. Шушкова М.Э. Организация управления Туркестаном в начале XX века. – М.2015. – С.157.

TRITIKALE NAVLARINING BIOMETRIK KO‘RSATKICHLARIGA EKISH MUDDATLARINING TA’SIRI

Maftuna Mashrabovna Raimqulova
Burxon Sobirovich Avutxonov
Sharof Rashidov nomidagi Samarqand davlat universiteti
almum76@mail.ru

Annotatsiya: *Ushbu maqolada Samarqand viloyati sharoitida yetishtirilgan tritikale navlarining biometrik ko‘rsatkichlariga ekish muddatlarining ta’siri bo‘yicha olingam ma’lumotlar keltirilgan. Samarqand viloyati sharoitida ekilgan tritikale navlari yigirmanchi oktabrda ekilganlarini biometrik ko‘rsatkichlari yuqori natija berishi. Tritikale navlari orasida Valentin navi donining yirikligi, yashil massasi ko‘pligi bilan ham boshqa navlardan farq qilishi aniqlangan.*

Kalit so‘zlar: *Tritikale, navlar,yetishtirish, biometrik ko‘rsatkichlar, ekish muddatalari.*

Abstract: *This article presents the information obtained on the effect of planting dates on the biometric indicators of triticale varieties grown in the conditions of Samarkand region. Biometric indicators of triticale varieties planted in the conditions of Samarkand region are those planted on the 20th of October. Among the triticale varieties, it was found that the Valentine variety differs from other varieties in terms of its grain size and green mass.*

Key words: *Triticale, varieties, cultivation, biometric indicators, planting dates.*

KIRISH. Bugungi kunda dunyo aholisini ko‘p qismi oziq-ovqat yetishmasligi bilan qiynalmoqda. Ayniqsa oqsil yetishmasligi bolalar o‘rtasida keng tarqalgan. Bu masalani hal qilishda tarkibida oqsil miqdori ko‘p, tannarxi arzon va yetishtirish oson bo‘lagan donli ekin tritikaledan keng foydalanish maqsadga muvofiqdir.

Tritikale uni asosan konditer mahsulotlarini (keks, pechene, vafli) ishlab chiqarishda tarkibiy qism bo‘lib xizmat qiladi. Non yopish uchun tritikale navlarining ko‘pchiligi afsuski yaroqsizdir, chunki kuchsiz kleykovinaga ega, ammo ular bug‘doy va boshqa boshoqli o‘simliklar uni bilan qorishmasida faol ishlatiladi.Tritikaledan non yopish uchun maxsus yondashuv kerakligi ta’kidlanadi. Olimlar oliy navli bug‘doy unini 70 % va tritikale unini 30 % miqdorda qo‘llashni tavsiya etishadi. Bunday qorishma natijasida olinadigan xamirturushsiz usul bilan yopiladigan tritikale-bug‘doy noni tayyor katta hajmi bilan farqlanadi va ajoyib ta’m va hidga ega [8].Tritikale navlaridan oziq-ovqat sifatida foydalanishdan tashqari chorvachilikni sifatli ozuqa bilan ta’minlash maqsadida ham keng foydalanish mumkin.

Chorvachilikni rivojlantirishning asosiy negizini chorva mollarini sifatli va to‘yimli ozuqa bilan taminlash tashkil etadi. Shu boisdan keyingi yillarda respublikamiz qishloq xo‘jaligi tarmoqlarida yangi islohatlar olib borilmoqda. Tritikale donining yirikligi, kraxmalga, oqsilga va uglevodga boyligi bilan ajralib turadi. Ayniqsa respublikamizda keng tarqalqan yem-xashak o‘simliklari bilan birga ekilgan tritikale navlaridan to‘yimli va oqsilga boy ozuqa sifatida ishlatilish samarali natija beradi.

ADABIYOTLAR TAHLILI VA METODOLOGIYA. Tritikale bug‘doy-javdarning eng muhim xususiyatlarini o‘zida mujassam etgan o‘simlik sifatida quyidagilarni aytish mumkin: bug'doyning yuqori agrotexnik ko'rsatkichlari, javdarning turli xil biotik va abiotik stresslarga chidamlilik va ozuqaviylik qiymati [7]. Tritikalening kelib chiqishi uning nomida aks etadi, bu Triticum va Secale avlodlari nomlarining qismlari qo'shilishidan kelib chiqadi. Bug‘doy va javdar duragayi—ikki xil o‘simlik xususiyatlarini o‘zida mujassamlashtirgan o‘simlik hisoblanadi. Bug‘doy va javdarning dastlabki duragayini 1875-yilda Shotlandiya olimi Vilson yaratgan. 1881-yil Germaniyada Rimpau uning doimiy duragayini ajratib olgan. Keyingi yillarda oktaploid (56 xromosomali), geksaploid va oktaploid (42, 56 xromosomali) duragaylari yaratilgan [9].

Tajribalar Samarqand viloyati Payariq tumanida sug‘oriladigan o‘tloq-bo‘z tuproqlar sharoitida o‘tkazildi. Barcha tajribalarda tritikale navlari uch qaytariq qilib ekildi.Paykalchalarning umumiy yuzasi 64 m^2. Ekish muddati kuzda-1-10-20-30 oktabrda, qator orasi 60 sm, ekish chuqurligi 3-4 sm. Tajribadagi tuproqning namlik darajasi cheklangan dala namlik sig‘imi (CHDNS) 70% dan kam bo‘lmagan holda ushlandi. Sug‘orish meyorlari tuproqdagi namlikning taqchilligi asosida belgilanadi (600-700m^3/ga).

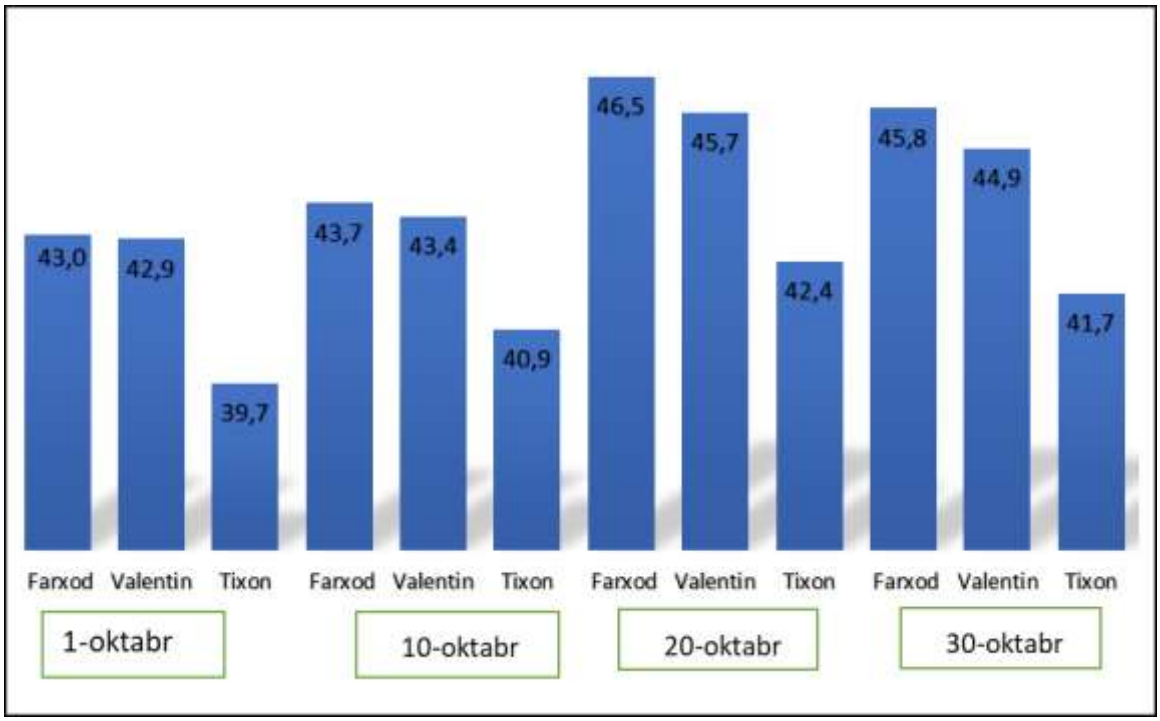
Asosiy agrotexnik tadbirlar xo'jalikda qabul qilingan me'yorlar asosida o'tkazildi. Barcha fenologik kuzatuvlar va biometrik o'lchovlar Samarqand qishloq xo'jaligi institutida ishlab chiqilgan va tavsiya etilgan (2002) usullarga asoslandi. Dala tajribalarini o‘tkazish, tuproq va o‘simlik namunalarini olish va tahlil qilish, fenologik kuzatishlar O‘zPITI [5] uslublar asosida amalga oshirildi. O‘simliklarning bioekologik xususiyatlarini ontogenezda o‘rganishda I.G.Serebryakov [6] uslublari qo‘llaniladi. O‘simliklarning mavsumiy rivojlanish maromoni o‘rganish I.N. Beydeman [3] uslublarida bajarildi.

Tajribalarda urug‘larning 1000 ta don massasi, urug‘larning tinim davri, o‘sish energiyasi, o‘sish kuchi davlat standarti bo‘yicha aniqlandi.

NATIJALAR. Tadqiqotlarim Samarqand viloyatining Payariq tumanida sug‘oriladigan o‘tloq-bo‘z tuproqlar sharoitida olib borildi. Samarqand viloyati sharoiti sharoitiga mos tritikale navlarini tanlab olib, moslanuvchanlikning fiziologik asoslarini tahlil qilish va ishlab chiqarishga tatbiq etish bo‘yicha tajribalar o‘tkazdik. Tritikale navlarining 1000dona don og‘irligi bo‘yicha olingan natijalar 1-rasmda keltirilgan.

Bundan ko‘rinib turibdiki 1-oktabr sanasida ekilgan tritikale navlarida 1000 ta don massasi bo‘yicha esa Farxod navi eng og‘iri bo‘lib, 43,0 g, Valentin navida esa bu 42,9 g. Yengili esa Tixon navida bo‘lib 39,7 g ga ega ekan. Bunda Farxod navi Valentin navidan 0,1 g ga Tixon navidan esa 3,2 g ga og‘ir ekani ma’lum bo‘ldi. Valentin navi esa Farxod navidan 0,1 g ga yengil, Tixon navidan esa aksincha 3,2 g

ga og‘ir ekanni aniqlandi. Yengili esa bu Tixon navida bo‘lib, Farxod navidan 3,3 g, Valentin navidan esa 3,2 g ga yengilligini kuzatdik.



1-rasm.Tritikale navlarining1000 dona don og‘irligi, g

10-oktabr sanada ekilgan navlarda esa kursatkich quydagicha bo‘lib, 1000 ta don massasining og‘irligi Farxod navida 43,7 g, Valentin navida esa 43,4 g Tixon navida esa 40,9 g ekani ma’lum bo‘ldi. Farxod navi eng og‘iri bo‘lib Valentin navidan 0,3 g, Tixon navidan esa 2,8 g og‘ir ekan. Valentin navida esa Farxod navidan 0,3 g yengil, Tixon navidan esa 2,5 g og‘ir ekanini aniqladik. 1000 don massasining vazni bo‘yicha yengili bu Tixon navida ekan Farxod navidan 2,8 g, Valentin navidan esa 2,5 g yengil ekanini kuzatdik.

20-oktabr sanada ekilgan tritikale navlarida 1000 don massasining og‘irligini o‘rganganimizda Farxod navining 1000 dona don massasining og‘irligi 46,5 g ni tashkil etdi, undan farqli ravishda Valentin navida 1000 dona don massasining og‘irligi 45,7g ga teng bo‘ldi, 1000 dona don massasining og‘irligi qolgan navlarga qaraganda Tixonda yengil 42,4 g ni tashkil etdi. Farxod navida 1000 dana donning og‘irligi Valentin navidan 0,8 gga og‘irroq, Tixon navidan esa 4,1 g og‘irroq chiqdi. Valentin navida 1000 don massasi Farxod navidan 0,8 yengil, Tixon navidan 3,3 gga og‘ir chiqdi. Tixon navida 1000 dona don massasi Farxod navidan 4,1 g yengil ekan.

Valentin navidan esa 3,3 g ga kamroq chiqdi. Bundan ko‘rinib turibdiki Farxod navining donlari og‘ir, Tixon navining donlari esa aksincha yengil chiqdi.

30-oktabr sanasida ekilgan tritikale navlarini 1000 ta don massasini aniqlaganimizda quydagi natijalar olindi. Bunda Farxod navida 45,8 g, Valentin navida 44,9 g ekan Tixon navi 41,7 g ekanini aniqladik. Bunda Farxod navi og‘iri bo‘lib, Valentin navidan 0,9 g, Tixon navidan esa 4,1 g og‘ir chiqdi. Valentin navida Farxod navidan 0,9 g ga yengil. Tixon navidan 3,2g ga og‘ir ekanini bildik. Tixon navidagi 1000 ta don massasi eng yengili bo‘lib Farxod navidan 4,1 g, Valentin navidan esa 3,2 g ga yengil ekan.

Tritikale navlarining biometrik ko‘rsatkichlariga ekish muddatlariningta’siri bo‘yicha olingan ma’lumotlar 1- jadvalda ko‘rsatilgan.

1-jadval.

Tritikale navlarining biometrik ko‘rsatkichlariga ekish muddatlariningta’siri

№	Navlar	Ekish muddatlari	Boshoq uzunligi (sm)	1-ta boshoqdagi boshoqchalar soni	1-ta boshoqdagi donlar soni	1-ta boshoqdagi donning og‘irligi (g)
1	Farxod	1.10	12,1	25,4	43,9	1,8
2	Valentin		11,9	29,1	56,9	2,3
3	Tixon		11,1	22,3	50,7	1,9
1	Farxod	10.10	12,5	27,6	45,4	2,0
2	Valentin		12,7	31,9	58,7	2,5
3	Tixon		11,4	24,7	52,6	2,1
1	Farxod	20.10	14,6	29,8	48,4	2,2
2	Valentin		13,9	33,9	62,8	2,8
3	Tixon		13,5	26,7	55,6	2,3
1	Farxod	30.10	13,7	28,4	47,1	2,1
2	Valentin		13,1	32,8	60,9	2,6
3	Tixon		12,9	25,6	53,7	2,2

Jadvaldan ko‘rinib turibdiki tritikalening biometrik ko‘rsatkichlari aniqlandi. Unga ko‘ra 1-oktabrda ekilgan natijalari bir boshoq balandligi Farxod navida 12,1 sm, Valentin navida bir boshoq balandligi 11,9 sm, Tixon navida bir boshoq balandligi 11,1 sm. Bitta boshoqdagi boshoqchalar soni navlarga mos holda turlicha bo‘lib, Farxod navida 24,5 ta, Valentin navida boshoqchalar soni ko‘p bo‘lib 29,1 ta, Tixon navida qolgan navlarga nisbatan kam bo‘lib 22,3 ta boshoqchalar borligi aniqlandi. Bitta boshoqda donlar soni turlicha bo‘lib, Farxod navida 43,9 ta, Valentin navida undan ko‘p 56,9 ta ni, Tixon navida esa 50,7 ta ni tashkil qilgan. Bir boshoqdagi donlar soni bo‘yicha eng kami Farxod navida bo‘lib Valentin navidan 13,0 ta ga, Tixon navidan esa 6,8 ta kam ekan. Bir boshoqdagi donlar og‘irligi bo‘yicha Valentin navi ko‘p ekan Farxod navidan 13,0 ta, Tixon navidan esa 6,2 ta ga ko‘p ekani aniqlandi. Tixon navida esa o‘rtacha ko‘rsatgich bo‘lib Farxod navidan 6,8 ta ko‘p, Valentin navidan esa 6,2 ta ga kam ekanini kuzatdik. Bir boshoqdagi donning og‘irligi Farxod navi eng yengili bo‘lib uning o‘g‘irligi 1,8 g og‘iri esa Valentin navida bo‘lib, 2,3 g ga teng Tixon navida esa 1,9 g ekanini aniqlandi. Farxod navi Valentin navidan 0,5 g Tixon navidan esa 0,1 g ga yengil ekannini aniqladik. Valentin navi esa og‘iri bo‘lib Farxod navidan o,5 g ga Tixon navidan esa 0,4 g ga og‘ir ekan. Bunda ham o‘rtacha ko‘rsatkich Tixon navida bo‘lib, Farxod navidan 0,1 g ga ogir, Valentin navidan esa 0,4 g ga yengil ekani ma’lum bo‘ldi.

10-oktabrda ekilgan tajribalarimiz esa avvalgidan sezilarli darajada o‘zgarganini kuzatdik. Boshoq uzunligi Farxod navida 12,5 sm, Valentin navida boshoq uzunligi 12,7 sm ga yetgan, Tixon navida esa boshoq uzunligi 11,4 sm ga teng ekan. Bitta boshoqdagi boshoqchalar soni Farxod navida 27,6 ta boshoqcha bo‘lib, Valentin navida boshoqchalar soni 31,9 ta boshoqcha bor. Tixon navida boshoqchalar kam bo‘lib, 24,7 ta boshoqcha bor ekanligini aniqladik. Bitta boshoqdagi donlar soni turli navlarda turlicha bo‘lib, Farxod navida 45,4 ta, Valentin navida esa ko‘pi bo‘lib 58,7 ta, Tixon navida esa 52,6 tani tashkil etganini kuzatdik. Farxod navida bir boshoqda donlar soni bo‘yicha eng kami bo‘lib, Valentin navidan 13,3 ta, Tixon navidan esa 7,2 ta kam ekani ma’lum bo‘ldi. Valentin navida bir

boshoqda donlar soni bo‘yicha eng ko‘pi bo‘lib, Farxod navidan 13,3 ta, Tixon navidan esa 6,1 ta ko‘p ekan. Tixon navi esa Farxod navidan 7,2 ta ga ko‘p, Valentin navidan esa 13,3 ta ga kam ekanini kuzatdik. Tadqiqotlarimizni davom etirar ekanmiz bir boshoqdagi donning og‘irligini kuzatdik. Bunda Farxod navida 2,0 g ga, Valentin navida 2,5 g, Tixon navida esa 2,1 g ga yetdi. Farxod navi boshoqdagi don og‘irligi buyicha yengili bo‘lib, Valentin navidan 0,5 g, Tixon navidan esa 0,1 g ga yengil ekan, bir boshoqdagi donlar og‘irligi bo‘yicha Valentin navi og‘ir ekanini kuzatdik Farxod navidan 0,5 g Tixon navidan 0,4 g o‘g‘ir ekan. Tixon navida esa Farxod navidan 0,1 g og‘ir, Valentin navidan esa 0,4 g yengil ekanini aniqladik.

Tadqiqot natijalariga ko‘ra tritikale navlaridan 20-oktabr kundagi Farxod navining bir boshoq uzunligi 14,6 smni tashkil etadi, Valentinda undan farqli ravishda bir boshoq balandligi 13,9 sm ga teng bo‘ldi, Tixon navida bir boshoq balandligi 13,5 sm ni tashkil etdi. Boshoqlar uzunligi boyicha tritikale navlarida Farxod navining boshog‘i baland ekan. Farxod navi Valentin navidan 0,7 sm ga baland ekan Tixon navidan esa 1,1 sm ga baland ekan. Valentin navining boshoq balandligi Farxod navidan 0,7 sm qisqaroq ekan Tixon navidan esa 0,4 smga baland ekan. Tixon navining boshog‘ining balandligi Farxod navidan 1,1 sm ga kalta ekan Valentin navidan esa 0,4 sm ga qisqaroq ekan. Tritikale navlarida bir boshoqda boshoqchalar Farxod navida 29,8 ta, Valentin navida 33,9 ta, Tixon navida 26,7 ta boshoqchalar bor ekan. Tritkale navlarida bir boshoqdagi donlar soni Farxod navida 48,4 ta, Valentin navida esa bir boshoqda donlar soni 62,8 ta ni tashkil qiladi, Tixon navida esa bir boshoqda donlar soni 55,6 ta ni hosil qildi. Bundan ko‘rinib turibdiki 1 boshoqda donlar soni ko‘pligi bo‘yicha Valentin birinchi o‘rinda turar ekan.Boshog‘i baland bolishiga qaramay Farxod navida esa eng kam ko‘rsatkich kurinib turibdi. Farxod navining bir boshoqdagi donlar soni Valentin navidan 14,4 ta kam, Tixon navidan esa 7,2 ta ga kam ekani kurinib turibdi. Valentin navida bir boshoqdagi donlar soni Farxod navidan 14,4 ta ga ko‘p, Tixon navidan esa 7,2 ta ga ko‘p ekan. Tixon navida bir boshoqdagi donlar soni Farxod navidan 7,2 ta ga ko‘p, Valentin navidan esa 7,2 ta ga kam ekani aniqlandi. Tajribani davom ettirar ekanmiz. Bir

boshoqdagi donlar og‘irligini aniqladik. Tritikale navlaridan Farxod navida bir boshoqdagi donlar og‘irligi 2,2 g ni tashkil etdi. Valentin navida esa bir boshoqda donlar og‘irligi 2,8 gni ko‘rdik undan farqli ravishda Tixon navida bir boshoqda donlar og‘irligi 2,3 g ni tashkil etadi. Bundan ko‘rinib turibdiki bir boshoqdagi donlar og‘irligi boyicha Valentin navida yuqori ko‘rsatkichga ega, kamroq ko‘rsatkich esa Farxod navida ekan. Valentin navining bir boshoqdagi donning og‘irligi Farxod navidan 0,6 g ga og‘ir ekan Tixon navidan 0,5 g ga og‘ir chiqdi. Farxod navining bir boshoqdagi donning og‘irligi Valentin navidan 0,6 g ga yengil, Tixon navidan esa bir boshoqdagi donning og‘irligi 0,1 g ga yengil ekan. Tixon navining boshoqdagi og‘irligi Farxod navidan 0,1 g ga og‘irroq chiqdi. Valentin navidan esa aksincha 0,5 g ga yengilroq chiqdi.

Tajribalarimizni davom etirar ekanmiz oyning 30-oktabr sanasida ekilgan tritikale navlarning biometrik ko‘rsatkichlari sekinlashganini kuzatdik. Bunda birinchi boshoq uzunligini o‘rgandik, Farxod navida bir boshoq uzunligi 13,7 sm, Valentin navida esa 13,1 sm ekan Tixon navida bu ko‘rsatkich 12,9 sm ga yetganini kuzatdik. Farxod navi boshoq balandligi bo‘yicha eng balandi xisoblanadi.Valentin navidan 0,6 sm ga, Tixon navidan esa 0,8 sm ga baland ekani aniqlandi. Valentin navi esa Farxod navidan 0,6 sm ga kaltaroq, Tixon navidan esa 0,2 sm ga baland ekanini kuzatdik. Tixon navida esa boshog‘i sekin o‘sganini kuzatdik, Valentin navidan 0,2 sm ga, Farxod navidan esa 0,8 sm ga boshog‘i qisqa ekani aniqlandi. Bir boshoqdagi boshoqchalar soni Farxod navida 28,4 ta Valentin navida 32,8 ta boshoqchalar bor Tixon navida 25,6ta boshoqcha borligi aniqlandi. Tajribalar davomida bir boshoqdagi donlar soni turlicha bo‘lib Farxod navida 47,1 ta, Valentinda esa 60,9 ta, Tixon navida 53,7 ta ekanini aniqlandi. Farxod navida bir boshoqlar doni qolgan navlarga qaraganda kam ekani ma’lum, Valentin navidan 13,8 ta, Tixon navidan 6,6 ta ga kam ekan. Boshoqdagi donlar soni bo‘yicha Valentin yuqori o‘rinda turar ekan, Farxod navidan 13,8 ta Tixon navidan 7,2 taga ko‘p ekan, Tixon navi o‘rtacha ko‘rsatgichda bo‘lib, Farxod navidan 6,6 ta ko‘p, Valentin navidan esa 7,2 ta ga kam ekanini kuzatdik. 1 ta boshoqdagi donning og‘irligini

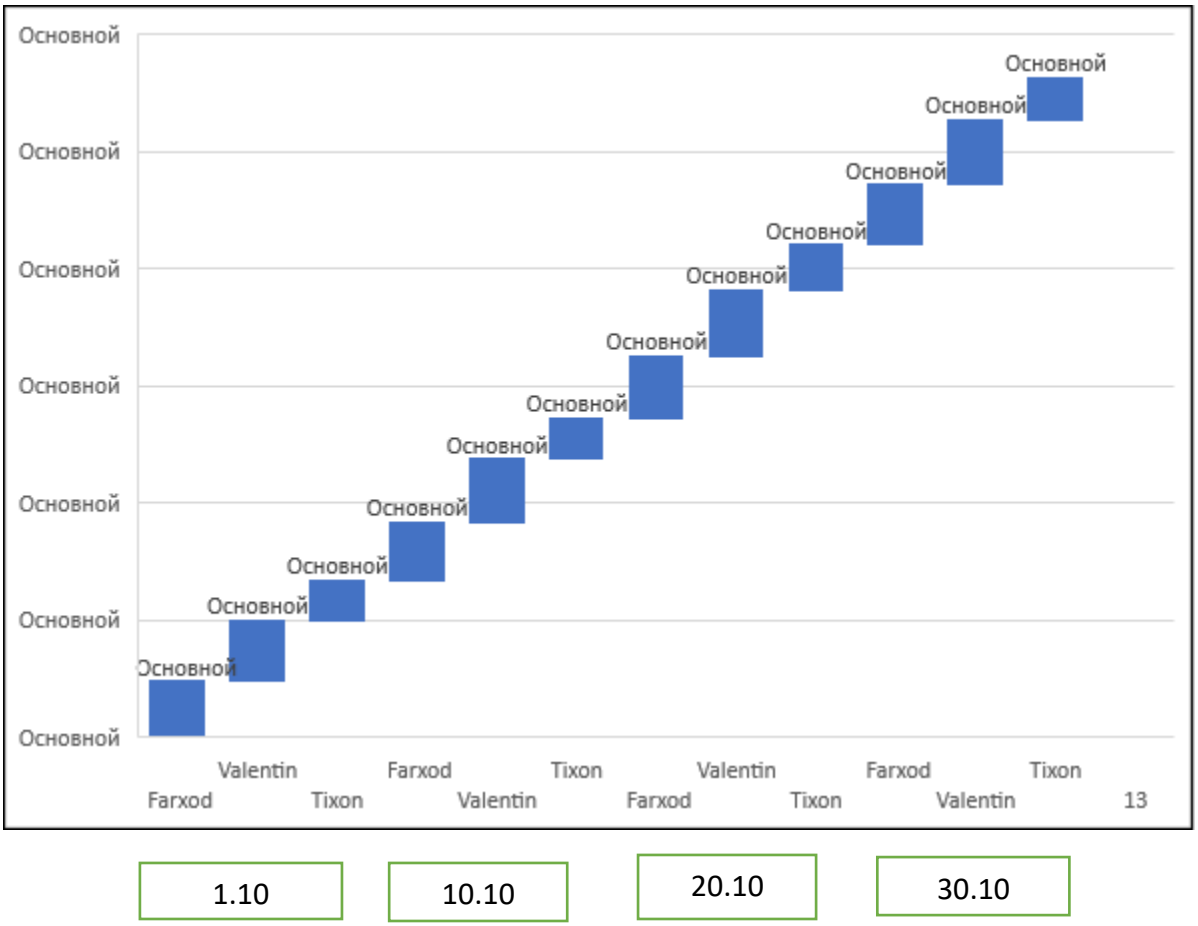
aniqladik unga ko‘ra Farxod navida 2,1 g, Valentin navida 2,6 g ga teng. Tixon 2,2 g chiqdi. Farxod navi bir boshoqdagi donlar og‘irligi bo‘yicha eng yengili sanaladi. Valentin navidan 0,5 g, Tixon navidan esa 0,1 g ga yengil ekanini kuzatdik. Bir boshoqdagi donlar og‘irligi bo‘yicha Valentinning donlari og‘ir chiqdi. Farxod navidan 0,5 g, Tixon navidan 0,4 g ga og‘irroq ekan. Tixon navida o‘rtacha ko‘rsatgich bo‘lib, Farxod navidan 0,1 g ga og‘ir, Valentin navidan aksincha 0,4 g yengil ekanini aniqladik.

Tritikale navlarining bo‘yini balandligini aniqlaganimizda quydagi natijalarni aniqladik.1-oktabr sanadagi tritikale navlarining bo‘yining balandligi quydagicha bo‘lib, Farxod navining bo‘yining balandligi 94,6 sm. Valentin navining bo‘yining balandligi eng balandi bo‘lib, 104,6 sm ga yetgan. Tixon navining bo‘y o‘sishi bo‘yicha eng sekini bo‘lib 67,8 sm ga teng. Bunda Farxod navi Valentin navidan 10,0 sm ga sekin o‘sgan Tixon navidan esa 26,8 sm ga tezroq o‘sgani ma’lum bo‘ldi. Valentin navi Farxod navidan 10,0 sm ga, Tixon navidan esa 36,8 sm ga tez o‘sgan. Tixon navi esa Farxod navidan 26,8 sm, Valentin navidan esa 36,8 sm ga sekin o‘sgan ekan.

10-oktabr sanadagi kuzatuvlarimizni davom etirar ekanmiz tritikale navlarining bo‘yining balandligi bunda Farxod navining bo‘yining balandligi 99,0 sm, Valentin navining balandligi esa 107,8 sm, Tixon navi bu sekin o‘sgan nav bo‘lib, bo‘yining balandligi 70,9 sm ekani aniqlandi Farxod navi Valentin navidan 8,8 sm ga sekin o‘sgan, Tixon navidan esa 28,1 sm ga tezroq o‘sgani ma’lum bo‘ldi. O‘sish jadalligi tez bo‘lgan nav bu Valentin navi bo‘lib, Farxod navidan 8,8 sm, Tixon navidan esa 36,9 sm ga o‘sish jadallashgan. O‘sish jadalligi sekin bo‘lgan nav bu Tixonda edi bu nav Farxod navidan 28,1 sm ga, Valentin navidan esa 36,9 sm ga sekin o‘sgan.

20-oktabr sanadagi navlarning balandligi qolgan sanadagilarga qaraganda balandroq bo‘lganini kuzatdik. Farxod navining bo‘yining balandligi 105,7 sm ni tashkil etdi, Valentin navida esa bo‘yining balandligi yuqori ko‘rsatkichda bo‘lib 113,5 sm ga yetganini ko‘rdik, o‘sish tezligi sekin bo‘lgan esa Tixon navida bo‘lib

bo‘yining balandligi 76,4 sm tashkil etishini aniqladik. Farxod navining bo‘yining balandligi Valentin navidan 7,8 sm ga o‘sishi sekinroq ekan, Tixon navidan esa 29,3 sm ga baland chiqdi. Valentin navi Farxod navidan 7,8 sm ga baland Tixon navidan 37,1 sm ga baland chiqdi. O‘sish jadalligi sekin bo‘lgan nav Tixon navi bo‘lib Farxod navidan 29,3 sm ga kalta, Valentin navidan esa 37,1 sm ga kaltaroq ekan.



2-rasm.Tritikale navlarining o‘sish davomiyligiga ekish muddatlarining ta’siri, sm.

30-oktabr kundagi natijalar Farxod navining bo‘yining balandligi 102,6 sm, Valentin navining bo‘yining balandligi 110,1 sm, Tixon navida bu ko‘rsatkich sekinlashadi. 73,4 sm ga yetadi. Farxod navi Valentin navidan 7,5 sm ga sekin o‘sgan. Tixon navidan esa 29,2 sm ga tez o‘sgan. Valentin navida bu ko‘rsatkich ancha o‘sadi. Farxod navidan 7,5 sm, Tixon navidan 36,7 sm ga tez o‘sganini aniqladik. Sekin o‘sgan nav bu Tixon bo‘lib, Farxod navidan 29,2 sm, Valentin navidan esa 36,7 sm ga sekin o‘sgan.

MUHOKAMA. Tritikale navlarining donida lizin, triptafan singari almashinmaydigan aminokislatalarga boy [1]. Tritikalening asosiy ishlab chiqaruvchilari Polsha, Germaniya, Belarus, Fransiya va Rossiyadir Tritikale – stress omillarga chidamli ekin bo'lib, kasalliklarga va yuqori haroratga chidamli, noqulay tuproq va iqlimga tez moslashuvchan ekindir [8]. Shuning uchun abiotik stresslar tufayli ko'pchilik ekinlar uchun noqulay hisoblangan joylarda ekishni tavsiya qilinadi [4].

Tritikalening hozirgi navlari don hosildorligi va yashil massa bo‘yicha javdar, arpa, suli va bug‘doyning qimmatli navlari bilan bemalol raqobatlasha oladi [7]. Shu bilan bir vaqtda tritikale yuqori ozuqaviy ko‘rsatkichlarga ega va tarkibidagi oqsilda ko‘p miqdorda lizin mavjud; unimsiz, kislotali yoki suv bosgan tuproqlarda yetishtirilishi mumkin; noqulay qishlashni va bahor-yoz mavsumlarini yaxshi o‘tiradi; ko‘pgina zamburug‘larga chidamli; boshqa donli ekinlarga qaraganda kamchiqimli va resurstejamkor texnologiyalarga yaxshiroq mos keladi [9]. E’tiborli jihati tritikale hosildorligi ozuqaviy qiymati bo‘yicha dunyoning ko‘p agrar hududlarida oldindan yetishtirilib kelinayotgan ekinlardan o‘tib ketdi, iqlim, tuproqning noqulay sharoitlari va kasalliklariga chidamlilik bo‘yicha bug‘doyni ortda qoldirdi [2].

XULOSA. Samarqand viloyati sharoitida ekilgan tritikale navlari yigirmanchi oktabrda ekilganlarini biometrik ko‘rsatkichlari yuqori natija berdi. Tritikale navlari ichida Valentin navi donining yirikligi, yashil massasi ko‘pligi bilan ham boshqa navlardan farq qilishi aniqladi.Shuningdek, Samarqand viloyati Payariq tumani sharoitida yetishtirilgan tritikale navlari bo‘yining balandligi ekish muddatiga bog‘liq holda 67,8 sm dan 113,5 sm gacha bo‘lishi aniqlandi. 20-oktyabrda ekilgan tritikale boshqa muddatlarda ekilgan variantlarga nisbatan balandroq bo‘lishi kuzatildi. Tritikale navlarining o‘sish sur'ati naychalash fazasida eng jadal (umumiy o‘sishining 36,1-42,2%) bo‘lishi aniqlandi. Umuman olganda ushbu hududda Farxod, Valentin va Tixon navlaridan yuqori hosil olish uchun barcha agrotexnik tadbirlarni to’g‘ri yo‘lga qo’yib, oktabr oyining ikkinchi o‘n kunligida ekishga tavsiya etiladi.

ADABIYOTLAR RO‘YXATI

1. Atabayeva X.N. Xudayqulov J.B. O'simlikshunoslik. -T .: «Fan va texnologiya», 2018, 408 bet.

2. Баженов, М. С. Изучение внутрисортового озимой тритикале по устойчивости к прорастанию зерна в колосе Тритикале: мат-лы междунар-й науч.-практич.конф. «Тритикале и его роль в условиях нарастания аридности климата» и секции тритикале отделения растениеводства РАСХН. - Ростов - н/Д, 2012.-С. 16-20.

3. Бейдеман И.Н.Методика изучения фенологии растений и растительных сообществ. - Новосибирск: Наука, 1974. -153с.

4. Гончаров С.В. Европейский семенной рынок тритикале // Тритикале. Материалы научно- практич. конференции ―Тритикале и его роль в условиях нарастания аридности климата‖. – Ростов н/Д, 2012. – С. 141-145.

5. Дала тажрибаларини ўтказиш услублари– Тошкент, ЎзПИТИ,2007.-256 б.

6. Серебряков И.Г. О методе изучения ритмики сезонного развития растений в геоботанических стационарах // Доклады совещаний по стацио- нарным геоботаническим исследованиям.М.-Л. Изд.АН СССР, 1954.- С.145-159.

7. Кутровский В.Н., Инновационные сорта зерновых культур и их роль в развитии зерновой отрасли Центрального региона России // Зерновое хозяйство России. 2011. - № 4 (16). – С. 13-18.

8. Godfray, H.C.J., J.R. Beddington, I.R. Crute, L. Haddad, D. Lawrence, J.F. Muir, J. Pretty, S. Robinson,S.M. Thomas, and C. Toulmin. 2010. Food security: the challenge of feeding 9 billion people. science. 327:812-818.

9. Xalilov N. Oripov R. O'simlikshunoslik. - T.: O'zbekiston faylasuflari milliy jamiyati nashriyoti, 2007. ~ 384 b.

IMPROVEMENT OF ADEQUATE MODELING SYSTEM IN PRIMARY CLASS NATURAL SCIENCE LESSONS

Gavhar Abdullayeva Ro‘zimurod qizi
Karshi State University teacher of the institute

ABSTRACT

At the current stage, teaching natural sciences to junior schoolchildren is carried out under the auspices of forming a holistic view of the world and adapting children to a changing living environment. The content of any school course, including science, requires regular updating in accordance with the changing basic ideas of the social system. At the current stage, all reform trends are aimed at forming the child's education system or bringing it as close as possible to the model of didactic formalism, which requires the child's education not only to remember and thus acquire the amount of knowledge, but also to develop thinking. It consists of getting acquainted with the main sources and methods of obtaining information.

Key words: *Adequacy, mental adequacy, intuition, attention, perception, memory, thinking, imperfection, audit.*

Introduction (Introduction)

First of all, when talking about the model, let's focus on the following information, that is, there are several types of models. Specifically, a deterministic model is one that assumes that the data are known and that the mathematical formulas used are correct to determine the outcome within observable limits at any given time.

Stochastic or probabilistic models are models in which the outcome is not certain, but probable. And there is uncertainty about the correctness of the approach to the model. Numerical models are models that express the initial conditions of the model through numerical sets. These models allow you to model a model by

changing the original data so that you can see how the model behaves when you have different data. In general, mathematical models can also be classified according to the type of input they operate on. These can be heuristic models, in which explanations are sought for the causes of the observed phenomenon. In the scientific model, it is an abstract representation of phenomena and processes to explain them. A scientific model is a visual representation of the solar system that appreciates the relationships between the planets, the sun, and motion.

By entering data, the model allows you to study the final result. To create a model, it is necessary to implement certain hypotheses so that the description of the result we want to get is as clear as possible, as well as simple and easy. manipulation. According to the third international TIMSS study in 1995, the results of Russian students were assigned to the intermediate, middle group. Unlike schoolchildren of leading countries, our students showed low indicators of integrating knowledge and applying it to gain new knowledge and explain the events happening in the world around them. These data emphasize the need for reforms: it is necessary to strengthen the practical orientation of the course content in the cycle of natural sciences.

The priority direction of primary general education is the formation of general education skills and competencies. In the state standard of primary general education, the activity, practical content, specific methods of the activity have a special place. Students' cognitive activity includes working with the simplest ready-made object, symbolic, graphic models to describe the properties and qualities of the studied objects. Mandatory minimum of the content of the main educational programs on the external world provides for the study of the relationship between plants and animals, the specific features of animal nutrition in primary school. Models make it easier for students to understand relationships, help them remember and repeat knowledge about them. At the same time, students' independent work and direct participation in the construction of models play a decisive role in the modeling process. Thus, a significant activation of children's cognitive activity is achieved.

Analysis of literature on the topic (Literature review)

Adequacy theory - the first scientific works in this field were published in 1881 by F. Pickley and in 1892 by Lawrence Dixie. T. Rud, a follower of this theory, published the following formula in 1989: "Economic activity should be defined as a process of verifying the accuracy of accounting information." Continuing and developing the approach of Lawrence Dix, these theorists saw their task in uncovering voluntary and involuntary errors that entered the test report. Adequate (Latin adaeguatus - equal, suitable, exactly the same, similar) - in the theory of knowledge, the properties and relationships of things and events correspond to their objective content, clear and appropriate, the human mind is an objective being, social practice will be adequately reflected on the basis of

In recent decades, under the influence of political and social factors, problems related to unclear and conflicting goals have emerged. Mathematical modeling in this area is still problematic. What are these problems? Protection from environmental pollution; predicting volcanic eruptions, earthquakes, tsunamis; leading military operations and a number of others. But, despite this, "the process has begun", progress cannot be stopped, and the problems of modeling such extremely complex systems are constantly being solved. Here it is necessary to emphasize the leading role of local scientists and, first of all, Academician N. N. Moiseev, his students and followers. Such a preliminary assessment of the adequacy of the model allows to identify the most gross errors in it.

Models can also be classified by topic: physical, chemical, biological, sociological, economic and others.

According to the topic of modeling, there are the following types:

Descriptive (descriptive) models simulated objects, events.

Earth. We have no way to influence the motion of the comet.

Optimization models are subject to certain conditions and constraints to find the best solutions. In this case, this model includes one or more parameters that we can influence. Often, the process needs to be optimized by several parameters at the same time, and the goals may conflict with each other.

The model is built specifically to obtain additional information about the simulation object. This means that the information obtained in the study of the model can be transferred to the object with different degrees of accuracy. Adequacy of the studied model is a necessary condition for transitioning from the study of the object to the study of the model and the subsequent transfer of the results to the object of study.Adequacy means that all properties of the object important for modeling are reproduced by the model with the necessary completeness.In order to establish adequacy in the case of constructive, including information models, it is necessary to formulate the purpose of modeling and determine which aspects of the studied object (appearance, structure or behavior) are of interest in this case. In this case, the adequacy problem reduces to establishing the corresponding isomorphism or homomorphism.

If different models of an object are available to the observer, but the object itself is not, then it can compare the available models and find some invariant that may belong to the object itself. (available on all models) can highlight torques. trust

Research Methodology (Research Methodology)

The basis of practical teaching methods is the cognitive activity of young students. At the same time, considering natural science as a theoretical and experimental science brings these methods to the fore in the process of studying nature. First, they provide an opportunity to actively implement the principle of visualization of learning, which contributes to the visual-figurative thinking of young students. Secondly, they contribute to the initial emotional fixation of objects in the process of cognition and the need for children to get acquainted with the technology of ways of knowing the world around them. The peculiarity of practical methods is that children should be taught not only to use them, but also to apply them independently in life.

Modeling is one of the practical methods. Instructional modeling is considered by Methodists as an independent teaching method or methodical method.

Modeling is a system of actions to build, change, use a perceived (surreal) model whose elements and relations are similar to (real) elements and relations of a given natural system. In modern teaching of science in elementary school, this method takes the leading place at a certain stage, which determines the direction of the entire course. Chudinova, E.N. Bukvareva and is one of the frequency methods of teaching (A.A. Pleshakov "Green House". The model is a substitute for visual material for objects, reflecting their structure, properties, internal relations (visually - a figurative presentation of complex abstract combinations).and processes) and makes it possible to abstract from unimportant features of the studied natural object or phenomenon. At the same time, it allows not only to think about the phenomenon, but also to actually feel it, to perform various manipulations. with it. In addition to traditional material and ideal (speculative) models, the following types of natural history are distinguished: description, image, scheme, drawing, graph, model, project, etc.

According to the nature of the repeated aspects of the object under study:

a) structural, imitating the structure of the object, its internal structure ("Human skeleton" manual);

b) functional (oil platform model) that visually shows the flow of processes and the sequence of actions.

By correcting information:

a) object - adequate or size copies of objects, their physical structures (models of terrestrial forms, models of plant organs, etc.); static models are about the visual properties of objects, dynamic models are about specific properties of ongoing processes (for example, the current tree model); They also distinguish industrial (fruit samples) and home-made, teacher-made and children's items made of papier-mache, paper, Plasticine (living organisms, models of the solar system), stones, twigs and other natural materials. material - natural communities. According to the nature of working with them, all models of this level are also divided into illustration-

demonstration (display in a finished form) and independently modeled (ground surface forms from gravel and sand).

b) subject - schematic models, in which selected important components of the object are shown using conventional symbols - representatives (graphic symbols, substitute objects), for example, a plan and a map, geometric shapes as a transfer of the shape of a flower. . The use of schemes (structure of natural objects), applications of drawings, etc. is allowed. (structures of natural communities);

c) graphic or symbol (graphs, diagrams, etc.) - the most generalized form of representation of natural relations, at the pre-literal stage for children (plant growth);

d) theatrical, staged or live "simulation", where the children themselves act as markers and substitutes, for example, in clarifying the centering of the rotation of the Earth and the Sun.

The use of modeling in the "Around the World" lesson includes the following sequence:

1) preparation: the teacher determines in advance the possibility, purpose, place and time of using this method in the lesson, the approximate progress of the work and the final representation of the image;

2) the main: a) setting goals and encouraging the work being done; b) preliminary analysis of the educational material: updating knowledge about the studied object or event and highlighting its important features (story - visual identification of the features and characteristics of the object, comparing it with others, description based on identifying similarities and differences). ; in parallel, the task of selecting representative models of each important feature); c) translation of textual, verbal information into sign language at a real or graphic level: the initial coding is done by the teacher, later by the children themselves, while adults pay attention to a new feature in the process of work. which cannot be corrected using the created models and require a different image (new model); d) applying the model in practice (describing various objects, decoding the model, considering the possibilities of using it to change and complicate it);

3) final: correlation of the results obtained during the modeling process with reality (comparison of the original and representative).

At the same time, when using this method, it should be remembered that the model simplifies the object, makes the signs necessary for observation clear, provides only certain aspects, connections and relationships, so it can be combined with other methods - observation need real objects in nature, etc. Working with the model requires a certain level of thinking development; its effectiveness depends on the chosen technology of depicting the model and the active participation of children in its creation.

The modern period of formation of elementary natural science is characterized not only by tendencies to reform its content, methods, forms and tools, which are subordinated to the idea of forming a holistic picture of the world in a junior school student. is to educate an active person who can independently diagnose, predict and act in accordance with the principles of co-evolution of the surrounding socio-natural reality.

Conclusion and recommendations (Conclusion/Recommendations)

If the child acquires knowledge in the process of active, independent, primarily objective, material activity, education will have a developmental effect. A significant activation of children's cognitive activity is achieved by direct participation in the design of models. LM Friedman wrote: The use of simulation has two aspects. First, modeling is the content to be mastered by students as a result of learning, if it is a way of knowing they must master, and secondly, modeling is complete without learning activities and tools. education is not possible. In these courses, modeling is presented as one of the most common hands-on teaching methods. The syllabus of these courses provides a list of modeling exercises for each subject. Many assignments on various types of modeling are offered in textbooks and notebooks. Systematic work on opening individual chains and connections leads the child to understand the unity and integrity of nature. Models - schemes help to deepen understanding and systematization of natural science knowledge, generalize

knowledge, distinguish the main thing in them, play an important role in the development of creative abilities, thinking and imagination.

The basis of practical teaching methods is the cognitive activity of young students. At the same time, considering natural science as a theoretical and experimental science brings these methods to the fore in the process of studying nature. First, they provide an opportunity to actively implement the principle of visualization of learning, which contributes to the visual-figurative thinking of young students. Secondly, they contribute to the initial emotional fixation of objects in the process of cognition and the need for children to get acquainted with the technology of ways of knowing the world around them. The peculiarity of practical methods is that children should be taught not only to use them, but also to apply them independently in life.

List of used literature (References):

1. Voitkevich G.V., Vronsky V.A. Fundamentals of the doctrine of the biosphere: Book. for the teacher. - M.: Marifat, 1989

2. Guseva T.V. On some types of working with models - schemes // Elementary school. - 2002 year. - No. 12.

3. Methodology of teaching natural sciences: textbook for students of higher educational institutions / E.F. Kozina, E.N. Stepanyan. - M.: "Akademiya" publishing center, 2004.

4. The world and man: A textbook for man. four-year school / A.A. Vakhrushev, O.V. Bursky, A.S. Rautian. - M.: Bustard, 2000.

5. Vinogradova N.F., Kalinova G.S. The world around: a textbook for 3kl. four-year school - M.: Venta - Graff, 2002. -

STUDY ON THE RELATIONSHIP BETWEEN SECONDARY EDUCATION AND REGIONAL ECONOMY IN INNER MONGOLIA AUTONOMOUS REGION, CHINA

Zhao Yong-feng [,2,3]

1. Researcher of faculty of Geography and Geoinformation systems, National University of Uzbekistan, Tashkent 100174, Republic of Uzbekistan

2. Faculty of Geography and Planning, Jining Normal University, Ulanqab 012000, People's Republic of China

3. Key Laboratory of Geospatial Big Data Application and Environmental Monitoring, Jining Normal University, Ulanqab 012000, People's Republic of China)

Abstract: *Secondary education and regional economic development have a logical relationship of theme interaction and element coupling, which is the basis of constructing the contemporary basic education system. By constructing the comprehensive system of secondary education and regional economy evaluation index, the coupling coordination model, decoupling model and barrier factor diagnosis model are comprehensively used to study the interactive coupling relationship between secondary education and regional economy in Inner Mongolia Autonomous Region.*

The results show that: (1)The degree of coupling has been in the high-quality coupling stage since 2005, and the degree of coupling coordination indicates a consistent climbing trend, with high-quality coordination being attained in 2017. (2) The decoupling relationship is principally of the expansionary negative decoupling type, and the distribution of weak and strong decoupling is alternate, which exemplifies the emergence of synergistic interactions between secondary education and the regional economy. (3) The subsystem and index barrier factor scores both demonstrated a decreasing tendency over time. In recent years, the size of the school has served as a barrier subsystem, with enrollment, student enrollment, graduation rates and the proportion of secondary industry serving as the primary barriers.

Key words: *Secondary education; Regional economy; Coupling coordination; Degree; Inner Mongolia*

INTRODUCTION

The frontier and central problem of theoretical economics is the connection between education and the economy. The key responsibility and goal of secondary education is to promote exceptional future students for higher education. It is a crucial human resource guarantee for regional economic development as well as a vital basic education front for the comprehensive implementation of the strategy of reviving the region through science and education, supporting the nation through talent, and fostering innovation.

Optimum resource configuration for secondary school basic education, establishment of high school education and regional economic coordinated development of the benign interactive coupling mechanism, scientific regulation, and promotion of secondary school basic education are some of the objective, comprehensive mental differences between high school education and regional economic development. The minority regions of western and central China include Inner Mongolia. It is unclear how the local economy is doing overall. In particular, the friction between basic education and the regional economy is obvious.

The success of promoting the high-quality development of secondary education in Inner Mongolia, strengthening the capacity of high-tech and high-quality professionals, and recognizing the comprehensive promotion of regional economic competitiveness and the soft power of regional economic development all depend on the speedy coupled and coordinated high-quality development of secondary education and regional economy.

LITERATURE REVIEW

The American scholarly Schultz's human capital theory is recognized as the most traditional approach to inspecting how schooling contributes to economic growth in studies conducted abroad on the relationship between education and economy [1-2]. From historical statistical analysis, Dennison (1960) measured different growth-related parameters [3]. Numerous researchers, including Jorgenson, Fraumeni (1992) [4], Mankiw, Romer, Weil (1992) [5], Krueger (1998) [6], Hall,

Jones (1999) [7], and others, have done quantitative analyses of human capital in relation to economic development. Li Yining, a Chinese academic, wrote The Economics of Education, which is a great resource for learning about how education and the economy interact in China. After that, He Dan (2017) [8], Chi Jingming (2019), Hao Qian (2021), and Peng Shaolong (2021) [11] explored the internal logical connection between higher education and the local economy. Countless empirical research on the connection between vocational education and economy has been initiated by scholars such as Liu Wenjun (2007) [12], Li Changhui et al. (2008) [13], Zhou Hong (2012) [14], Wang Yi (2018) [15], Qi Zhanyong (2021) [16], and Cai Wenbo (2021] [17]. The results indicate a strong association between vocational education and regional economic growth.

Macroeducation, higher education, and secondary vocational education receive more attention from local and foreign scholars in quantitative studies on the relationship between education and economy, while secondary education receives comparatively little attention. The limited research on the connection between secondary education and the local economy focuses largely on countermeasure analysis and is insufficiently in-depth in terms of the investigation of its primary influencing elements.

Successfully promoting the high quality running of secondary education in Inner Mongolia Autonomous Region and training more top-notch high-tech and high-quality professionals for regional economic development are crucial for understanding the interactive development and evolution process of secondary education and regional economy in Inner Mongolia and recognizing the main obstacle influencing factors affecting the coupling and coordinated development of the two. It is a crucial research issue that needs to be settled swiftly in order to recognize the comprehensive promotion of regional high-level human resource reserves and regional economic development soft power, and to promote new urbanization construction in the new development period of Inner Mongolia.

MATERIALS AND METHODS

The secondary education and regional economic system complete evaluation index system is constructed based on the findings of the prior study and in accordance with the criteria of regional, scientific, and data availability. The secondary education system consists of 11 indicators, three subsystems, including education scale, education teachers, and education funding (Table 1). The regional economic system consists of 5 sub-systems, comprising 13 indicators and the economic aggregate, structure, level, trade, and effectiveness sub-systems (Table 2).

Table 1. The evaluation index system of secondary education subsystem

System layer	Subsystem layer	Weight	Index layer	Units	Attribute	Weight
Secondary education subsystem	Education scale	0.3396	Number of regular secondary education	Quantity	+	0.3551
			Number of graduates	Persons	+	0.2093
			Enrolment	Persons	+	0.2035
			Student Enrollment	Persons	+	0.2322
	Education teachers	0.2046	Number of faculty	Persons	+	0.2215
			Full-time teachers	Persons	+	0.1724
			Student teacher ratio	%	+	0.6061
	Education funding	0.4558	State financial education funds	10,000 Yuan	+	0.2412
			Fiscal expenditure on education	Yuan	+	0.2286
			Average education expenditure（Local General Secondary school）	Yuan	+	0.2529
			Average education expenditure（Local regular high school）	Yuan	+	0.2773

Table 2. The evaluation index system of regional economic subsystem

System layer	Subsystem layer	Weight	Index layer	Units	Attribute	Weight
Regional economic system	Economic aggregate	0.2786	GDP	10,000 Yuan	+	0.3315
			Gross product of the secondary industry	10,000 Yuan	+	0.3292
			Gross product of the tertiary industry	10,000 Yuan	+	0.3393
	Economic structure	0.0421	Proportion of the secondary industry	%	+	0.4843
			Proportion of the tertiary industry	%	+	0.5157
	Economic level	0.2869	per capita gross national product	10,000 Yuan	+	0.3241
			urban per capita disposable income	10,000 Yuan	+	0.3413
			Average salary of urban workers	10,000 Yuan	+	0.3345
	Economic and trade	0.2338	total retail sales of consumer goods	10,000 Yuan	+	0.5917
			Total import and export trade	10,000 Yuan	+	0.4083
	Economic effectiveness	0.1587	Local budgetary revenue	10,000 Yuan	+	0.5745
			Engel coefficient of urban residents	%	-	0.2349
			urban registered unemployment rate	%	-	0.1905

Data source

This survey uses the Inner Mongolia Autonomous Region as its primary research area, and it pulls its data from the Inner Mongolia Statistical Yearbook, the China Education Statistical Yearbook, and the China Education Funding Statistical

Yearbook from 2001 to 2021. These sources can sufficiently secure the authenticity, authority and reliability of the original data.

Research method

The comprehensive evaluation approach can be used to compute the regional economic development index and the secondary education development index.

$$U(x)=\sum_{i=1}^{n} w_i x_{ij} \cdot E(y)=\sum_{i=1}^{m} w_i y_{ij}$$

$U(x)$ and $E(y)$ respectively represent the comprehensive development index of secondary education and regional economy, x_{ij} and y_{ij} are the standardized values of indicators, and w_i is the index weight computed by the entropy weight method.

Coupling degree is the degree of interaction and mutual influence between systems. By applying coupling theory in physics to the two systems of secondary education and regional economy, the coupling degree of the system can be obtained as follows:

$$C=\sqrt{\frac{U(X)\cdot E(y)}{\left(\frac{U(X)+E(y)}{2}\right)^2}}$$

The greater the value of the coupling degree C, the closer the connection between the systems is, otherwise, the looser the connection between the systems is.

The pairing coordination degree model is presented [18] in order to precisely calculate the degree of development of synergistic connection between the two systems of secondary education and regional economy:

$$T=\alpha U(x)+\beta E(y);\ D=\sqrt{C\times T}$$

Where D is the degree of coupling coordination; T is the comprehensive system development index; α and β respectively represent undetermined coefficients, and $\alpha+\beta = 1$. This paper believes that secondary education in the complex system is as important as regional economy, so $\alpha = \beta = 0.5$.

To more adequately capture the dynamic evolution process of the two, the Tapio decoupling elasticity coefficient formula [19] is used to assess the link between secondary education and regional economic system.

$$DI_t = \frac{(E_t - E_{t-1})/E_{t-1}}{(U_t - U_{t-1})/U_{t-1}}$$

Where: DI_t represents the decoupling degree of regional economy to the development of secondary education in period **t**; E_t and E_{t-1} represent the regional economic composite index of year ***t*** and year ***t-1*** respectively. U_t and U_{t-1} represent the comprehensive index of secondary education in year ***t*** and year ***t-1***, respectively. $\triangle E = (E_t — E_{t-1})/ E_{t-1}$, represents the change rate of the regional economic composite index in year ***t***; $\triangle U = (U_t — U_{t-1})/U_{t-1}$ indicates the change rate of the composite index of secondary education in year ***t***.

The primary influencing variables that affect the coordinated development of secondary education and regional economic system are objectively analyzed and recognized using the obstacle factor diagnosis model, and the calculation method is as follows:

$$O_j = \frac{I_j \times \omega_j}{\sum_{j=1}^{m} I_j \times \omega_j}$$

Where: ω_j is the weight of the JTH index; I_j is the difference between the optimal target value and the actual value of each index, which can be expressed as $1 — r_{ij}$ (the difference between the normalized value of each index and 1).

RESULTS AND ANALYSIS

Time series analysis of the degree of coupling between secondary education and the regional economy

The regional economic system and secondary education system of Inner Mongolia exhibited a consistent and sustained growth trend from 2000 to 2020, achieving a maximum value of 0.8163 in 2020, which still has a significant difference with the degree of coupling and degree of coupling coordination. The high-level coupling stage widened between 2000 and 2005, although the degree of coupling of the high-quality coupling stage lingered for a considerable time after that. The local economic system and the secondary education system are continually involved in a

process of mutual integration, promotion, coordination, and synchronous development evolution, according to the average coupling degree of 21a, which was 0.9324 and depicted the characteristics of high quality coupling. The regional economic system and the secondary education system are recognized to have reached a high quality coupling level in their cooperative interaction.

The coupled coordination curve exhibited an upward trend from 0.1411 in 2000 to 0.9748 in 2020, with an increase value of 0.8337 and an average annual growth of 3.97%. The coupling coordination degree during the preceding 21a was on average 0.6332, and the coordination type exhibited signs of reduced coordination. Pairing coordination experience from 2000 to 2020: Since 2017, the stages of high-quality coordination (2017–2020), moderate coordination (2011–2016), satisfactory coordination (2011–2016), and extreme imbalance have all been finished (2000-2002). The full index of secondary school education and regional economic system during the preceding 21 years also serves as an illustration of the evolution of advanced secondary education (2000-2010) and advanced regional economy (2011-2020).

Analysis of the degree of decoupling between secondary education and regional economy

The Inner Mongolia autonomous region's secondary enrollment and regional economic decoupling degree are essentially expansionary negative decoupling, strong decoupling, weak decoupling, expansionary connection, strong negative decoupling, and other five types of decoupling states. These states are characterized by recurrent interactions between secondary enrollment and the adaptive adjustment process of the regional economic system. Strong and weak decoupling were the second types of decoupling states, and the average decoupling index over the previous 21 years was 1.1443, implying a dilated negative decoupling link. The following portrays the decoupling evolution process: The expansionist and negative decoupling states of 2000–2006, 2007–2012, and 2015–2017 demonstrate that secondary education exhibits positive growth characteristics and that the capacity for regional economic

development is still robust. Although the two are evolving in tandem and in concert, the growth potential of secondary education is greater than that of the local economy.

The growth amplitude is essentially the same, which is represented in the evolution of collaborative growth, throughout the period of 2012–2013, which implies the synchronous growth of secondary education and regional economy. Weak decoupling was seen in the years 2014 to 2015 and 2018 to 2019. The regional economy and secondary enrollment both experienced rapid growth, but the growth rate disclosed that the regional economy was less robust than the secondary enrollment. From 2006 to 2007, 2013 to 2013 and 2017 to 2018, there was a substantial decoupling between regional economic growth and a decrease in secondary education. Due to the effects of COVID-19, there was a substantial negative decoupling from 2019 to 2020, with secondary education and the local economy showing a sharp decline.

Diagnosis of secondary education and regional economic barriers

The key barriers subsystems and variables indicate stage differences, and the barriers of each subsystem to the coordinated growth of secondary education and regional economy in Inner Mongolia frequently exhibit a tendency of fluctuation and reduction.

1) The secondary education in the Inner Mongolia Autonomous Region had rapid growth from 2000 to 2010, which was the time of highest enrollment, graduation, and student numbers. Economic growth in the region lags far behind progress in secondary education. Due to the steady expansion of the economy in the area, the distance between the two has shrunk year by year. At this time, the main barrier subsystems affecting the coupling coordination degree of the system were academic professors and educational benefits. The key challenges were the student to teacher ratio, spending on financial education, and local fiscal budget revenue.

2) Between 2011 and 2020, there was a solid trend of continuous growth in the transformation and upgrading of regional economic structure, and the regional economic development elevated the investment of secondary education funds year by

year. At the time, economic structure reform was in an essential stage of iterative improvement, and the scale problem with education became the main barrier subsystem. This dilemma is particularly prevalent in the secondary education system. The key challenges are secondary enrollment, student and graduate numbers, the proportion of secondary and tertiary industry, and the unemployment rate in metropolitan areas.

CONCLUSIONS

This research establishes a detailed evaluation index system for the composite system of secondary education and regional economy on the basis of collaborative development. The comprehensive system development level, coupling coordination evolution process, and decoupling degree of the Inner Mongolia Autonomous Region are explored from 2000 to 2020 utilizing the entropy weight method, coupling coordination degree, decoupling model, obstacle factor diagnosis, and other models. The main challenges to the coordinated development of the two entities are thoroughly assessed. The following are the main conclusions:

1) When viewed from the perspective of coupling degree and coupling coordination degree, secondary school education and regional economy show a gradual evolutionary development trend from low level to high level, gaining high quality coupling in 2005 and high quality coordination in 2017. The two have grown more interacting and synergistic;

2) Secondary school education and regional economy exhibit a complex evolution trajectory from expansionary negative decoupling, strong decoupling, expansionary connection, strong decoupling, weak decoupling, expansionary negative decoupling, strong negative decoupling, and strong negative decoupling when viewed from the perspective of the correlation and change trend between secondary school education and regional economy. It exhibits the complex, interactive and dynamic evolution traits of regional economic influence on secondary school education.

3) From the perspective of the principal barrier factors, the subsystem and index barrier factors' scores displayed a deterioration trend over time, and the educational scale and economic structure progressively replaced academic teachers and educational benefits as the barrier subsystem. The number of enrollments, students enrolled in school, graduates, the proportion of secondary industry, the proportion of tertiary industry, and the urban registered unemployment rate have been the main barriers in the last ten years.

REFERENCES :

1. Schultz, T.W.The Value of the Ability to Deal with Diseuilibria [J]. Journal of Economic Literature, 1975, (13):823-838.
2. Schultz, T.W.Capital Formation by Education [J]. Journal of Political Economy, 1960, 68(12):571-583.
3. Dension, E.F.The Sources of Economic Growth in the United States and the Alternatives before Us [R], New York: Committee for Economic Development, 1962.
4. Jorgenson, D. W and B. M. Fraumeni. Investment in Education and U. S. Economic Growth, Scandinavian [J]. Journal of Economics, 1992, 94: 51-70.
5. Mankiw, Roman, and Weil. A Contribution to the Empirics of Economic Growth Quarterly Journal of Economics, 1992, vol 107 (2):407-437.
6. David, Lawrence Katz, and Alan Krueger. Computing Inequality Have Computers Changed the Labor Market [J]. Quarterly Journal of Economics, 1998(4):1169-1213.
7. Hall, R. E. and C. I. Jones. Why do Some Countries Produce So Much More Output Per Worker Than Others? [J]. Quarterly Journal of Economics, 1999, 114, 83–116.
8. He Dan, CHENG Wei, GONG Peng. Study on coordinated Development of Higher Education and regional economy in urban agglomerations along the Yangtze River in central China [J]. China Higher Education Research. 2017,(09):30-35.
9. Chi Jingming, Li Qifeng, He Shengsheng. Regional Difference in Coordinated Development of Higher Education and Economy in China: Based on TOPSIS Method [J]. Heilongjiang Researches on Higher Education, 2019, (12): 54-59.
10. Hao Qian. Analysis of coordination degree between higher education and regional economy [J]. Statistics & Decision, 2021,37(09): 68-70.

11. Peng Shuolong, Wu Mingyang. Study on the Coupling and coordinated Development of Higher education scale and regional economy in China [J]. Statistics & Decision, 2021,37(09):109-112.

12. LIU Wen-jun. Vocational Education and Economic Development: Japanese Experience and the Suggestion to China [J]. Education & Economy, 2007, (02): 64-68.

13. Li Changhui, Xiang Caiyi, Ma Shizhou, Xiao Junfu. A Study on the contribution of secondary Vocational Education to economic Development -- A Case study of Chongqing [J]. Probe, 2008, (01): 186-191.

14. Zhou Hong, Yang Mengmeng, Wang Tingting. The impact of secondary vocational education on economic growth in China: Based on provincial panel data from 2003 to 2008 [J]. Public Finance Research.2012,(02): 54-55.

15. Wang Yi, Ren Junqing & Lei Zhi'an: A Study on the Correlation between Secondary Vocational Edu-cation Input and Economic Growth in the Region — Based on the Analysis of Inter-provincial PanelData [J]. Journal of Vocational Education, 2018, (03): 66-73+80.

16. Qi Zhanyong, Xie Jinchen. Can Investment in Vocational Education Increase the Income of the Rural Labor Force？—A Counterfactual Estimate Based on Propensity Score Matching [J]. Educational Research.2021,42(02):97-111.

17. CAI Wenbo, GAN Xueyan. Analysis of Coupling Relationship Between Secondary Vocational Education and Regional Economic Growth [J]. Contemporary Vocational Education.2021,(05):67-74.

18. Wang Shujia, KONG Wei, Ren Liang, Zhi Dandan, DAI Binting. Research on misuses and modification of coupling coordination degree model in China [J]. Journal of Natural Resources, 2021,36(03): 793-810.

19. Tapio P. Towards a theory of decoupling: Degrees of decoupling in the EU and the case of road traffic in Finland between 1970 and 2001. Transport Policy, 2008, 12(2):137-151.

ANALYSIS OF COUPLING STATE OF MAN-LAND RELATIONSHIP REGIONAL SYSTEM IN DAIHAI BASIN: A CASE STUDY OF ULANQAB, CHINA

Zheng Hui *

*1.Researcher of Faculty of Geography and Geoinformation systems, National University of Uzbekistan, Tashkent 100174, Republic of Uzbekistan

*2. Faculty of Geography and Planning, Jining Normal University, Ulanqab 012000, People's Republic of China

*3. Key Laboratory of Geospatial Big Data Application and Environmental Monitoring, Jining Normal University, Ulanqab 012000, People's Republic of China

Abstract: *This study investigates trends in the evolution of the coupling state of the man-land relationship and the primary barrier by using a model of the coordination and coupling of the man-land link to the regional system and the Ulanqab in the Daihai Basin as a topic. The next conclusions were reached: (1) Regional development intensity index, resource and environment level index, and trend in collaborative development after 2015 all demonstrated a varying and intertwined growing tendency. (2) After 2004, the coupling degree reached high-quality coupling, and after showing a weak upward trend, the coupling degree reached good coordination in 2012. (3) Effective irrigated area, total area of crops planted, effective irrigated area, and total population at the end of the year were the key barrier variables; (4) It is advised to support integrated urban and rural growth, uphold green development, and improve the hub economy's agglomeration function.*

Keywords: *Daihai Basin; Man-land relationship; Coupling coordination; Degree of obstacle*

INTRODUCTION

Man-land connections relate to the effects of human activity on the physical environment, the modifications and effects these activities have on resources and the environment, as well as the responses of the altered resources and environment to human activity [1]. Relationship between people and land area system is interaction between human activities and geographic environment on the earth's surface layer formed by the open complex giant system [2]. In this complex giant system, where people have always dominated, people interaction, relationship with the law of time and space, and relationship between man and the contradiction of coordinated process have always been the main research areas for geography and other related science [3-6].The relationship between people and the land area system is at the core of geography research spirit and theoretical foundation, and is to implement the global sustainable development strategy and the significant law of circular economy strategy. Relationship between man and the optimization of regulation directly determines the success or failure of the global and regional sustainable development strategies [7].

Chinese researchers have conducted systematic study on two key topics related to the interaction between people and the land, including dry desert regions, river basins, lakes, and wetlands, as well as diverse geographic locations on macro, meso and micro scales. Diversification of research techniques is on the rise. Widespread use is made of improved techniques like system dynamics [8], ecological footprint [9–10], and the coordinated coupling model [11–12]. One of the key areas for the future growth of geographical science in China is to strengthen research on how land-sea links have changed in common regions. Due to their relative complexity, it has been challenging to objectively distinguish between the various types of anthropogenic systems. Many common locations are frequently represented in the worsening land conflict across a wide range of geographical and chronological dimensions. At the same time, it will provide recommendations for typical areas to reduce land-use disputes and encourage sustainable development. This paper

examines trends in the development of people-place relations and the impact of barriers, using the Darjeeling Basin as an example of arid and semi-arid regions, in order to provide recommendations and reference points for sustainable development in the Darjeeling Basin and other arid and semi-arid regions.

MATERIALS AND METHODS

The Daihai Basin is located in Ulanqabu City in northern Inner Mongolia at the coordinates 112°10'E 112°59'E, 40°48'N 40°55'N, and has a watershed area of 2312.75km2. Between the Yongding River basin and the Yellow River basin, there is a confined inland salt lake basin, with a basin in the middle containing the Daihai River. The basin is surrounded by mountains. Long, cold winters and short, hot summers are characteristic of the temperate continental climate enjoyed by the Great Smoky Mountains. The average annual temperature is 5.0°C, the typical annual precipitation ranges from 350 to 450 mm, and the typical annual water surface evaporation capacity is around 1200 mm. With irregular flows, 22 different rivers supply water to the Daihai River basin.

We have created a comprehensive system of evaluation metrics for man-land interaction regional systems, based on the findings of prior studies and adhering to scientific, regional, and data availability criteria. The volume system of human exploitation consists of land use, economic development intensity and population growth. Twelve indices made up three subsystems, including intensity (Table 1), The Resource Environmental Carrying capacity System, which is supported by the Resource Utilization Level, Ecological Environmental Stress, Ecological Environmental Protection, and an additional 3 subsystems, consisting of 12 indicators (Table 2).

Table 1. Evaluation index system of human development activity intensity subsystem

System layer	Subsystem layer	Entropy weight	Index layer	Units	Index attribute	Entropy weight
Intensity of human exploitation activities	Population size expansion (PSE)	0.1412	Year-end Population	Person	+	0.4631
			Urbanization rate	%	+	0.1589
			Natural population growth rate	%	+	0.1484
			The proportion of non-farm employment	%	+	0.2296
	Economic development intensity (EDI)	0.2409	Gross regional product	Yuan	+	0.2858
			Per capita gross regional product	Yuan	+	0.2593
			Urban fixed-asset investment	Yuan	+	0.3010
			Proportion of non-agricultural output value	%	+	0.1539
	Land use intensity (LUI)	0.6179	Urban built-up area	Km^2	+	0.1132
			Total power of agricultural machinery	KWH	+	0.1625
			Effective irrigated area	Hm^2	+	0.3092
			Road eara per sitizen	m^2/ Person	+	0.4150

Table 2. Evaluation index system of resource and environmental carrying capacity subsystem

System layer	Subsystem layer	Entropy weight	Index layer	Units	Index attribute	Entropy weight
Resource environmental carrying capacity	Resource utilization level (RUL)	0.5501	Total Sown Area	Hm^2	+	0.2055
			Grain total output	Ton	+	0.1414
			Greenery coverage of urban area	%	+	0.4528
			Per capita park green area	m^2	+	0.2004
	Ecological environmental stress (EES)	0.2300	Total annual water supply	Ton	-	0.2649
			Industrial Waste Water Discharged	Ton	-	0.1925
			Industrial sulfur dioxide emissions	Ton	-	0.4251
			Industrial soot (powder) emissions	Ton	-	0.1175
	Ecological environmental protection (EEP)	0.2199	Planting area	Hm^2	+	0.1610
			Treatment rate of domestic sewage	%	+	0.4073
			Harmless disposal rate of household garbage	%	+	0.1462
			Comprehensive utilization rate of industrial solid waste	%	+	0.2855

The main research area for this study is Ulanqab in the Daihai Basin, and the data was gathered from the Inner Mongolia Statistical Yearbook and the Ulanqab Statistical Yearbook between 2004 and 2019 to thoroughly assure the originality, authority and reliability of the raw data.

The human activity intensity metric and the resource and environment carrying capacity metric are derived after the initial data has been standardized and the weights of each metric have been established using the entropy weighting method.

Coordination degree and coupling degree model of man-land relationship

Based on the coupling degree model between the domestic and foreign scholar systems, we construct the coupling degree model for the man-land relations regional system[12]:

$$H = \sqrt{L \times T}, \quad L = \frac{2\sqrt{HA \times RE}}{HA + RE}, \quad T = \lambda_1 HA + \lambda_2 RE$$

Where, ***H*** is the coupling degree of man-land relationship; ***L*** Coupling coordination degree of man- land relationship; ***T*** is the integrated man-land relationship index, ***HA*** is the intensity index of human activity, ***RE*** is the resource and environment carrying capacity index; λ_1, λ_2 are set parameters, there is in, $\lambda_1 + \lambda_2 = 1$, according to the man-land relationship interaction mechanism and research needs, set $\lambda_1 = \lambda_2 = 1$, the larger ***H***, the higher the degree of coupling, the larger ***L***, the better the degree of coordination.

Obstacle factor diagnosis model

The obstacle factor diagnostic model is used to objectively identify the major influences affecting the coordinated development of the man-land relations regional system, which is calculated as follows[13] :

$$O_j = \frac{I_j \times \omega_j}{\sum_{j=1}^{m} I_j \times \omega_j}$$

Where: ω_j is the weight of the JTH index; I_j is the difference between the optimal target value and the actual value of each index, which can be expressed as $1 - r_{ij}$ (the difference between the normalized value of each index and 1).

RESULTS

Analysis on the coupling evolution trend of the regional system of man-land relationship

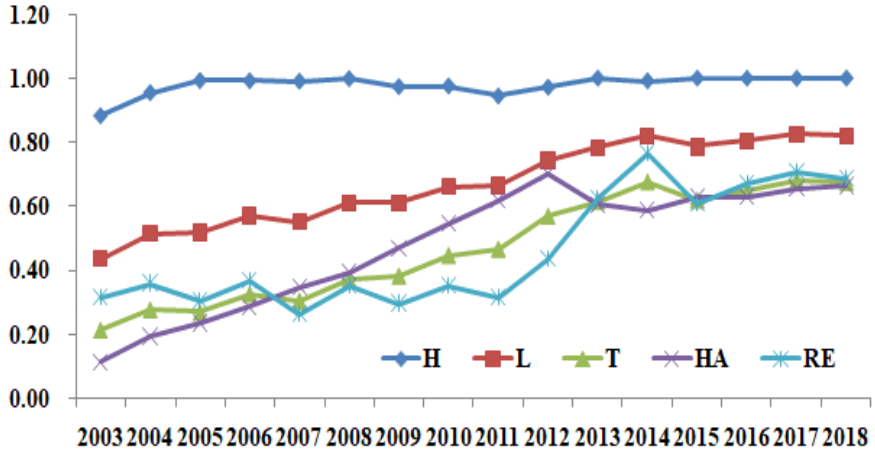


Figure 1. Variation of human activity intensity, resource and environment carrying capacity and coupling degree

According to the comprehensive analysis in Fig. 3, the intensity of human development activity and the resource and environmental carrying capacity index show co-evolutionary features. The resource and environmental carrying capacity fluctuated from 2003 to 2011 and has shown a rapid growth trend since 2012. The intensity of human activity is continuously within a controllable threshold of resource and environmental carrying capacity. The evolution process of coupling degree of man-land relationship regional system from 2003 to 2018 was from High level coupling (2003) to High quality coupling (2004-2018), and the average coupling degree of 16a was 0.9794.

The study period is stable in the high-quality coupling phase for a lengthy period of time, which comprehensively reflects the long-term process of mutual integration, promotion, coordination and synchronous development and evolution of man-land relations in the Daihai Basin regional system. The coupling coordination curve shows

a steady and continuous upward trend, increasing from 0.4532 in 2003 to 0.8217 in 2018 with an increase value of 0.3685 and an average annual growth rate of 2.30 percent. In the latest 16a, the mean coupling coordination is 0.6701 and the coordination type is moderate. Evolution process of coupling coordination from 2003 to 2018: Mild disorder (2003) -Moderate coordination (2004-2011) -Good coordination (2012-2018) and other three coupling coordination evolution processes, the coupling coordination degree can still be improved.

Diagnosis of obstacle factors in man-land relationship regional system

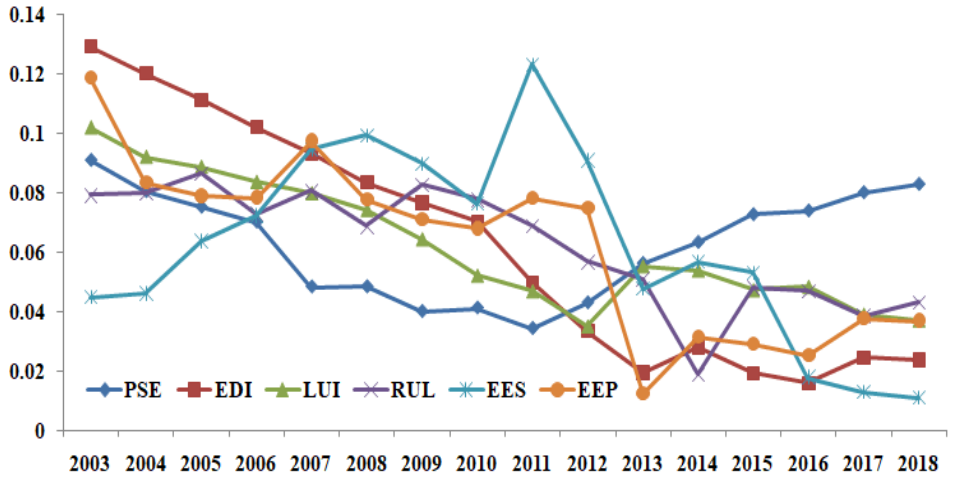


Figure 2. Changing Trend of the barrier subsystem of the regional system of man-land relationship

As can be seen in Fig. 2, the inter-site barrier fraction as a function of the inter-site barrier fraction typically shows a fluctuating and decreasing trend, with the dominant barrier subsystems and barrier factors exhibiting phase differences. (1) From 2003 to 2013, the Daihai Basin was in the stage of rapid urbanization development. The size of the population continued to increase, and both GDP and urban fixed-asset investment increased year-on-year. In 2007, the intensity of human development activities exceeded the carrying capacity of resources and the environment, and the man-land relationship began to evolve in a discordant direction, with contradictions in the man-land relationship coming to the fore. The strength of economic development and the level of resource utilization are the main barriers for

subsystems to affect the degree of coupling coordination of the system during this period. Urbanization rate, GDP per capita, urban sewage treatment rate and per capita area of park green space are major obstacles. (2) 2014-2018, guided by the idea of ecological civilization in the regional economic structure transition iteration upgrade, people-centric efforts to build a different type of urbanization continues, surrounding the overall economy better the siphon effect of central cities, population outflow is more outstanding, population scale expansion to become main obstacle subsystem of this phase, the effective irrigation area, The total population at the end of the year, the natural growth rate of population, the total sown area of crops, and the afforestation area were the main obstacle factors.

CONCLUSION AND SUGGESTIONS

Conclusion:

In this study, we have scientifically developed a comprehensive system of evaluation metrics for regional man-land interaction systems based on the concept of cooperative development. The integrated development level and coupled state evolution of Ulanqab in the Daihai Basin from 2003 to 2018 was evaluated using a coordination and coupling degree model of man-land relations and an obstacle factor diagnostic model to comprehensively examine the primary barriers. The main conclusions are as follows:

1) From the perspective of the comprehensive development level of the system, the regional system development index of man-land relationship showed an increasing trend of staggered fluctuation from 2003 to 2018, and the resource and environment carrying capacity continued to strengthen. The intensity of human activity is continuously within a controllable threshold of the carrying capacity of resources and the environment.

2) From the perspective of the evolution process of coupling degree and coupling coordination degree, the coupling evolution process of man-land relationship regional system showed a continuous upward evolution trend and reached good coordination in 2004. It remains necessary to continue to increase the

intensity of human development activities and the capacity of resources and environments for collaborative and interactive development.

3) From the perspective of main barrier factors, the score of subsystem and index barrier factors showed a decreasing trend year by year, and the barrier subsystem gradually shifted from the intensity of economic development and the level of resource utilization to the expansion of population scale; more recently, the main barriers have been: total crop sown area, effective irrigation area, and total population at the end of the year.

Suggestions:

1) Putting ecology first and pursuing green development. The ecological and safety in a more prominent position, balanced economic, social, cultural and other diverse demand, strengthen the function of central city services, reasonable control development intensity and population density, optimized development pattern, improve the function of municipal facilities, strengthen the construction of digital city, improve the ability of intelligent management, promote urban development from the extension expansion to connotation lift.

2) Focus on improving the agglomeration function of hub economy. Play location convenient transportation, livestock products high quality, excellent ecological environment, the advantages of the port hinterland are linked together, to develop an open economy, creating central trains, the goods collection center, building a green livestock products brand development area, graphite new materials production base of well-known destinations, tourism, leisure vacation, green data center, national logistics hub essential nodes in the network.

3) Promoting integrated development between urban and rural areas. We will improve the systems, mechanisms and policies for integrated urban and rural development, coordinate urban and rural development, improve planning for county and rural development, and make appropriate spatial arrangements for industrial agglomeration, village distribution, ecological conservation, and farmland protection, so as to form a new pattern of villages with rational distribution, complete functions, and coordinated and orderly distribution. We will improve the living environment of cities, improve their integrated functions and guide people to concentrate in cities and towns.

REFERENCE:

1. CHENG Yu REN Jian-lan XU Cheng-long. Men-land Relationship's Evolution Trend and Influence Factor of Shandong Province from the Perspective of Ecological Civilization [J] 2015,25 (11):121-127.

2. WU Chuan-jun. The Man-Land Relationship and Economic Location. Beijing: Xueyuan Press, 1998.

3. MAO Han-ying. Man-Land System and Regional Sustainable Development. Beijing: China Science and Technology Publishing House, 1995.

4. ZHENG Du，CHEN Shu-peng. Progress and disciplinary frontiers of geographical research [J]. Advance in Earth Sciences, 2001, 16 (5): 599-606.

5. LU Da-dao. Theoretical studies of man-land system as the core of geographical science[J]. Geographical Research, 2002, 21 (2): 133-145.

6. SONG Chang-qing, LENG Shu-ying. Characteristics and trends of modern geography and progress of geographical research in China [J]. Advance in Earth Sciences, 2005, 20 (6): 595-600.

7. Fan Jie. Scientific Idea about Territorial System of Human-Nature Relation and Economic Geography [J]. Economic Geography, 2008, 28 (2): 177-183.

8. SHI Pei-jun. Today and future of the dynamics of human earth (earth surface) system[J].Earth Science Frontiers, 1997, 4 (1/2): 201-211.

9. CHEN Xing-peng, LU Cheng-peng, YANG Jing, et al.Analysis of human-environment coordination fluctuations of Ningxia in 1986-2005 based on ecological footprint model[J]. Journal of Arid Land Resources and Environment, 2011, 25 (10)(10) .

10. LIU Yu-hui. The analysis of China's human-environment relationship fluctuations between 1961-2001: Study based on the EF (ecological footprint) model[J]. Economic Geography, 2005, 25 (2): 219-235.

11. CHENG Yu, WANG Yaping, ZHANG Yuze REN Jianlan. The Evolution Trend and Driving Factors of Man-land Relationship about theYellow River Delta Area [J]. Economic Geography, 2017, 37 (2): 83-97.

12. CHENG Yu, RENJian-lan, XU Cheng-long. Men-land Relationship's Evolution Trend and Influence Factor of Shandong Province from the Perspective of Ecological Civilization [J]. China Population, Resources and Environment, 2015, 25 (11): 121-127.

13. Zhao Anzhou, WANG Dongli, Wang Jinjie, HU Xiaofeng. Quantitative Investigation of the Interactive Coupling Relationship Among Urbanization-Tourism Industry-Ecological Environment and Their Obstacle Factors in Beijing-Tianjin-Hebei Urban Agglomeration [J]. Research of Soil and Water Conscrvation, 2021, 28 (04): 333-341.

TECHNICAL SITUATION OF THE PROBLEM OF COTTON PROCESSING IN COTTON PROCESSING ENTERPRISES IN UZBEKISTAN

Karimova Nilufar Homid qizi

Bukhara Institute of Engineering and Technology. ITITFTEB Engineer

Nilufar814@gmail.ccom

ANNOTATION

In the conditions of the market economy, rational use of raw materials, production of high-quality cotton raw materials and cotton products of sufficient quality and suitable assortment for use is also an important problem for the country. Based on them, the competitiveness of cotton fiber is increasing both in the domestic and world markets. At the moment, it is becoming an important and urgent task to systematically improve and improve the quality indicators of the production of cotton fiber and yarn, as well as textile materials and products. The fact that the above is aimed at improving and increasing the quality of finished gas is an important economic and social problem. Therefore, we must protect the economic business interests of Uzbekistan, use the opportunities and tools effectively and consistently, search for new main sources of economic development, increase the competitive advantage of local production and self-implement innovative technologies.

Keywords*: Cotton, Uzbekistan, fiber, technology, development, variety, factory, processing.*

АННОТАЦИЯ

В условиях рыночной экономики важной проблемой для страны также является рациональное использование сырья, производство высококачественного хлопкового сырья и хлопчатобумажной продукции достаточного качества и пригодного для использования ассортимента. Исходя из них, конкурентоспособность хлопкового волокна повышается как на

внутреннем, так и на мировом рынках. В настоящий момент важной и актуальной задачей становится систематическое совершенствование и улучшение качественных показателей производства хлопкового волокна и пряжи, а также текстильных материалов и изделий. То, что вышеизложенное направлено на улучшение и повышение качества готового газа, является важной экономической и социальной проблемой. Поэтому мы должны защищать экономические бизнес-интересы Узбекистана, эффективно и последовательно использовать возможности и инструменты, искать новые основные источники экономического развития, повышать конкурентные преимущества местного производства и самостоятельно внедрять инновационные технологии.

Ключевые слова: *Хлопок, Узбекистан, волокно, технология, разработка, сорт, фабрика, переработка.*

INTRODUCTION

Currently, in cotton processing enterprises, the working area of the dryer chamber is used ineffectively; the supplied coolant needs to be studied. The question of the interconnectedness of drying, cleaning and the kinetics of dirt, the nature and block mechanism of defect formation in cotton fiber during the drying process remains open. Therefore, the development of effective technology with a scientifically based approach to the preparation of cotton fiber demonstrates the relevance of the research. A special substance of short fibers evaluates the finality, which originates from the use of heat during drying with a higher temperature of the drying agent, thereby in turn leading to overdrying of the fiber. The bulk of cotton mills are faced with a situation where regeneration waste flows from the cleaning shops and fiber - from the shop for processing fiber waste, flows oppositely into the primary flow. This same implementation mechanism also leads to a deterioration in the quality of cotton fiber, and, accordingly, to a decrease in its spinning ability.

METHODS

Based on this, specialists and scientists in the cotton processing industry Zulfonov S.Z., Ibrogimov Kh.I., Safarov F.M., Ruziboev Kh.G., Ismatov I.A., Juraev O.O. etc. Research work is underway to improve the technology for processing raw cotton, which largely depends on the design of individual technological machines.

If we consider the technological line for processing medium-staple and long-staple varieties of cotton and compare it with today, it should be noted that these lines do not meet the requirements of the industry, especially in terms of improving the quality of cotton fiber and the high costs of creating and maintenance of machines used in cotton ginning factories.

Enterprises where Uzbek technology is installed due to high energy consumption and the number of technological equipment, high dimensions, and many working areas are currently idle. All these changes pose new challenges for scientists and specialists in this industry to create new machine designs and technologies for processing raw cotton.

RESULTS

Enterprises for the primary processing of raw cotton, in order to obtain high-quality products, allocate space for machines for the technological process, in order to increase and maintain the class and grade of cotton fiber. The main indicator of the quality of raw cotton, which all farms and cotton factories need to pay attention to, is the fiber yield. Moistening cotton fiber is one of the most important tasks for the cotton ginning industry, which requires compliance with the drying regime of raw cotton. On this issue, some technical solutions have been obtained for humidification installations and their designs, based on the results of the necessary theoretical and experimental studies. It has been established that the required moisture content of cotton fiber before pressing in a press box, the fiber will reach from 5.5 ÷ 6.0%, instead of the required 7.0 ÷ 8.5% according to the standard.

The introduction of new designs for moistening cotton fiber increases humidity by 1.5 ÷ 2.0%, which significantly changes the process for the better. Based on the

results of the study, it was revealed that in order to improve the activities of cotton-growing farms and cotton factories for primary processing of cotton in the future, it is necessary:

- improve the design of drum cotton dryers to increase moisture removal, reduce ignitability in the fibrous bonds of raw cotton flakes and drying efficiency;

- at cotton ginning shops and factories, use advanced technology, which includes a humidification unit, taking into account the requirements of spinning factories for the moisture content in the produced cotton fibers that meet standard standards;

- comply with the requirements of regulations and modes of modern technological processes for processing materials.

Some of the listed tasks are the subject of further research.

Enterprises for the primary processing of raw cotton, in order to obtain high-quality products, allocate space for machines for the technological process, in order to increase and maintain the class and grade of cotton fiber. The main indicator of the quality of raw cotton, which all farms and cotton factories need to pay attention to, is the fiber yield. Moistening cotton fiber is one of the most important tasks for the cotton ginning industry, which requires compliance with the drying regime of raw cotton. On this issue, some technical solutions have been obtained for humidification installations and their designs, based on the results of the necessary theoretical and experimental studies. It has been established that the required moisture content of cotton fiber before pressing in a press box, the fiber will reach from 5.5 ÷ 6.0%, instead of the required 7.0 ÷ 8.5% according to the standard.

The introduction of new designs for moistening cotton fiber increases humidity by 1.5 ÷ 2.0%, which significantly changes the process for the better. Based on the results of the study, it was revealed that in order to improve the activities of cotton-growing farms and cotton factories for primary processing of cotton in the future, it is necessary:

- improve the design of drum cotton dryers to increase moisture removal, reduce ignitability in the fibrous bonds of raw cotton flakes and drying efficiency;

- at cotton ginning shops and factories, use advanced technology, which includes a humidification unit, taking into account the requirements of spinning factories for the moisture content in the produced cotton fibers that meet standard standards;

- comply with the requirements of regulations and modes of modern technological processes for processing materials.

Some of the listed tasks are the subject of further research.

DISCUSSION

Many developments are experimental in nature. They do not provide notice about upgrading the dryer internals. And also the development of an automated device for regulating the direction of coolant supply in the falling zone of raw cotton, finding methods and materials for coating the internal devices of the dryer chamber to eliminate rust from the components in order to preserve the outer appearance of the fiber.

In this context, there was a need to conduct a study of the functioning of drum and tower dryers in order to identify the influence of the most important factors on the flow occurring in them and, on the basis of this, to reveal the concept of further ways to increase drying efficiency, by creating:

- automation of regulation of the direction of supply of coolant into the initial lengths of the drum into the zone of falling material;

- increasing the high efficiency of using the volume of the drum chamber and coolant;

- finding methods and materials for coating the internal devices of the dryer chamber to prevent rusting of parts in order to preserve the appearance of the fiber.

CONCLUSION

Based on the results of the comparative study, the main indicators of the procurement processes and processing of new varieties of selected cotton varieties

were determined and the quality indicators of the fiber were assessed. To improve the techniques and technologies for preparing raw cotton for processing and the issue of their use in practice, the state of the issue of drying raw cotton was analyzed and the existing shortcomings in the functioning of drying machines were identified, as well as setting tasks for further research.

REFERENCES

1. Гуляев Р.А., Лугачев А.Е., Усманов Х.С. Современное состояние производства, переработки, потребления и качества хлопковой продукции в ведущих хлопкосеющих странах мира. Научный центр АО «PAXTASANOAT ILMI MARKAZI», Ташкентский институт текстильной и легкой промышленности,

«Пахтасаноат илмий маркази» акция-дорлик жамияти («Paxtasanoat ilmiy markazi»AJ), 2017. -Ташкент. -169 с

2. Межгосударственный стандарт 3279 - 95 (Уз РСТ 604 - 93;O'zDSt 604:2001) «Волокно хлопковое». Техническое условие. -Ташкент. Узгосстандарт, 1995. - 31 с.

3. «Русское хлопковое сообщество». Маркетинг рынка хлопкового волокна. -М.:, Учебник для Вузов. - 2004. - 128 с.

4. Кучерова Л.И. Оценка влияния сушки на структуру и свойства хлопкового волокна и качество вырабатываемых из него пряжи и ткани. //дис. на соискание ученой степени канд. техн. наук - М.: 1981. - 178 с.

SEPARATE HEATING AND COOLING UNITS USED IN OIL DEHYDRATION

Jo‘rayev Shoxrux

Federal State Budgetary Educational Institution of Higher Education "Kazan National Research Technological University"

ANNOTATION

Providing natural gas to the population and consumers of our country is one of the urgent issues. The President's decision of January 9, 2020 "On measures to implement the investment program of the Republic of Uzbekistan for 2020-2022" is of great importance in increasing the scope of work in this regard. In this article, we will discuss "separate heating and cooling units used in oil dehydration".

Keywords*: gas, raw material, security, natural gas, law, molecule.*

АННОТАЦИЯ

Обеспечение природным газом населения и потребителей нашей страны является одним из актуальных вопросов. Большое значение в увеличении объёмов работы в этом направлении имеет решение Президента от 9 января 2020 года «О мерах по реализации инвестиционной программы Республики Узбекистан на 2020-2022 годы». В этой статье мы обсудим «отдельные установки нагрева и охлаждения, используемые при обезвоживании нефти».

Ключевые слова: *газ, сырье, безопасность, природный газ, закон, молекула.*

INTRODUCTION

In the initial stages of gas preparation for transportation, simple separation devices are used. The composition of such a device uses high-pressure primary separators that clean liquid droplets and mechanical impurities, the secondary

separator is used to separate the gas-liquid mixture and control the removal of gas condensate and gas throttling. The device is equipped with a multi-level adjusting and main throttle valve; adjusters are used to release water and release gaseous condensate from the separator. Devices of this type are installed on wells that do not have a large flow rate. PHA (low-temperature separation) technology is widely used in gas condensate fields when there is condensate in the gas and absorption and adsorption drying are carried out. Low-temperature absorption is also used when the amount of condensate in 1 m3 of gas is more than 100 cm3. Two methods are used for gas and gas condensate cooling in PHA: gas throttling and use of special cooling machines. The throttling method is based on the throttling effect or the Joule-Thomson method. The purpose of this effect is based on reducing the pressure in the throttle by changing the temperature of the gas, using the energy of the local resistance of the gas flow.

METHODS

GPHAQ ¾ queue 1 technical network 210 m. m^3 in 1 hour

9 technical networks 1,890 million m^3in 1 hour

5,040 million m^3 in 1 day

45.36 million m^3 in 1 day

1.68 billion in 1 year.

In 1 year, 15,120 bln. m^3per section (3+5 mln. calculated) 16 technical networks 2,765 mln. in 1 hour. m^3

66,360 million $m^{3м}$in 1 day

22,120 billion m^3in 1 year Note: GPHAQ ¾ 1,2,9 tex. lines

(when 4 mln. is calculated) (when 4+5 mln. is calculated) 1 tech. network 167 m. m^3 in 1 hour

9 technical networks 1,760 million m^3in 1 hour

(4 million) 4 million m^3in 1 day

42,240 million m^3in 1 day

1.336 billion m^3in 1 year

14,080 billion m^3in 1 year

According to this section (3+4+5 mln. calculated) 16 technical networks 2,635 mln. m^3in 1 hour

63,240 million m^3in 1 day

21,080 billion m^3in 1 year

RESULTS

Natural gas is sent to the first stage separator S-1 through a Ø300 mm pipe from block I. S-1 consists of a horizontal, cylindrical device that enters the gas flow through a separator and a vertical swirler (zavikhritel). In the swirler, the gas flow rotates due to the guide vanes of the mobile cylinder.

In the swirler, the flow rate is adjusted according to the change in the size of the gap in the slots of the movable cylinder. Droplet liquid and mechanical mixtures hit the walls of the incoming tube due to centrifugal forces and flow to the horizontal part of the apparatus, and the gas is directed from the separator to the T-1 heat exchanger through the nozzle located in the center of the flow.

In the horizontal part of the S-1 apparatus, the liquid separated from the flow of gas is divided into liquid, formation water and hydrocarbon condensate according to the difference in specific gravity.

The gas separated from droplet liquid and mechanical mixtures is directed from the separator S-1 to the tubular area of the double heat exchanger T-1, and here it is cooled to a temperature of 30-45°C in the circulation of the dried gas passing through the inter-tube area.

The flow of gas cooled to a temperature of 30-45°C in the T-1 heat exchanger is sent directly to the second-stage separator S-2 at a pressure of 7.0-10.0 MPa. The structure and working principle of the S-2 separator is similar to the first-stage separator S-1.

DISCUSSION

Molecular sieves are used for deep drying of gas, that is, they are usually called zeolite. Zeolites are polymers with a complex inorganic crystal lattice, and the shape of the zeolite crystal is volumetric. All six sides of them are made with cracks, through which moisture enters the interior of the space. Each zeolite is made up of oxygen atoms. (from 3*10-7 to 10*10-7 μm). Due to this, zeolite has the ability to absorb small molecules, that is, as a result of the diffusion of very small molecules during the adsorption process, large molecules appear. Small molecules seep into the inner space of the crystal and get stuck (caught) in it, while large molecules do not pass, so absorption does not occur.

Zeolites are used in the form of powder or granules, the size of which is up to 3 mm, with high porosity (up to 50%) and the surface of the pores is large. Their absorption activity is 100%, zeolite absorbs 14–16 g of water under a partial pressure of 50 Pa, and its activity is about 4 times greater than that of silica gel and aluminum oxide. It should be noted that the possibility of zeolite absorption is high at relatively low humidity of the gas or at a small partial pressure of water vapor. Therefore, the gas dries to a very low dew point (up to 173 k).

The advantage of the molecular mesh is that it does not lose its absorption property even at high temperature (at a temperature of 373K, its absorption property also decreases). The absorption property of silicate and bauxite decreases several times at the temperature of 311K, and at the temperature of 373K the absorption becomes zero.

Well gas heated to a temperature of 473-573 K is used in the regeneration of molecular networks, and it is passed through the mold layer in the opposite direction to the temperature flow of the drying gas. A two-stage drying scheme (lithol and bauxite) and a molecular mesh are used for deep drying of gases. Zeolites withstand 5000 cycles, losing 30% of their absorbency in the process.

Gas goes through several stages of purification from the mine to the consumer. The first step is to install a filter inside the well to limit the flow of particles from the bottom of the well.

The gas is passed a second time through a separator installed on the ground in the mine, where the liquid (water and condensate) is separated and the gas is cleaned of particles of rock and dust.

CONCLUSION

Degassing of oil under reduced pressure is a situation where the properties of oil in formation and surface conditions differ from each other. Chemical properties of oil, selection of the number of stages for optimal separation of oil from gas, determination of the number of the optimal separation device is carried out through very complex calculations, issues of ensuring its complete and accurate separation into components during stabilization of oil, control of deep extraction using rectification in the stabilization device on the basis of obtaining one or another type of components (deparaffinization, butaneization and pentanization) were studied in the graduation qualification work. In the process of rectification, the establishment of the equilibrium state of the vapor and liquid phase is the main issue, and the work of temperature and pressure equalization and redistribution of components with each other is analyzed.

1. The proposed method for the separation of hydrocarbon mixtures provides an opportunity to adjust the vapor flows in the main column and the stripping column and ensures the quality separation of products and is used in industry.

2. Using this proposed method, the energy costs of hydrocarbon mixture separation are reduced and the drying process and hydrocarbon separation are carried out in one column, used in the technical industry. A method of separating multicomponent mixtures by means of rectification

3. This proposed method of separating multicomponent mixtures reduces capital and energy costs through rectification, the initial mixture is recirculated between the feed tank and the dephlegmator as a coolant before being fed to the column, heated in the dephlegmator, extracted and fed to the column or raw materials are transferred as a vaporizer and used in industry.

REFERENCES

1. file:///C:/Users/Acer/Downloads/4280-Article%20Text-83aМурин В.И., Киселенко Н.Н. «Перспективы переработки природных газов. Повышение эффективности процессов переработки газов и газового конденсата. Сб. научных трудов. - М. ВНИИГаз. 1995, с.-3-6.3-1-10-20221027.pdf
2. Сатторов, М. О., Хасанов, А. С., Неьматов, Ж. Ж., & Артыкова, Р. Р. (2013). УСТАНОВКА ОЧИСТКИ УГЛЕВОДОРОДНЫХ ГАЗОВ ОТ СЕРОВОДОРОДА РАСТВОРАМИ ЭТАНОЛАМИНОВ. In СОВРЕМЕННЫЕ МАТЕРИАЛЫ, ТЕХНИКА И ТЕХНОЛОГИЯ (pp. 189-199).
3. Хайдаров, С. Ж., Ражабов, А. С., & Сатторов, М. О. (2021). КОНТРОЛЬ ФИЗИКО-ХИМИЧЕСКИХ СВОЙСТВ И КАЧЕСТВА ПРОДУКЦИИ ГАЗОВОГО ПРОМЫСЛА. Science and Education, 3.
4. Хайдаров, С. Ж., Ражабов, А. С., & Сатторов, М. О. (2021). КОНТРОЛЬ ФИЗИКО-ХИМИЧЕСКИХ СВОЙСТВ И КАЧЕСТВА ПРОДУКЦИИ ГАЗОВОГО ПРОМЫСЛА. Science and Education, 2(3).Хайдаров, С. Ж., Ражабов, А. С., & Сатторов, М. О. (2021). КОНТРОЛЬ ФИЗИКО-ХИМИЧЕСКИХ СВОЙСТВ И КАЧЕСТВА ПРОДУКЦИИ ГАЗОВОГО ПРОМЫСЛА. Science and Education, 2(3).

ADAPTIVE EDUCATIONAL APPROACHES IN HIGHER EDUCATION INSTITUTIONS OF EUROPEAN (CIS) COUNTRIES AND THEIR IMPACT ON THE EDUCATIONAL SYSTEM

Yusupova Yashnar Feruz qizi
Namangan State University, Faculty of Mathematics, teacher of the Department of Algebra and Mathematics Teaching Methodology
yusupovayashnar@gmail.com

ANNOTATION

Institutional changes in higher education are taking place at a very fast pace. The reform is being implemented in a very short period of time. As universities grow in size and become more expensive for the state, administrative pressure increases, and the number of control procedures and regulatory mechanisms increases. At the same time, the atmosphere in higher education institutions is becoming tense and uncertainty is increasing. Therefore, teachers and students involved in the educational process must adapt to the ever-changing and increasingly complex rules. Institutional economic theory and qualitative analysis methods served as the conceptual basis of the research on identifying and explaining adaptation mechanisms in higher education. In the article, we study and reflect on the use of adaptive education in higher education institutions in Uzbekistan today, as well as the experiences of the CIS countries.

Keywords: *adaptive behavior, adaptive changes, Higher education, government reforms, Uzbekistan, qualitative research, educational system, educational process.*

АННОТАЦИЯ

Институциональные изменения в высшем образовании происходят очень быстрыми темпами. Реформа реализуется в очень сжатые сроки. По мере

того, как университеты растут в размерах и становятся дороже для государства, увеличивается административное давление, увеличивается количество контрольных процедур и механизмов регулирования. В то же время атмосфера в высших учебных заведениях становится напряженной и неопределенность возрастает. Поэтому учителя и студенты, участвующие в образовательном процессе, должны адаптироваться к постоянно меняющимся и усложняющимся правилам. Институциональная экономическая теория и методы качественного анализа послужили концептуальной основой исследований по выявлению и объяснению механизмов адаптации в высшем образовании. В статье мы изучаем и размышляем над использованием адаптивного образования в высших учебных заведениях Узбекистана сегодня, а также опыт стран СНГ.

Ключевые слова: *адаптивное поведение, адаптивные изменения, высшее образование, государственные реформы, Узбекистан, качественные исследования, образовательная система, образовательный процесс.*

INTRODUCTION

Since the 60s of the twentieth century, some organizations began to face rapid changes in the external environment, so many of them developed and implemented new, flexible types of organizational structures that are better than traditional (vertical) structures. began to reach. adapted to the rapid changes in the external environment. conditions and the emergence of science-demanding and innovative technologies. Such structures are called adaptive, because they can be quickly changed in accordance with changes in the environment and the needs of the organization itself. Adaptation is the process of forming a structure to suit a particular environment. Successful adaptation leads to organizational survival. Adaptation of higher education institutions occurs due to state regulation through material, financial and personnel resources, market pressure, modern information technologies and legal documents.

METHODS

Ongoing research claims to partially fill the research gap, which is actually an attempt to implement institutional monitoring - monitoring the order and effectiveness of reforms implemented in the field of education in Uzbekistan. The theoretical and methodological framework of the study was formed by traditional institutionalism based on pragmatist philosophical foundations (see also: Stanfield, 1999; Gruchy, 1947; Mirowski, 1987; Hodgson, 2000; Parada, 2006; Dewey, et al.) - practical interdisciplinary approach to the studied problem, covering economic, legal and ethical aspects of economic behavior. The qualitative methodology used in the study suggests that any socio-economic phenomenon should be studied in the context of the accompanying norms (Commons, 2012) that have meaning in a particular society. Thus, the sample for the study is 50 representatives of three communities in the field of higher education: the heads of structural units of universities (including representatives of administrative staff, some of whom are not currently teachers), teachers and students was formed. The choice of qualitative research methodology is justified by relying on traditional institutionalism (see also: Rutherford, 2011; 2012; Commons, 1998; 2012; Efimov, 2016). The practical importance of this methodology is that issues related to the development of socio-economic policies must inevitably include the identification of the relevant beliefs of the main subjects directly affected by the changes resulting from this policy. These beliefs form the basis of customs (e.g. Hodgson, 2000; Dequech, 2013) and reflect whether or not there is agreement among members of certain communities on certain policies implemented by authorities. Thus, an important part of the institutional analysis becomes to explain the actual prospects of the policy being carried out, in particular, the possibility of its acceptance or rejection by the population, in other words, what will be the new rules and orders transmitted through the policy? remains only an officially announced, non-institutionalized rule (see also Efimov, 2016), which inevitably raises issues of "careful institutional design" of socio-economic policies (see, e.g., Hodgson, 2013). .

Aspects covered by institutional analysis are economics, law and ethics (Commons, 2012; Chavance, 2012).

RESULTS

If we build a model with actors who act rationally, how will the education sector of Uzbekistan develop? Most likely, it represents a semi-desert, which alone has been swept away by the sands of oblivion of elite metropolitan research universities and provincial universities. Why does this happen, according to the hypothesis of rational behavior? And why not really? We try to answer these questions using the methods of interpretive institutionalism and the concept of adaptive rationality. After the collapse of the Soviet Union, work in higher education institutions gradually began to lose its prestige. For 25 years, teacher salaries have rarely reached the average level for a given region. Of course, teachers' investment in human capital is unique, which may explain, for example, their attempts to keep (at least partially) their university jobs. But the lack of clear financial prospects for professors for a long time forces us to look for alternative explanations for continuing to work in universities. One such explanation can be the hypothesis of an increase in hidden income in the field of higher education in the 90s and zeros (Klyamkin, Timofeev, 2000). It is no coincidence that in those years well-structured markets for students' final qualification works, dissertations and other shadow services appeared, which made it possible to purchase the necessary diplomas and scientific degrees. Perhaps this adaptation was the only possible form of survival for a significant part of the university community. In the last 10 years, significant changes have taken place in Uzbekistan, affecting both the quality and quantity indicators of the higher education system. These changes have a significant impact on the decision-making process of the participants of the educational services market, as well as shape their further behavior. To study the adaptive behavior of participants in the organization of the educational process, we consider the impact of the most important changes for teachers and students, which determines their further behavior, and also based on the concept of adaptive rationality , we define the types of these behaviors. The analysis

of 20 in-depth interviews conducted with teachers of the city of Tashkent in 2020 showed that the biggest impact on the educational process is related to the bureaucratization of the educational process and the increase in the administrative burden. According to the respondents, this has a negative impact on the educational process: "Every month, a bunch of unnecessary reports add nervousness to the teaching process"; "Lectures take a lot of time due to preparation for lectures." In the second place of importance, teachers emphasize the transition to a two-level system of "bachelor and master". This change has a twofold effect on the educational process. On the one hand, the classroom hours are decreasing, the hours for independent work of students are increasing, and the amount of courses necessary for successful mastery of the subject at the undergraduate level should be reduced. On the other hand, in the master's degree, students can engage more deeply in scientific activities and improve their professional skills.

DISCUSSION

As a form of adaptive behavior, obedience may represent a hidden form of opportunism, which, due to the changed institutional environment and economic conditions, was prone to symbiosis with obedience. For example, a teacher in his behavior may show complete obedience in fulfilling some obligations, but at the same time, his motivation decreases in fulfilling others: "I want to be creative in the process of organizing educational activities." I will stop. Now we are given orders and decrees, and as a conscientious, law-abiding officer, I must carry them out. I am not paid for discussing orders, but for carrying them out."

CONCLUSION

The social significance and uniqueness of the organizational culture in our higher educational institutions is related to the social values and institutions formed in an evolutionary way. However, in the course of reforms, not all participants understand and correctly interpret regulatory measures and management decisions, which is also a negative factor in the formation of effective (allowing to carry out transactions at a lower cost and increasing the regularity of transactions) existing

rules. Thus, it is reasonable to doubt the correctness of the institutional reforms carried out in the higher education system of our country in recent years, which are trying to fully transfer to a market-oriented system and in practice, along with the introduction of legislation. zi is not enough. reforms "from above". Compulsory organization of public discussions involving representatives of the communities that make up the educational system in the reform process is a necessary condition for saving higher education. At the same time, systematic qualitative research focusing on the perceptions of educational subjects about the institutional changes being implemented is a tool for better understanding not only "what" but "how it should be" - how inevitable and important the reforms should be. must be. was developed and implemented in accordance with the modernization of the economy and society and the requirements of the time.

REFERENCES

1. Yefimov V.M. (2016). Economic science in question: another methodology, history and research practices. Moscow: KURS, Infra-M Publ.
2. Дорохина О., Левинский Д. (2016). Как поработал Дмитрий Ливанов // Коммерсантъ, 19 августа
3. Lumineau F. and Verbeke A. (2016). Let’s Give Opportunism the Proper Back Seat. Academy of Management Review, vol. 41, no. 4, pp. 739–754.Lumineau F. and Verbeke A. (2016). Let’s Give Opportunism the Proper Back Seat. Academy of Management Review, vol. 41, no. 4, pp. 739–754.

KOREYS TILIDAGI EMOTSIONAL BO‘YOQDORLIKKA EGA GAPLAR HAQIDA KOREYS TILSHUNOSLARINING NAZARIY QARASHLARI

Aslonova Husnida Botirjon qizi
O`zbekiston davlat jahon tillari universiteti
Koreys tili nazariyasi va amaliyoti kafedrasi o‘qituvchisi
email: aslonovahusnida@gmail.com

Annotatsiya: *Ushbu ilmiy maqola koreys tilida emotsional bo'yoqdorlikka ega gaplarga bag'ishlanadi. Unda koreys tilida emotsional bo'yoqdorlikka ega gaplarning qanday yasalishi, nimalar asosida yasalishi va qanday ma'no anglatishi chuqur tahlil qilinadi. Koreys tilida emotsional bo'yoqdorlikni ifoda etuvchi undov so'zlar va undov qo'shimchalar turlari, his-tuyg‘uni ifodalovchi sifatlar va ularning gapda joylashish o'rni, qaysi so'zlar bilan birga qo'llanilishi ko'rib chiqiladi. Koreys tilidagi emotsional bo'yoqdorlikni ifodalovchi so'z va qo'shimchalarni gapdagi sintaktik o'rni tahlil qilinadi. Shuningdek, koreys tilida undov gaplarning yasalishining o'ziga xos xususiyatlari va boshqa tillardan farqi yoritiladi. Shu qatorda, koreys tilidagi emotsional bo'yoqdorlikka ega gaplardagi so'z va grammatik qo'shimchalarni o'zbek tilida aynan ekvivalenti bor yoki yo'qligi, tarjimada uning o'rnini qanday grammatik qo'shimcha yoki yuklama bosa olishi tahlil qilinadi.*

***Kalit so`zlar:*** *emotsiya, bo`yoqdorlik, undov gap, undov so`z, grammatik qo`shimcha, his-tuyg‘uni ifodalovchi sifatlar.*

Annotation: *This scientific article is devoted to the construction of emotionally charged sentences in Korean. An in-depth analysis was made of how and on the basis of what emotionally charged sentences are made, as well as what it matters. The article deals with exclamatory words and types of exclamatory affixes, their place in a sentence and their use with other parts of a sentence. The syntactic role of words and affixes in Korean sentences expressing emotional coloring is analyzed. It also highlights the features of the construction of exclamatory sentences in Korean and their differences from other languages. In addition, it is analyzed whether words and grammatical suffixes in emotionally charged sentences in Korean have an exact equivalent in Uzbek, and what grammatical suffixes or prepositions can replace them in translation.*

Keywords: *emotion, coloring, exclamation mark, exclamation word, grammatical suffixes, emotional adjectives.*

Аннотация: *Данная научная статья посвящена построению эмоционально окрашенных предложений в корейском языке. Был проведен глубокий анализ того, каким образом и на основе чего составляются эмоционально окрашенные предложения, а также, какое это имеет значение. В статье рассмотрены восклицательные слова и виды восклицательных аффиксов, их место в предложении и использование с другими частями предложения. Анализируется синтаксическая роль слов и аффиксов в корейских предложениях, выражающих эмоциональную окраску. Также освещаются особенности построения восклицательных предложений в корейском языке и их отличия от других языков. Кроме того, анализируется, имеют ли слова и грамматические суффиксы в эмоционально окрашенных предложениях на корейском языке точный эквивалент в узбекском языке, и какие грамматические суффиксы или предлоги могут заменить их в переводе.*

Ключевые слова: *эмоция, окраска, восклицательный знак, восклицательное слово, грамматические суффиксы, эмоциональные прилагательные.*

KIRISH

O`zbekiston Respublikasi prezidenti Shavkat Mirziyoyev “Mamlakatimizda xorijiy tillarni o‘rgatish bo‘yicha kelajak uchun mustahkam poydevor bo‘ladigan yangi tizimni yo‘lga qo‘yish vaqti-soati keldi. Biz raqobatdosh davlat qurishni o‘z oldimizga maqsad qilib qo‘ygan ekanmiz, bundan buyon maktab, litsey, kollej va oliy o‘quv yurti bitiruvchilari kamida 2 ta chet tilini mukammal bilishlari shart. Bu qat’iy talab har bir ta’lim muassasasi rahbari faoliyatining asosiy mezoniga aylanishi lozim, ”[1,C.1] – deb ta`kidlaydi. Davlatimiz rahbari o‘qituvchilarga munosib sharoit yaratish, malakasiga qarab ularni rag‘batlantirish zarurligini ta’kidladi. Xalqaro sertifikatning dastlabki va o‘rta darajasini olgan o‘qituvchilarning oylik maoshiga 40 foiz, yuqori natija ko‘rsatganlarga 50 foiz ustama berilishi belgilandi. Bundan tashqari, yuqori ball olgan o‘qituvchilarga xalqaro sertifikat olish uchun test topshirish xarajatlari qoplab beriladi. Endilikda ishga qabul qilinayotgan chet tili o‘qituvchilariga milliy va xalqaro sertifikatga ega bo‘lish talab etilmoqda. Ana shunday shart-sharoitlar yaratib berilayotgani chet tillarini mukammal o`rganish va chet tillari bo`yicha chuqur izlanishlar olib borishga undaydi. Hozirgi kunda g‘arb

tillari bilan bir qatorda sharq tillarini o‘rganishga bo‘lgan talablar kundan-kunga ortib bormoqda. Ushbu ilmiy maqola koreys tilining ajralmas qismi bo‘lgan undov gaplar va ularning grammatik xususiyatlariga bag‘ishlangan. Ya`ni, koreys tilida emotsional bo`yoqdorlikka ega bo`lgan gaplarning tuzilishiga bag`ishlangan. Ma’lumki, har bir tilda shu tilda so‘zlashuvchi xalqning madaniyati, turmush tarzi va qadriyatlari bevosita o‘z aksini topadi. Shuningdek, til doim jamiyat bilan uzviy bog‘liq bo‘lib, ularni bir-birisiz tasavvur etib bo‘lmaydi. Ushbu bog‘liqlikning asosiy komponenti bo‘lgan tilning vujudga kelishida esa, undovlar to‘g‘risidagi farazlar ham mavjud. Emotsional bo`yoqdorlikka ega bo`lgan gaplarni o`z navbatida undov gaplar deb ha yuritiladi. Koreys tilida undovlar gap turlaridan biri sifatida o‘rganiladi. Undov gaplar so‘zlashuv nutqida ko‘p ishlatiladi. Uning yordamida nutqimiz jonliligi, ishonchliligi ortadi, nutqdagi his-tuyg‘u bo‘yog‘ini beradi. Xalq tasavvuri va turmush tarzining turli xilligi sabab bir tildagi undov gap boshqa bir tildagi undov gap xususiyatlari bilan to‘g‘ri kelmaydi. Koreys tilini o‘rganayotgan talabalar koreys tilidagi undov gaplarni ona tilida mavjud undov gaplarning xususiyatlari bilan solishtirish va talqin qilish natijasida ko‘pgina muammoli vaziyatlarga duch kelishadi Shu bilan birga, koreys tilidagi ba’zi undov gaplaroxirida undov tinish belgisi qo‘yilmay berilishi ham, ularni undov gap sifatida o‘rganishdagi qator muammolarni yuzaga keltiradi. Boshqa tillardan farqli o‘laroq, koreys tilida so‘zlovchi hissiyotini ifodalashda undov so‘z va qo‘shimchalardan keng foydalaniladi. Boshqa tillarda bu hissiyotlar ifodasi so‘z yoki so‘z birikmasi tarzida berilishi mumkin. Natijada esa, tarjima jarayonida undov so‘z bilan ifodalanishi kerak bo‘lgan voqelik mazmuni qisman o‘zgaradi.Shu sababli koreys tilida undov gaplarning o‘ziga xos xususiyatlarini o‘rganish masalasi bugungi kunda dolzarblik kasb etadi. Koreys tilida emotsional bo‘yoqdorlikka ega gaplarga to‘g‘ri tasnif berish va ularni chuqurroq o‘rganish uchun koreys tilshunos olimlarning aynan shu haqida olib borgan izlanishlari hamda yozgan ilmiy ishlarini tahlil qilish katta natija beradi.

ADABIYOTLARNING TAHLILI VA METODOLOGIYA

Koreyalik tilshunos olim Pyong Shi (평시) o‘zining “한국어-중국어 감탄 표현의 대비 연구” (“Koreys-xitoy tillaridagi his-hayajon ifodasini taqqoslash”) nomli ilmiy ishida koreys tilida emotsiyani ifodalashga quyidagicha ta‘rif bergan:

“감탄 표현은 다른 문장 유형과는 달리 화자 중심적이고 개인적인 발화여서 창자 에게 무엇인가를 전달하려는 의도가 적은 언어 표현이다. 따라서 화자는 사태에 대해 완전한 인식과정을 거쳐 발화로 표출해야 하는 필요성이 적어지고, 지각한 사태가 인식의 세계로 완전히 안착되지 않더라도 순간적으로 자신의 원초적인 발화를 표출해 버리는 것이 가능하다.) [2,C.85].

(3) 가. 아유, 날씨가 아주 춥군요.

나. 아이고. 마침 잘 왔네.

(4) 야. 정말 좋은 세상이다.

(5) 가. 한국에서는 추석하고 설날이 가장 큰 명절이구나!

나. 이 시간에 길이 얼마나 막히는데 택시를 타나?

(6) 물이야!

위의 예문을 보면 (3)은 한국어 감탄사과 감탄 종결어미가 나타난 전통적인 감탄 표현이다. (4)의'야' 뒤에 나타난 문장의 종결어미는 평서문 종결어미다. (5 가)는 부사와 감탄 종결어미가 나타난 감탄문이다. (나)는 의문형 감탄 표현이다. (6)는 문장의 생략형이 나타난 감탄 표현이다”[2,C.7].

(Boshqa gap turlaridan farqli o‘laroq, undov so‘zlovchiga yo‘naltirilgan va shaxsiy gap bo‘lgani uchun u biror narsani to‘liq yetkazish niyati kam bo‘lgan

lingvistik ifodadir. Demak, so‘zlovchining vaziyatni to‘liq tan olish jarayoni orqali ifodalash zarurati kamayadi, idrok olamida idrok etilayotgan vaziyat to‘liq o‘rnashmagan taqdirda ham uning dastlabki fikrini bir zumda ifodalash mumkin bo`ladi.)

Yuqoridagi misolga qaraganda, (3) an'anaviy undov iborasi bo'lib, unda koreyscha undov so'zlari va undov kesimlik qo‘shimchasi bor. (4) dagi “ya”dan keyin kelgan kesimlik qo‘shimchasi darak gap oxirida keluvchi kesimlik qo‘shimchasi hisoblanadi. (5) olmosh va undov kelimlik qo‘shimchasidan iborat undov gap. B) undovning so‘roq ifodasi. (6) undov ifodasi bo‘lib, unda gapning qisqartmasi paydo bo‘ladi. Koreys tilidagi emotsional bo‘yoqdorlikka ega gaplarni undov so‘zlar, undov kesimlik qo‘shimchalari, olmoshlar va undov ohangi tashkil etadi.

No De Kyu (노대규) koreys tilida emotsional bo‘yoqdorlikka ega gaplarga quyidagicha ta‘rif bergan:

“감탄문이 말할이가 자기 자신의 정서나, 느낌이나, 또는 태도를 표현하는 데에 사용하는 문장이다. 감탄문에 있어서 감탄이란, 한 마디로 말하면, 말할이의 심리적 행위나 태도를 가리킨다고 할 수 있다. 이를 점 더 구체적으로 말하면, 감탄이란 말할이가 명제 내용에 대한 사실, 관찰, 경험, 추론, 지각을 하고 정서적으로 표현한다” [3,C.32].

(Undov gap so'zlovchi tomonidan o'z his-tuyg'ularini, yoki munosabatlarini ifodalash uchun ishlatadigan jumla sifatida ta'riflagan. Undov gapida “hayratlanish” so‘zlovchining psixologik xulq-atvori yoki munosabatini bir so‘z bilan ifodalaydi. Xususan, his-hayajon degani so‘zlovchi vaziyatni faktlar, kuzatishlar, tajribalar, xulosalar va tasavvurlarni his-tuyg‘u bilan ifodalaganiga aytiladi.)

li Shi Ye (이시애) “감탄사를 정의해 보면, 감탄사는 기능면에서 다른 언어와 어떤 관계도 맺지 않고, 형태적으로 불변하는 문법적 성질을 가지며,

화자의 내면 상태나 정신 작용을 표출하거나 화자의 뜻을 전달하는 데에 상황 의존적으로 쓰이는 단어라고 정의할 수 있다” [4,C.313].

(Undov so‘z funksional tomondan boshqa so‘zlar bilan hech qanday aloqa bog‘lamaydi. U so‘zlovchining ichki holatini yoki aqliy harakatini ifodalash yoki so‘zlovchining niyatini bildirish uchun kontekstga bog‘liq holda qo‘llanadigan, hech qanday mansubliksiz, morfologik o‘zgarmas grammatik xususiyatga ega bo‘lgan so‘z sifatida ta’riflanishi mumkin.)

O‘sing Shin (오승신) koreys tilidagi indov so‘zlarni shunday ta‘riflaydi:

“간투사의 정의는 발화에서 다른 단어와 통사적인 구조를 이루지 않으며, 형태적으로는 활용이나 파생을 하지 않고, 발화 당시의 화자의 내면 상태나 정신 작용을 표출하거나 화자의 뜻을 전달하는 데에 관례적으로 쓰이는 단어이다”[1] [5,C.300].

(Undov so‘z gapda boshqa so‘zlar bilan sintaktik tuzilma hosil qilmaydi, morfologik vazifa bajarmaydi. U so‘zlovchining gap vaqtidagi ichki holatini aks ettiradigan va yetkazadigan so‘zdir.)

Koreys tilidagi emotsional bo'yoqdorlikka ega gaplarning tuzilishini tadqiq qilishda turli xil metodlardan foydalanildi. Asosan gaplarga emotsional bo'yoqdorlik beruvchi undov so'zlar va undov kesimlik qo'shimchalari bilan gap tuzish, undov gaplarni koreys tilidan o'zbek tiliga tarjima qilish, koreys undov so'zlarining o'zbek tilidagi ekvivalentini topish kabi metodlardan keng foydalanildi. Shuningdek, koreys tilshunoslarining fikr-mulohazalarini tahlil qilishda ham ularni chuqur o‘rganish, u fikrlar yuzasidan berilgan misollar bilan tanishish hamda mustaqil misollar tuzib ko‘rish metodlaridan foydalanildi.

[1] 오승신.국어의 간투사 연구. 이화여자대학교, 1995.- 300 b.

NATIJALAR

Undov gap fikrni qattiq hayajon bilan ifodalab, kuchli ohangda aytiladigan gap bo‘lib, koreys tilida undov gaplar asosan ikki xil usulda: undov so‘zlar (감탄사) va undov qo‘shimchalari (감탄종결사) orqali yasaladi. Undov so‘zlar mustaqil ma’noli so‘zlar bilan yordamchi so‘zlar orasidagi bir kategoriya bo‘lib, ularda leksik ma’no grammatik ma’no bilan dialektik birlikni tashkil qiladi. Undov so‘zlar fonetik shakllanishi,morfologik butunligi, ekspressivligi va maxsus ohangi bilan, egalik kelishigi, shaxs, zamon kabi grammatik ma’noni anglatmasligi bilan boshqa so‘zlardan ajralib turadi. Undov gap so'zlovchi tomonidan o'z his-tuyg'ularini, yoki munosabatlarini ifodalash uchun ishlatadigan jumla sifatida ta'riflanadi. U so‘zlovchining ichki holatini yoki aqliy harakatini ifodalash yoki so‘zlovchining niyatini bildirish uchun kontekstga bog‘liq holda qo‘llaniladi.

MUHOKAMALAR

Koreys tilidagi undov gaplar nutqda keng qo‘llaniladi Shuningdek, emotsional bo`yoqdorlikni beruvchi undov so`zlar va grammatik qo`shimchalarning boshqa ba`zi tillarda ekvivalenti yo`qligi ham ularni qanchalik qiziqligi va o`rganishga, izlanishga munosib ekanligini bildirdi. O`zbek tilida aynan tarjimasi topilmasa, uni qanday boshqa so`z bilan yoki yuklama bilan ifodalanishi mumkinligini izlab topishni talab etadi.

XULOSA

Ushbu ilmiy maqolada koreys tilida emotsional bo`yoqdorlikka ega gaplarning qurilishi va undov gaplar, undov gaplarni yasovchi so`z va qo`shimchalar aynan koreyalik tilshunos olimlarning nazariy qarashlari yordamida ko`rib chiqildi. Izlanishlar natijasida quyidagicha xulosaga kelindi. Undov gaplar grammatik jihatdan o‘ziga xos xususiyatlari bilan boshqa gap turlaridan farqlanadi. Bir qator o‘ziga xos gaplarni undov gaplar kategoryasiga birlashtiradi. Koreys tilida ham undovlar gap yoki gap bo‘laklari bilan grammatik jihatdan bog‘lanmaydi, so‘zlovchining his-hayajoni, buyruq va istagini, ta’kid va javobini ifodalaydigan grammatik kategoriyadir. Shu bilan birga his-hayajon kabi inson tuyg‘usining so‘zlarda bevosita

инъикосидir. Undov gaplar ma’nosi ma’lum bir o‘rin, vaqt va sharoitda aniqlanadi. Undov gapda ohang muhim o‘rin tutadi.Chunki undov gaplar ma’lum ohang bilan aytilmasa, u his-tuyg‘uni ifodalay olmaydi.Shuning uchun ohangning turlicha bo‘lishiga qarab undov gaplar xilma xil his-tuyg‘ularni anglatadi. Koreys tilida undov gaplar qurilishiga ko‘ra ikki usul undov so‘zlar va undov gap yasovchi qo‘shimchalarga bo‘linadi.Koreys tilidagi undov gap yasalishidagi yana bir o`ziga xos jihat bu undov gap qo‘shimchalri hisoblanadi. Koreys urf-odatlari va tarixiga nazar solsak, ularda yosh va amal tushunchalari alohida o‘rin egallaydi. Shu sababdan ham undov gaplar qurilishidagi undov qo‘shimchalar yoshva amalning katta yoki kichigligiga qarab ishlatiladi. Bu esa koreys tilining o‘ziga xos xususiyatidir. Yuqorida aytib o‘tganimizdek,undov gapda maxsus undov so‘z ishlatilmagan bo‘lsada, kesimga qo‘shilgan qo‘shimchalar undov so‘z bilan bir xil ma’noni anglatadi. Ko‘p hollarda esa, gapda ham undov so‘z, ham undovni anglatuvchi qo‘shimchalar qo‘shiladi. Koreys tilidagi undov gaplar grammatik tomondan butun bir gap vazifasini o‘taydi, undagi undov so‘z va qo‘shimchalar esa gapdagi sintaktik birlikning ma’nosini kuchaytiradi, unga emotsional bo‘yoq birlik ro‘lini o‘ynaydi. Shunday ekan, kelajakda bu mavzuga chuqur to`xtalib o`tish va samarali izlanishlar olib borish lozim degan xulosaga kelindi.

ADABIYOTLAR RO‘YXATI

1. https://uza.uz › posts
2. 평 시. 한국어-중국어 감탄 표현의 대비 연구.단군대학교 대학원,- 2014.
3. 노대규.한국어의 감탄문.- 국학자료원,-1997.
4. 이시애.한국어 간투사 연구. 조선대학교, - 2011.
5. 오승신.국어의간투사연구.이화여자대학교,-1995.
6. https://en.dict.naver.com/#/main
7. https://krdict.korean.go.kr/rus
8. http://library.ziyonet.uz/ru
9. https://uza.uz › posts

TYPES OF WRITING CONTROL PROGRAMS FOR CNC MACHINES

Ruzaliyev Xojiakbar Shermaxammad o‘g‘li
Fergana poltechnical institute, assistant of “Applied mechanics” chair

Annotation: *This article discusses methods for creating a program for processing parts on computer numeral control machines used in mechanical engineering and manufacturing enterprises.*

Keywords: *CNC, Software, programming, G-code, design, technology, CAD, CAM, CAE.*

ТИПЫ НАПИСАНИЯ УПРАВЛЯЮЩИХ ПРОГРАММ ДЛЯ С ЧПУ

Рузалиев Хожиакбар Шермахаммад ўғли
Ферганский политехнический институт,
ассистент кафедры Прикладной механики

Аннотация: *В данной статье рассматриваются методы создания программы для обработки деталей для станков с числовым программным управлением используемых в машиностроении и производственных предприятий.*

Ключевые слова: *ЧПУ, программа, программирование, G-код, проектирование, технология, CAD, CAM, CAE.*

Nowadays, all industries are reaching the peak of the development stage. Also, in the field of mechanical engineering, the digital system is moving. Digitally controlled (CNC) machines are now used in production instead of the previous simple machines. The production process is carried out on automatic lines.

CNC machines can be imagined as a system consisting of 3 blocks: the control program (a device for reading it); CNC devices and the machine itself.

Machining of details on RDB machines is carried out by creating a machining program. There are three software processing methods for RDB machines:

• Manual programming;

• Programming on the control panel of the CNC machine;

• Programming with CAD / CAM system.

1. Manual programming.

Manual programming is the creation of a control program by a programmer without the use of special software based on knowledge of commands.

So, this programming method is obviously the most time-consuming, it is used to create a simple detailing control program.

Manual programming consists of the following steps:

- preparation of technological information;
- calculation and analysis;
- coding;
- program recording;
- setup and preparation for production.

The most time-consuming phase is the phase of program creation and implementation, which accounts for 30% of the programming time. The first stage (preparation of technological data) is indispensable for any programming method. At the stage of technological preparation of the control program, the development of operational technology, the selection of tools, the selection of the sequence of working processes and technological transitions, the selection of cutting rhythms, etc. are carried out.

The computational and analytical stage consists of determining the coordinates of the trajectory points, for example, intersection points, straight lines with an arc, and so on. Technological points are necessary for changing cutting tools, as well as

changing processing modes (amount of push, frequency of rotation of the spindle, etc.)

```
%
O0000
(PROGRAM NAME -  T )
(DATE=DD-MM-YY -  22-09-08  TIME=HH:MM -  16:53 )
N100 G21
N102 G0 G17 G40 G49 G80 G90
(   10. DRILL    TOOL - 20  DIA. OFF. - 20  LEN. - 20  DIA. - 10. )
N104 T20 M6
N106 G0 G90 G54 X-35. Y-20. S0 M5
N108 G43 H20 Z10.
N110 G99 G73 Z-20. R10. Q2. F2.4
N112 M98 P1001
N114 G80
N116 M5
N118 G91 G28 Z0.
N120 G28 X0. Y0.
N122 M30

O1001
N100 G91
N102 Y-20. P.5
N104 X20.
N106 Y20.
N108 X20.
N110 Y-20.
N112 X20.
N114 Y20.
N116 M99
%
```

Figure 2. A program compiled for detail processing on the CNC machine

Processing in an CNC is usually programmed in a language known as ISO 7-bit language or G and M code language. The G and M code language is based on International Organization for Standardization (ISO) and Electronic Industry Association (ESA) rules.

Advantages

- Almost unlimited possibilities in program development.
- Allows you to change any process parameters (for example, cutting speed, cutting depth, thrust amount, etc.).
- Produces CNC programs more efficiently than most CAM systems.

Disadvantages

- G-code requires knowledge of programming language.
- A lot of time is spent on manual calculations and checks
- A large number of calculations increases the probability of programmer error
- A difficult process that requires the full involvement of the RDB developer
- Lack of programmers to implement programs at this level

2. Programming on the control panel of the CNC machine

This method consists of creating and entering programs directly on the CNC machine control panel using the keyboard and display. In this case, the necessary

parameters for detail processing are entered in the control panel. For example, the rotation frequency of the machine spindle, the amount of push, the position of the part, the coordinate of the cutting tool, etc.

Figure 3. Writing a control program using the CNC drilling machine and its control panel.

Advantages

• Easy to learn and simple to use.

• Does not require G-code to write a program.

• Reduced installation and programming times

• Fewer software errors.

• More economical than CAM system

Disadvantages

• Coordinate geometry is limited.

• Difficult to program for complex and shaped details.

• Does not support cutting tool magazine.

• Does not offer the flexibility of a CAM system.

3. Programming with CAD / CAM system.

Today, in order to succeed in the market, the industrial enterprise has to work on reducing the production time, reducing the cost and improving the quality. The rapid

development of computer and information technologies has led to the emergence of CAD / CAM / CAE systems, which are the most effective means of solving these problems.

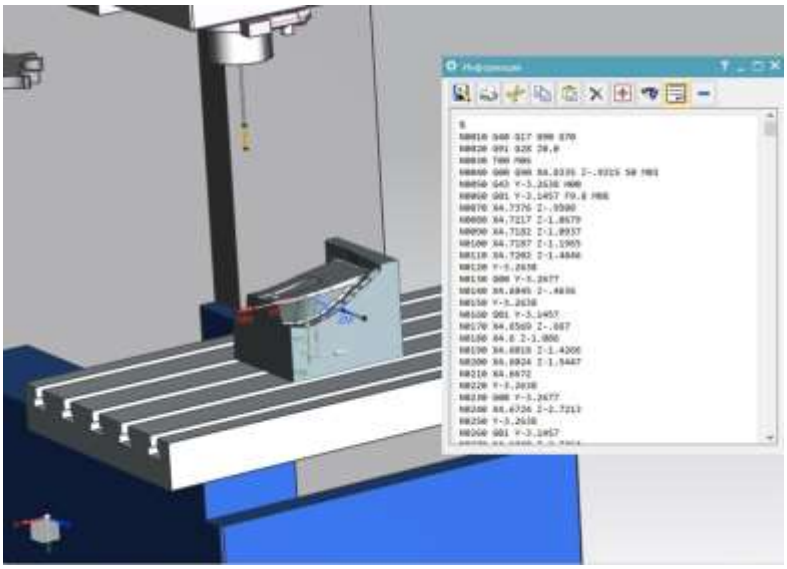


Figure 4. Writing a detail processing program using the CAM system of the Siemens NX program.

Advantages

• Does not require the programmer to perform mathematical calculations.

• Automates the programming process to increase overall productivity.

• It is easy to create a program for processing details with complex and shaped surfaces.

• Virtual simulation reduces machine downtime due to software errors.

Disadvantages

• Effective program management still requires basic knowledge of manual programming.

• Requires computer and CAD/CAM software (such as Siemens NX, Catia, Kompas 3D).

• The programmer-designer-technologist requires the skills of working with the above software.

REFERENCES

1. Mamadjonov, A. M., & Ruzaliyev, X. S. O. G. L. (2021). SIEMENS NX 12.0 DASTURI YORDAMIDA RAQAMLI DASTUR BILAN BOSHQARILADIGAN DASTGOHLAR UCHUN TEXNOLOGIK JARAYONLARNI LOYIHALASH. *Scientific progress*, *1*(6), 397-401.

2. Mamadjonov, A. M., & Ruzaliyev, X. S. O. G. L. (2021). RAQAMLI DASTUR BILAN BOSHQARILADIGAN DASTGOHLAR UCHUN DETALLARGA ISHLOV BERISH DASTURINI ISHLAB CHIQISH. *Scientific progress*, *2*(1), 11-17.

3. Юсуфжонов, Отабек Ғайратжон Ўғли, Рўзалиев, Хожиакбар Шермахамад Ўғли, & Турғунбеков, Ахмадбек Махмудбек Ўғли (2022). ОБЗОР И АНАЛИЗ РЕГЕНИРАЦИИ АСФАЛЬТОБЕТОНА. Oriental renaissance: Innovative, educational, natural and social sciences, 2 (4), 528-540.

4. Ruzaliev, K. S. U. (2022). ANALYSIS OF RESEARCH ON THE TREATMENT OF DETAILS ON THE INNER CYLINDRICAL SURFACE LAYER. Oriental renaissance: Innovative, educational, natural and social sciences, 2(4), 281-290.

5. Otabek, Y., Xojiakbar, R. Z., & Axmadbek, T. (2022). EXPERIMENTAL STUDIES OF THE TECHNOLOGICAL PROCESS OF PROCESSING CONCAVE SURFACES OF COMPLEX SHAPES. Universum: технические науки, (5-10 (98)), 48-50.

6. Ruzaliyev, X. S. (2022). Analysis of the Methods of Covering the Working Surfaces of the Parts with Vacuum Ion-Plasmas and the Change of Surface Layers. Eurasian Scientific Herald, 9, 27-32.

7. Ergashev, B., & Ruzaliyev, X. (2022). Metall listlarga ishlov beruvchi valikli qurilma. Science and innovation, 1(A8), 108-112.

8. Shermaxammad o'g'li, R. X. (2023). MURAKKAB VA SHAKLDOR YUZALARGA RDB DASTGOHLARIDA ISHLOV BERISH DASTURINI TUZISH UCHUN SIEMENS NX DASTURIDAN FOYDALANISH AFZALLIKLARI.

9. Эргашев, Б. Ҳ., & Рузалиев, Х. Ш. Ў. (2023). МЕТАЛЛ МУСТАҲКАМЛИГИГА ТАЪСИР ҚИЛУВЧИ ОМИЛЛАР. Scientific progress, 4(4), 198-202.

10. Ergashev, B., & Ruzaliyev, X. (2022). ROLLER DEVICE FOR PROCESSING METAL SHEETS. Science and Innovation, 1(8), 108-112.

11. Юсупов, С. М., Ғайратов, Ж. Ғ. Ў., Назаров, А. Ғ. Ў., & Юсуфжонов, О. Ғ. Ў. (2021). Компазицион материалларни борлаш. Scientific progress, 1(4), 124-130.

12. Юсуфжонов, О. Ғ., & Ғайратов, Ж. Ғ. (2021). Штамплаш жараёнида ишчи юзаларни ейилишга бардошлилигини оширишда мойлашни аҳамияти. Scientific progress, 1(6), 962-966.

13. O‘G‘Li, O. G. A. (2021). SHTAMPLARNI TA’MIRLASH USULLARI TAHLILI. Scientific progress, 2(1), 1628-1637.

14. Юсупов, С. М., Ғайратов, Ж. Ғ. Ў., Назаров, А. Ғ. Ў., & Юсуфжонов, О. Ғ. Ў.(2021). КОМПАЗИЦИОН МАТЕРИАЛЛАРНИ БОРЛАШ. Scientific progress, 1(4).

INTERREGIONAL SOCIO-ECONOMIC COOPERATION ANALYSIS CASES OF FOREIGN COUNTRIES

Sattarov Ravshan Alimovich, researcher
E-mail: fargona2012@mail.ru

Abstract. *This article analysis the methodological aspects and main issues of interregional cooperation of the Fergana valley regions of Uzbekistan. The level of socio-economic interdependence, innovation, the natural, economic potentials of the regions, the advantages of competitiveness as well as interregional relations of Russian Federation, United States of America, People`s Republic of China and European Union.*

Key words: *interregional cooperation, socio-economic relations, interterritorial economy, regional economy, socio-economic system and territorial division, socio-economic issues, trade and services, economic regions, scientific and analytical stages, regional policy and information base.*

Introduction

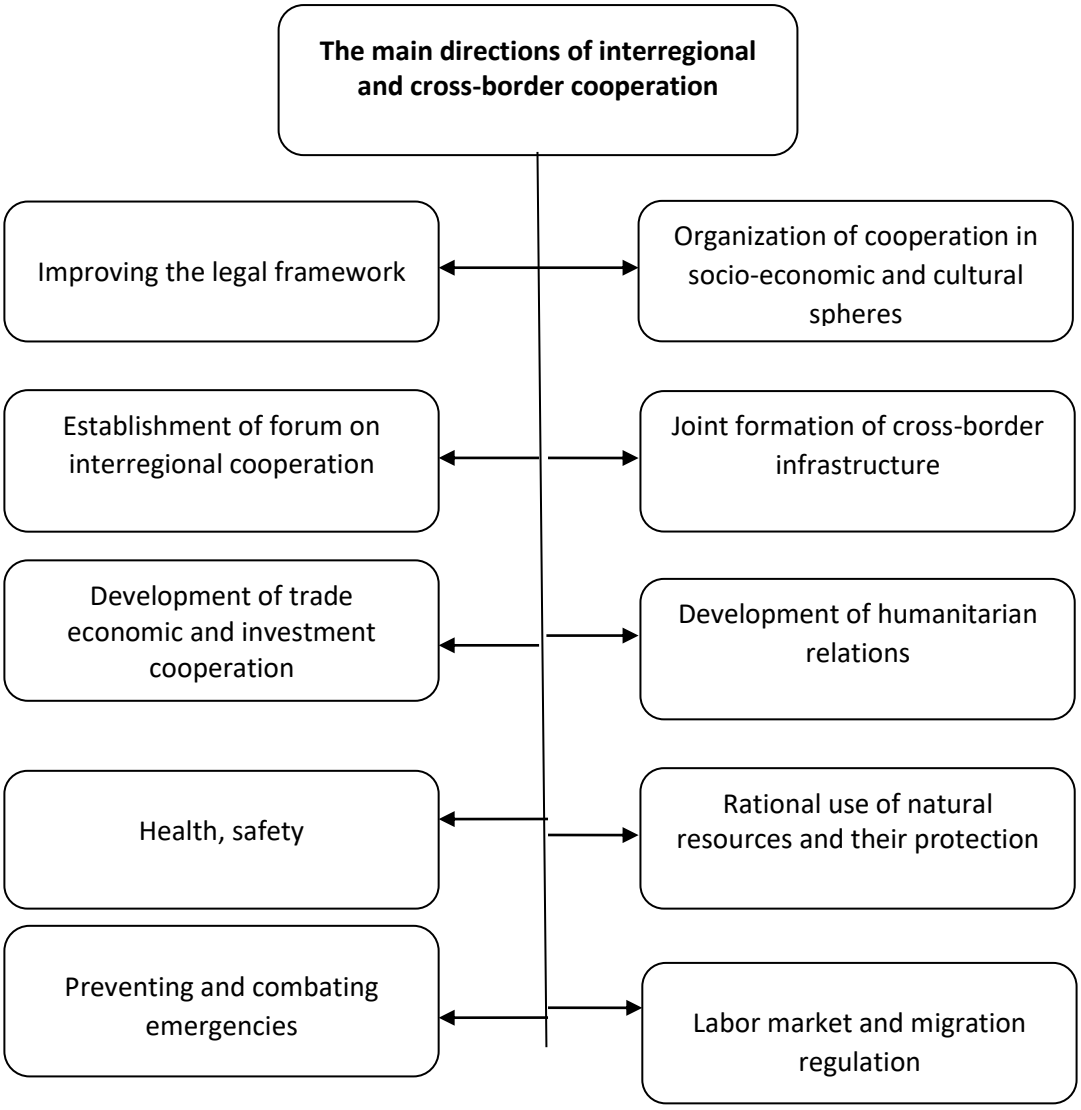
In foreign countries various international associations have accumulated positive experiences in development of interregional economies, and on the basis of their systematic research it can be developed specific scientific and practical proposals. In particular, the Commonwealth of Independent States (CIS) has created a regulatory framework for interregional cooperation which has achieved certain results in development of relations between the regions, based on the specific interests of each country. As an example, there was held the first forum of regional cooperation between Russia and Uzbekistan in October 17-20th, 2018. The main objectives were:

-socio-economic development assistance of CIS, Commonwealth of Independent States;

-ensuring the formation and development of mutually beneficial and coordinated regional policy of cooperation processes;

-development of trade, economic, cultural and human potentials.

The main factors of interregional and cross-border cooperation are interstate relations, historical ties, traditions of the population, natural, economic potentials and population migration. The main directions and goals of interregional cooperation of the CIS countries are determined on the basis of existing factors (Figure 1.3.1).



Discussion

Socio-economic cooperation between the internal territories of separate countries has a direct scientific and practical significance for our research. There is some experience in this area in Russian Federation.

Russian Federation, interregional cooperation has developed some level, such as the "Siberian Treaty", "Center-Black Earth", "North-West", "Great Volga", "North Caucasus", "Great Ural", "Far East" and others. Economic cooperation associations that unite these two or more regions, supported by federal government agencies.

There are different forms and methods of interregional cooperation. For example, there is an alliance between the city of Moscow and Moscow region, the St.Petersburg region which coordinates cooperation. Public unions and associations have been established within the framework of local government. Examples include the Union of Russian cities, the Congress of local districts, the associations of small and medium cities and others.

In particular, program for the development of the transport system in these regions has been developed and the Union has fulfilled the following tasks:

-evaluation effectiveness of St. Petersburg and Leningrad regions` transport communications;

-preparation of proposals for the development of a targeted state program for the development of transport infrastructure providing interconnected regions;

-development of regulations on the necessary financial and logistical resources for the development of a single infrastructure.

Decisions made by the Coordinating Union are binding on all ministries and organizations. The experience of the Russian Federation in the field of interregional cooperation shows that the relations between the main regions are carried out within the economic zone. In Siberia, Baikal, North-West, Caucasus, Krasnoyarsk, Far East and other economic zones, the close cooperation between their constituent regions the existence of single infrastructure, the formation of certain specialization served as an important factor. Socio-economic relations are focused on trade, implementation of joint investment projects, the establishment of joint ventures, meeting the needs and services for the population.

The analysis shows that the main mechanism of interregional cooperation in Russia is the conclusion of agreements and treaties between the legislative and

executive bodies of the regions. As an example, in 2018 the Leningrad region signed more than 26 agreements on cooperation with other regions, and the Rostov region signed at the level of 6 legislative bodies.

Most of the agreements are concluded between the territorial administrations (administration, government, executive body). Kastroma region has signed 62 agreements on trade, economic, scientific, technical and cultural cooperation with other regions of Russia. This figure 57 is in the Rostov region. It should be noted that Uzbekistan has no agreements on interregional cooperation.

New areas of interregional cooperation in Russia include agreements under purpose of developing various socio-economic ties between entrepreneurs and youth organizations.

In general, great emphasis is placed on development of interregional cooperation in Russian Federation. In future, this direction will be focused on the implementation of single regional policy, the need to develop socio-economic relations at the level of economic regions, the specific natural and economic potentials of each regions, the level of specialization meeting the needs of the population[1].

The United States of America has a highly decentralized government system. The role and responsibilities of states, municipalities and districts in socio-economic development are high. They pursue an independent regional policy and inter-regional cooperation depends directly on them. Interregional cooperation can be assessed mainly through the effective organization of transport infrastructure, cooperation in trade, services and industrial enterprises in interests of the population.

Japan, regional policy has been implemented taking into account the high level of production and population density, as well as the well-developed northern regions of Hokkaido and Tohoku. Its distinctive features are:

-the development of the regions and the location of productive forces have a clear legal basis;

[1] Rostanets V.G., Topilin A.V., Napravleniya i metodi issledovaniya problem mejregionalnogo sotrudnichestvo v sovremennoy Rossii. – M, RAEN, 2015, №2.

-private investors are not supported like the European Union, the United States and Canada;

-the main focus is on the formation of a single infrastructure for the development of exports and industry;

-in the plan of socio-economic development of the country, special plans for the organization of regional, including interregional cooperation. (Hokkaido, Okinawa Development Projects).

European Union, countries have accumulated some experience on development of regional and interregional cooperation. Four types of programs for integrated development of the regions have been developed and implemented:

First, national programs were developed on the interests of each countries` of the European Union.

Second, interstate programs were developed mainly on the interests of industries and regions.

Third, special long-term programs mainly aimed at regional development were funded through a special fund.

Fourth, generalized programs have been developed which would implement activities through a number of special funds, investment banks. A number of countries and regions in the European Union operate within the framework of cooperation organizations. These are the free trade zones, the customs union, the common market and economic cooperation.

In developed European Countries, interregional cooperation is based on the principles of a market economy on different directions, depending on the common goals, the specifics of each country the potentials of the regions.

The role of the specially established Territorial Development Fund in the development of regional and interregional cooperation is high. The funds will be directed to investment projects in the fields of transport infrastructures, services, culture and sports in the regions.

People's Republic of China, regional policy is considered as a priority factor. The developed regional plans and programs include:

- complex and coordinated different regions` development;
- demographic policy, population distribution and birth reduction;
- rational and full use of local natural resources;
- support for local initiatives.

Special economic zones play an important role on implementation of regional policy. There are more than thirty of them, which are designed to attract foreign investment.

The organization of interregional cooperation in China is carried out by the central government and local authorities.

The process of decentralization in foreign countries takes many forms and plays an important role on the organization of interregional cooperation. While decentralization level is high in the United States, the process is moderate in the European Union countries. Differences in the formation of the budget-tax system in the regions cause some problems in the development of interregional cooperation.

French Republic, the role of local taxes budget is 60% and 40% is allocated from the center as a subsidy. Regions set local taxes themselves. Summarizing the above, it can be said that interregional cooperation in foreign countries has a different form, each country forms of socio-economic ties between the regions based on its interests, natural and economic potentials, the priorities of ongoing reforms.

It`s level and width are affected by a number of factors:

- specialization of the regions;
- the level of complex and coordinated development of the regions;
- implementation of interregional cooperation mainly within economic regions;
- effective use of natural and economic potentials;
- rational placement of enterprises and industries;
- the formation of a certain management system, etc.

Republic of Uzbekistan,

In Uzbekistan great attention is paid to the complex and balanced socio-economic development of the regions it is looked as an important factor of sustainable economic growth. President Shavkat Mirziyoyev in his address to the Oliy Majlis mentioned the need to "Accelerate the process of urbanization integrated development of the regions the creation of suitable living conditions for the population".[1] It should be noted that the role of human capital, innovation and digital technologies in the formation of interregional cooperation, along with specialization, location of productive forces, natural and geographical conditions sharply has been increased. In Uzbekistan demographic processes and social factors play an important role in development of interregional cooperation.

The analysis of scientific works and articles on interregional cooperation show that it has different levels of forms each with its own characteristics.

Cooperation between the regions of Uzbekistan which is the object of direct research can be divided into different levels. They consist of interregional and inter-district cooperation between the regions, part of the economic regions the Republic of Karakalpakstan, 12 regions and the city of Tashkent.

One of the important areas of regional cooperation is how it will be implemented. Scientists` and experts` recommendations in various forms of cooperation relations, in our opinion in condition of Uzbekistan, forms of interregional socio-economic cooperation should be aimed at solving existing problems, increasing production efficiency, ensuring sustainable economic growth and improving living standards. The definite grouping of the proposed forms of interregional cooperation is reflected in the following main directions:

the first, the location and development of production including industrial enterprises, effective cooperation as well as the formation of a system of clusters;

the second, effective cooperation in the social sphere, use of labor resources, development of trade, education, health, tourism and recreation, science and innovation, training of highly qualified personnel;

[1] O‘zbekiston Respublikasi Prezidenti Shavkat Mirziyoevni Oliy Majlisga murojaati. Toshkent, 24 yanvar' 2020 yil.

the third, the formation of an advantageous business and investment environment, the implementation of investment programs and projects;

the fourth, the formation of a market economy, the development of market infrastructure, ensuring the effective functioning of the banking and financial systems;

the fifth, environmental protection, implementation of environmental programs, rational use of nature, land and water resources.

Uzbekistan needs to fundamentally change inter-regional socio-economic cooperation to make effective use of its potentials, consider it as a new factor in ensuring economic growth and one of the important priorities to the reforms is being implemented in our country. The most difficult task here is to form the organizational and economic mechanisms for the organization of interregional cooperation. In this case, it is important to assess the level and potentials of regional cooperation to scientifically substantiate strategies and methods for development.

The importance for developing inter-regional socio-economic cooperation has been noted by almost all foreign and domestic scientists, and the development of its scientific and methodological basis is becoming very significant for Uzbekistan.

Expects results of proper organization of interregional economic cooperation:

- more sustainable development of the consumer market;
- to provide manufacturers with raw materials and components;
- to expand the domestic markets based on demands;
- meeting the needs of the population in various goods and services,
- raising the level of competitiveness of enterprises,
- reduction of transportation costs and prices for products (services),
- effective use of existing natural and economic potentials,
- interregional production,
- removes barriers to the free movement of investment and labor resources.

During the years of independence in Uzbekistan almost there was not conducted any researches on deeply studying regional policy and interregional economic relations.

In particular, the organization and development of interregional socio-economic cooperation based on the relative advantages of the regions, coordination of these processes, bringing relations between the region and the industry to a new level, the use of new innovative forms of cooperation (cost and development model) has both scientific and practical significance.

The activation of interregional socio-economic cooperation should consist of several interrelated stages.

I stage – formation of the necessary information base.

II stage – carrying out scientific analysis.

III stage – define clear goal and task parameters.

IV stage – implementing the established strategy and tactics.

In the first stage, the main focus is on creating the necessary information base. Official data, monographic studies and the results of diagnostic assessments provided by experts can be used. Demands and proposals for export of products (services) produced in the region to other regions and abroad are prepared by studying the situations in the markets of goods (services) in territories.

In the second stage, the current socio-economic situation in each region on the basis of information collected and processed at the scientific-analytical stage, formation of the market products (services), competitive advantages, degree of specialization, production, the impact of social market infrastructure on interregional cooperation, existing problems and the imbalances will be scientifically analysed.

In the third stage, purpose and objectives of interregional socio-economic cooperation, clear future parameters will be determined, system of measures will be developed.

In the last stage, the developed roadmap is normative – legal aspects, specific proposals on institutional and organizational, economic and financial mechanisms should also be prepared.

It should be noted that goals and objectives of each region, from the

parameters of sustainable development, the advantages of the existing natural and economic potentials the cooperation with all regions of the country, formation can be based on an effective market economy.

However, the neighborhood which is an important factor in the organization of interregional cooperation, unique natural - climatic conditions, availability of integrated infrastructure facilities, mutual trade with nearby areas subject to the efficiency of using common land and water resources, it is expedient to ensure additional economic growth through the implementation of joint investment projects, full satisfaction of the needs and requirements of the population.

In order to achieve intensive interregional (including cross-border) cooperation in Uzbekistan, it would be advisable to strengthening integration processes:

- to develop a general simplified procedure for the implementation of border trade and entrepreneurial activities;

- to prepare bilateral and multilateral intergovernmental agreements between countries on the principles of cooperation in border regions, providing for measures to simplify procedures for the clearance of customs, border, immigration, veterinary and other types of control for citizens of border territories;

- develop and approve harmonized laws on border areas, taking into account the many years of experience of European countries;

- to create in Executive Committee a coordinating body for interregional and cross-border cooperation;

- to develop a general concept of cooperation between regions, highlighting cross-border cooperation.

Conclusion and recommendations

Based on the mentioned above, regional cooperation should serve as an integral part of ongoing regional policy to prove its scientific and practical basis and to develop mechanisms for implementation remains important.

Regarding the foreign experiences, it is advisable to take into account the following development of interregional socio-economic cooperation:

-development of normative and legal bases of interregional cooperation (memorandum, agreement, coordinating council, agreement, etc.);

-establishment of joint ventures, financial and industrial groups, implementation of joint investment projects in order to develop trade and economic cooperation;

-formation of interregional innovation clusters based on natural and economic potentials and specialization;

-creation of an integrated interchangeable information base for the organization of interregional cooperation;

-formation of direct relations with economic entities and development of cooperative relations;

-supporting additional joint small and medium business projects;

-taking into account the needs and requirements of the entire population in the organization of social spheres and services;

-cooperation with young people, including the implementation of joint projects;

-regulation of migration processes by mutual consent, the formation of a common regional labor market;

-development and implementation of measures for the development of transport and engineering infrastructure that unites all regions;

-organization of cooperation on ecology, climate, efficient use of water and land resources;

-development of medium and long-term strategy for the development of interregional socio-economic cooperation, etc.

For improved and swift economic growth in our country, additionally would be upright to announce some Uzbek elite business members` names` publicly as it has positive affect to business environment. We do not have officially distinguished yet the names of the elite business people in our society.

REFERENCES

1. Belousova A.V. Mejregional'nie vzaimodeystvie: vliyanie na ekonomiku regiona. Prostranstvennaya ekonomika, 2012, №4, 127-137s.
2. Izard W. Methods of regional analysis: introduction in a science about regions: abbr. transl. from English. M.: Progress, 1966. 659 p.
3. Lukin Ye.V. mejregional'nie svyazi. Ekonomicheskie i sosial'nie peremeni, 2012, №6, s.205-217s.
4. Axmedov T.M. i dr. Regional'naya ekonomika, -M, 2016, -235s.
5. O‘zbekiston Respublikasi Prezidentining O‘zbekiston Respublikasi Prezidenti Shavkat Mirziyoevning Oliy Majlisga Murojaatnomasi. - rasmiy veb-sayti, http://press-service.uz/uz/lists/view/1371
6. Mamatqulov A.V. O‘zbekiston cho‘l zonasi tabiiy-iqtisodiy salohiyatidan samarali foydalanishning asosiy yo‘llari.–T, 2012,-39s.
7. Blaug M. Ekonomicheskaya misl v retrospektive.–M, Delo, 1996,-720 s.
8. Jung (2008) Reviewing Regional Policies under the 'Participatory Government', Journal of Korean Social Trend and Perspective: 81-114 [in Korean] Republic of Korea (2015) South Korea–Summary. [accessed 23 November 2015]
9. Regional programming in the advanced capitalist countries. M.: The Science, 1974. 327 p.
11. The bourgeois regional theory and state-monopoly regulation of location of productive forces (critical analysis) / under edition of A.D.Sapozhnikova. M.: Idea, 1981. 252 p.
12. Granberg A.G. Osnovy regional'noy ekonomiki. – M.:2000. p. 354.
13. Rostanets V.G., Topilin A.V.,Napravleniya i metodi issledovaniya problem mejregionalnogo sotrudnichestvo v sovremennoy Rossii. – M, RAEN, 2015,№2.

ЖИНОЯТ ИШЛАРИНИНГ ВАКОЛАТЛИ, МУСТАҚИЛ ВА ХОЛИС СУД ТОМОНИДАН ОҚИЛОНА МУДДАТЛАРДА АДОЛАТЛИ, ОШКОРА КЎРИЛИШИГА БЎЛГАН ҲУҚУҚҚА ДОИР ХАЛҚАРО СТАНДАРТЛАР ВА МИЛЛИЙ ҚОНУНЧИЛИК НОРМАЛАРИНИ ҚЎЛЛАШНИНГ ТАҲЛИЛИ (тезис).

Ҳасанов А.М.

Ўзбекистон Республикаси

Бош прокуратураси Сурхондарё вилояти Денов туман прокурорининг ёрдамчиси лавозимида иш ўрганувчи

Ҳозирги кунда давлатимиз томонидан суд-ҳуқуқ тизимини янада демократлаштириш, аҳолининг одил судловга бўлган ишончини ошириш ҳамда жамиятда қонун устуворлигини таъминлашга қаратилган қатор ислоҳотлар амалга ошириб келинмоқда.

Биргина, жиноят ишларининг ваколатли суд томонидан кўрилиши, жиноят ишларини ўз иш юритувига олиш, судда кўриш, муҳокама қилиш ва иш натижаси юзасидан тегишли суд қарорини қабул қилиш ваколати берилган судлар томонидан юқори инстанция судларида кўришнинг янгича тартиби жорий этилди.

Шунингдек, халқаро нормаларни қонунчиликка имплементация қилиш ишлари ҳам ўз самарасини бермоқда. Жумладан, халқаро ҳуқуқда барча шахслар суд олдида тенглиги халқаро стандарт сифатида белгиланган. Унга кўра, миллий қонунчилик барча турдаги камситишдан: ирқи, жинси, ранги, этник келиб чиқиши, тили, диний эътиқоди, имконияти чекланганлиги мавжудлиги, ижтимоий мавқейидан қатъий назар тенг ва амалий ҳимояланишни кафолатлаши керак. Хусусан, миллий ҳуқуқий меъёрлар жинсига кўра камситишни тақиқлаши ва “хотин-қизлар ҳуқуқларини эркаклар

билан тенглик асосида юридик ҳимояланишини белгилаши ва ваколатли миллий судлар ва бошқа давлат муассасалари ёрдамида хотин-қизларнинг ҳар қандай камситиш ҳаракатига қарши ҳимояланишини таъминлаши керак”[1].

Бу қуйидагиларни англатади:

1. Қонунга риоя қилиш ва уни қўллашда ва одил судловни таъминлашда судьялар ва суд ходимлари юқорида санаб ўтилган белгиларга кўра камситишга йўл қўймасликлари керак;
2. Ҳар ким юқорида санаб ўтилган белгиларга кўра камситишсиз судга мурожаат этиши мумкин;
3. Ҳар ким юқорида санаб ўтилган белгиларга кўра камситишсиз суд томонидан тенг муносабатда бўлиш ҳуқуқига эга.

Ўзбекистон Республикаси қонунчилиги ЖПКга мувофиқ, жиноий ишлар бўйича одил судлов фақат суд томонидан амалга оширилади. Фавқулодда судлар тузишга йўл қўйилмайди. Ўзбекистонда суд тизими конституциявий юрисдикция (Ўзбекистон Республикасининг Конституциявий суди), умумий юрисдикция (Ўзб Реснинг Олий суди ва унга бўйсинувчи судлар). Олий суд судьялари, жумладан Қорақалпоғистон Республикаси судларининг судьялари Қорақалпоғистон Республикаси парламенти томонидан Ўзбекистон Республикаси Президенти билан келишилган тақдимномасига биноан беш йил муддатга сайланади, қолган судларнинг судьялари—Ўзбекистон Республикаси Президенти томонидан ушбу муддатга тайинланади. ЎзР Конституциясида “одил судловга бўлган ҳуқуқ” деб аталувчи ҳуқуқ кўзда тутилмаган, аммо, қонунга кўра, адолатли бўлиш судьянинг “мажбурияти” ҳисобланади. Хусусан, президентимиз таъкидлаганларидек, судларнинг асосий вазифаси адолатни қарор топтиришдан иборат. Бунинг учун суд ҳар бир иш юзасидан қонуний, асосли ва адолатли чиқариши лозим[2]. Юқоридаги талаблар доирасида жиноят судларида суд муҳокамасининг адолатли бўишини таъминлаш масаласи долзарб бўлиб турибди.

[1] Хотин-қизларга нисбатан камситишнинг барча шаклларига барҳам бериш бўйича конвенция, 2-модда.
[2] Мирзиёев Ш.М. Ўзбекстон Республикаси Президентининг Олий Мажлисга мурожаатномаси. Халқимизнинг розилиги бизнинг фаолиятимизга берилган энголий баҳодир. Т.2. Т.. Ўзбекистон, 2018.110 б.

Халқаро ҳуқуқ нормаларига кўра, айбланувчи қонун асосида ташкил қилинган ваколатли суд томонидан судланишга ҳақли. Халқаро стандартлар Судлар ва судьялар, шу жумладан суд терговчилари, қонунга мувофиқ, ваколатли бўлиши керак. Суд терговчилари кўплаб ривожланган давлатларда хусусан Франция, Германия ва бошқа кўплаб давлатларда учрайди. Чунки уларда жиноят ишлари бўйича тергов фаолияти билан суд терговчилари шуғулланади. Прокурор суд жараёнида айбловни қўллаб-қувватлайди. Шунингдек қўплаб давлатларда, жумладан Ўзбекистон Республикасида ҳам дастлабки терговни Ички ишлар органлари, Прокуратура ва ДХХ терговчилари юритади. Прокуратура органлари эса Ўзбекистон Респуликаси Конституцияси, ЖПК, “Прокуратура тўғрисида”ги қонуни ва бошқа қонунчилик ҳужжатларига кўра дастлабки тергов фаолияти устидан назоратни амалга оширилади.

Адолатли суд муҳокамасига бўлган ҳуқуқга доир халқаро стандартлрадан яна бири шахснинг ваколатли суд томонидан судланиши ҳуқуқи бўлиб унга кўра, ҳар ким қонунда белгиланган процессуал нормалар асосида тузилган умумий юрисдикция суди ва судьялари томонидан судланишга ҳақли. Керакли тарзда белгиланган процессуал нормаларни қўлламайдиган трибуналлар умумий юрисдикция судларининг ўрнини босиш учун тузилмаслиги керак[1].

Судлар ва уларнинг юрисдикцияси, мажбуриятлари ва вазифалари олдиндан миллий қонунчилик томонидан белгиланиши керак.

Ўзбекистон Республикаси қонунчилигига кўра эса Ўзбекистон Республикасида жиноят ишлари бўйича одил судловни Ўзбекистон Республикаси Олий суди, Қорақалпоғистон Республикаси жиноят ишлари бўйича Олий суди, жиноят ишлари бўйича вилоятлар, Тошкент шаҳар, туман (шаҳар) судлари ва ҳарбий судлар амалга оширади.

ЖПКнинг 389-моддасида жиноят ишларининг судловга тегишлилиги белгилаб қўйилган. Унга кўра, жиноят ишлари бўйича туман (шаҳар) судининг

[1] Суд органлари мустақиллигига доир асосий тамойиллар, 5-тамойил.

судловига юқори судларнинг ва ҳарбий судларнинг судловига тегишли бўлган ишлардан ташқари ҳамма жиноят ишлари тегишли.

Агар бир судда кўриб чиқилаётган жиноят иши бўйича суд муҳокамаси пайтида судланувчи томонидан бошқа суд судловига тегишли жиноят содир этилганлигини кўрсатувчи ҳолатлар аниқланса, ишни кўриб чиқиш суд муҳокамасини бошлаган суд томонидан давом эттирилади.

Ўзбекистон Республикаси Олий судининг раиси, Қорақалпоғистон Республикаси судининг раиси, вилоят, Тошкент шаҳар судининг раислари, Ўзбекистон Республикаси Ҳарбий судининг раиси ушбу модданинг иккинчи қисмида назарда тутилган жиноят тўғрисидаги ишни, агар у мазмунан мураккаб бўлмаса, жиноят ишлари бўйича тегишли туман (шаҳар) судига, шунингдек ҳудудий ҳарбий судга кўриш учун топширишга ҳақли.

Юқоридаги модданинг учинчи қисмига кўра, агар бир судда кўриб чиқилаётган жиноят иши бўйича суд муҳокамаси пайтида судланувчи томонидан бошқа суд судловига тегишли жиноят содир этилганлигини кўрсатувчи ҳолатлар аниқланса, ишни кўриб чиқиш суд муҳокамасини бошлаган суд томонидан давом эттирилади. Лекин халқаро ҳуқуқ нормаларида хусусан, 1985 йилда БМТ томонидан қабул қилинган “Суд органлари мустақиллигига доир асосий тамойиллар”нинг 5-тамойилида жиноят содир этишда айбланаётган ёки судланаётган шахснинг ваколатли суд томонидан судланиши ҳуқуқи белгилаб қўйилган. Шунингдек,миллий қонунчилигимизда ҳам туман (шаҳар) судининг ва юқори судларнинг ваколатига тегишли ишлар белгилаб қўйилган. Лекин суд муҳокамаси бошлангандан кейин ишнинг бошқа судга тегишлилиги аниқланса, судга тегишлилик қоидаси бўйича бошқа судга юборилмасдан балки суд муҳокамаси бошланган судда кўриб чиқилади. Шунингдек, ЖПКнинг 393-моддаси бешинчи қисмида Иш шу даражадаги бошқа суднинг судловига тегишли экани суд мажлисида маълум бўлиб қолса, ишнинг ҳолатларини тўла текширишга зарар етказмайдиган бўлса, суд ишни кўришни давом эттираверади, акс ҳолда суд ишни судловга тегишлилигига

кўра бошқа судга юбориб, бу ҳақда ажрим чиқариши назарда тутилган. Бироқ, ушбу ҳолатда эътиборга олиниши керак бўлган ҳолат шундан иборатки, судланувчининг ваколатли суд томонидан судланиш ҳуқуқининг бузилмаслиги ёки жабрланувчининг ваколатли судда ишнинг кўриб чиқилиши ҳуқуқи каби **халқаро стандартлар инобатга олиниши керак**.

Албатта барча судлар адолатли суд муҳокамасининг ўтказилишидан манфаатдор, шунинг учун ҳам юқоридаги модданинг нормаларида суд мажлиси жараёнида ишнинг бошқа судловга тегишлилик масаласи аниқланса қатиий тартибда юрисдикция масаласи бўйича юбориш лозим. Бунда судланувчи ва жабрланувчининг хоҳишини ҳам инобатга олиш лозим. Чунки қачонки жиноят иштирокчилари розилигида судловга тегишлилик масаласи ҳал этилса, адолатли суд муҳокамасига бўлган ҳуқуққа доир халқаро стандартлардан бири “ваколатли суд томонидан суд муҳокамасининг ўтказилиши” қоидаси бузилмайди.

Шунинг учун ҳам судланувчи ёки жабрланувчининг ҳуқуқ ва манфаатларини инобатга олган ҳолда юқоридаги модда нормаларининг қанчалик халқаро ҳуқуқ нормаларига ва миллий қонунчилигимиздаги мавжуд **нормаларга мослигини кўриб чиқиш лозим**.

МДҲ давлатларида жиноят иши бўйича суд муҳокамаси пайтида судланувчи томонидан бошқа суд судловига тегишли жиноят содир этилганлигини кўрсатувчи ҳолатлар аниқланса, ишни кўриб чиқиш бошқа судга ўтказилиши белгиланган. Жумладан, Озарбайжон Республикаси Жиноят процессуал-кодексининг 75-моддасига кўра, жиноят ишини суд муҳокамасига қабул қилиш тўғрисида қарор қабул қилишда:

судгача бўлган соддалаштирилган иш юритиш бўйича материаллар, буюртмадаги шикоятлар хусусий айблов, шунингдек, бошқа материаллар мавжудлигини ва юрисдикция масаласини кўриб чиқади. Агарда иш судга топширилганлиги аниқланса жиноят иши ёки бошқа материаллар ушбу суднинг юрисдикциясига кирмаса, суд буни амалга ошириши шарт бўлган судга

юборади. Иккинчи қисмда эса **агар суд томонидан кўриб чиқиш жараёнида шуни аниқласа жиноят иши бошқа судда (юрисдикцияси бўйича) кўриб чиқилиши керак**.

Россия Федерацияси Жиноят процессуал кодексига кўра: судья суд мажлисини тайинлаш тўғрисидаги масалани ҳал қилишда келиб тушган жиноят иши ушбу суднинг юрисдикциясига кирмаслигини аниқлаб, ушбу жиноят ишини судловга юбориш тўғрисида қарор чиқаради, ҳамда суд ўзи кўраётган жиноят иши худди шу даражадаги бошқа суднинг юрисдикциясига тегишли эканлигини аниқлаб, лекин у суд мажлисида кўриб чиқишни бошлаган бўлса, судланувчининг розилиги билан ушбу жиноят ишини ўз иш юритувида қолдиришга ҳақли[1].

Латвия Республикаси Жиноят процессуал кодексининг 15-модасига кўра, ишни судда кўриб чиқиш ҳуқуқи белгиланган унга кўра, ҳар ким ўз иши адолатли, холис ва мустақил равишда судда кўриб чиқилишига ҳақли эканлиги тушунтирилган.

Қозоғистон Республикаси Жиноят процессуал кодексининг 316-моддасига, Қозоғистон Республикаси Олий судининг 2017 йил 8 декабрдаги 10-сонли “Судлар томонидан келиб тушган жиноят иши бўйича жиноят-процессуал қонунчилиги нормаларини қўллашнинг айрим масалалари тўғрисида”ги меъёрий қарорига кўра:

1. Агар унга келиб тушган иш унинг юрисдикциясига кирмаслиги аниқланса, суд ишни юрисдикциясига мувофиқ ҳал этади.

2. Агар асосий суд мажлисида ушбу Кодекснингда назарда тутилган ишнинг ҳудудий юрисдикцияси қоидалари бузилганлиги аниқланса, у ҳолда процесснинг барча иштирокчиларининг розилиги билан суд иш жойидан чиқиб кетишга ҳақли.

3. Барча ҳолларда, агар иш жиноят ишлари бўйича ихтисослаштирилган туманлараро судининг, жиноят ишлари бўйича ихтисослаштирилган

[1] РФ ЖПК, 34-модда.

туманлараро ҳарбий судининг ёки гарнизоннинг ҳарбий судининг юрисдикциясига тегишли еканлиги аниқланса, судловга тегишли ҳисобланади[1].

Шунингдек, иш тарафнинг илтимосига биноан, судьянинг ёки суд раисининг тақдимига биноан, агар суд ишни белгиланган муддатда кўриб чиқишга имкони бўлмаса, иш кўриш учун бир хил даражадаги суддан бошқа судга ўтказилиши ҳам мумкин. Ишни бир суддан бошқа судга ўтказиш тўғрисидаги масала юқори турувчи суд томонидан ҳал қилинади ва бу ҳақда суд қарори чиқарилади.

Демак, юқоридаги давлатларнинг жиноят процессуал қонунчилигига кўра, адолатли суд муҳокамасига бўлган ҳуқуққа доир халқаро стандартлар миллий қонунчиликда турлича таърифланган. Хусусан, жиноят содир этган шахснинг ваколатли, мустақил ва холис суд томонидан судланиш ҳуқуқини таъминлашда МДҲ давлатларининг қонунчилигида турлича ёндашувлар бор. Баъзиларида суд мажлисида ишнинг бошқа суднинг судловига тегишлилиги аниқланса, ушбу ҳолатда жиноят иши иштирокчиларнинг розилиги инобатга олинса, баъзи давлат қонунчигида эса иш ҳолатларининг тўла очилишига тўсқинлик қилмаса ишни кўриш давом эттирилади. Масалан РФ ЖПКнинг 34-моддасида, суд мажлиси болангунга қадар ишнинг умумий қоидага кўра юрисдикция бўйича ҳал этилади, агарда суд процесси жараёнида иш бошқа суднинг судловига тегишлилиги аниқланса, суд ишни аввало ишда иштирок этувчи шахслари, хусуан судланувчи ва жабрланувчи рози бўлса ишни кўришни давом эттиради. Агарда рози бўлмаса, жиноят иши юрисдикция бўйича бошқа судга юборилади. Озарбайзон Республикаси ЖПКда эса суд мажлиси жараёнида ишнинг бошқа судловга тегишлилиги аниқланса иш юрисдикция бўйича тегишли судга юборилади.

Юқоридагилардан хулоса қилиб шуни айтиш мумкинки, судловга тегишлилик масаласини ҳал этишда, эътиборга олиниши лозим бўлган асосий элемент бу шахснинг ваколатли судлов ҳуқуқи ҳисобланади. Халқаро ҳуқуқ

[1] Қозоғистон Республикаси ЖПК, 316-модда.

нормаларида белгиланган ушбу ҳуқуқ халқаро стандарт сифатида тан олинган. Ушбу ҳуқуқни таъминлашда биринчи навбатда инсон ҳуқуқи, хусусан, адолатли суд муҳокамасига бўлган ҳуқуқни таъминлаш кўз ўнгимизга келади. Судланувчи ёки жабрланувчининг ҳуқуқи ва хоҳишини инобатга олиш лозим.

ЖПКда, жиноят процесси давомида ишнинг бошқа суднинг судловига тегишлилиги аниқланса, биринчи навбатда судланувчи ва бошқа иштирокчиларнинг розилигини, инобатга олиш лозим. Агарда улар ишни давом эттиришга рози бўлмаса, суднинг тегишлилиги бўйича бошқа судга юборишга мажбурлигини белгилаб қўйиш лозим бўлади.

ФОЙДАЛАНИЛГАН АДАБИЁТЛАР РЎЙХАТИ

I. Норматив-ҳуқуқий ҳужжатлар

1.1. Ўбекистон Республикаси Конституцияси. – Тошкент. Ўбекистон, 2019.

1.2. Ўбекистон Республикаси Жиноят кодекси (2018-йил 1-майгача бўлган Ўзгартириш ва қўшимчалар билан) Расмий нашр – Ўбекистон Республикаси Адлия вазирлиги – Т .:”Адолат”, 2018 й.

1.3. Ўбекистон Республикаси Жиноят-процессуал кодекси. (2018 йил 1-майгача бўлган Ўзгартириш ва қўшимчалар билан) Расмий нашр – Ўбекистон Республикаси Адлия вазирлиги. Тошкент: “Адолат”, 2018й.

1.3. Ўбекистон Республикаси Президенти Шавкат Мирзиёевнинг 2022-йил 28 январдаги “2022 — 2026 йилларга мўлжалланган Янги Ўзбекистоннинг Тараққиёт Стратегияси тўғрисида”ги ПФ-60-сон фармони.

1.4. Инсон ҳуқуқлари умумжаҳон декларацияси.БМТ.1948.

1.5. Суд органлари мустақиллигига оид асосий принциплар.БМТ.1985.

II. Дарсликлар ва ўқув қўлланмалар

2.1. Пўлатов. Б.Х. “Жиноятчиликка қарши курашни амалга оширадиган органлар томонидан қонунларни ижро етилиши устидан прокурор назорати. Ўқув қўлланма.Т.: 2007.

2.2. Д.Базаров,Б.Шамсутдинов. Жиноят процессида айбланувчининг ҳуқуқлари.Дарслик. 2021.

2.3. Ф,А.Рамазанова. Жиноят процессининг функциялари.Рисола. 2016.

2.3. Исроилов Б.О. Жиноят процессининг айрим принсиплари, Рисола. – Т.: “Тан ва технология” 2007. Б 23.

2.4. Ягофаров. С.М. "Международные стандарты в уголовном судопроизводстве". учебное пособие.2013.

III. Интернет манбалар

3.1 http://www.лех.уз

3.2 https://www.akorda.kz/ru/republic_of_kazakhstan/kazakhstan

3.3. http://www.право.ру.

3.4. https://www.echr.coe.int.

3.5. https://www.gov.uk.

ТЕОРИЯ ОЧИСТКИ СТОЧНЫХ ВОД НА УСТАНОВКАХ ПЕРВИЧНОЙ ПОДГОТОВКИ ГАЗА

Умаров Алихан Ахмадович, Очилов Абдурахим Абдурасулович

E-mail: ochilov82@mail.ru

Бухарского инженерно-технологического института, Узбекистан, г. Бухара

Аннотация: *К химическим методам очистки сточных вод относятся: нейтрализующие, окислительные и восстановительные. Эти методы относятся к числу дорогостоящих, так как связаны с расходом различных реагентов. Поэтому эти методы используются для разделения растворенных веществ, когда это необходимо, в закрытых системах водоснабжения. Химический метод иногда используется перед процессом биологической очистки.*

Ключевые слова: *сточные воды, органические загрязнения, минеральные загрязнения, биологические и бактериальные загрязнения, коллоидными система, ионный обмен, электродиализ, взвешенные вещества, плотный остаток, оседающие вещества.*

Расчетная производительность химической водоподготовки для питания испарителей принимается равной максимальной полезной производительности всех установленных испарителей с учетом их продувки и за вычетом используемых для питания испарителей других вод (вод продувки барабанных котлов, загрязненные конденсаты из дренажных баков, загрязненные производственные конденсаты и т.д.).

Устройство по обработке конденсатов, возвращаемых с производства, должно обеспечивать соблюдение норм питательной воды котлов в соответствии с ПТЭ. Необходимость сооружения конденсатоочисток в каждом

случае обосновывается технико-экономическими расчетами в сопоставлении с установкой испарителей или паропреобразователей, питаемых возвращаемым конденсатом.

Возвращаемый на конденсатоочистку производственный конденсат должен отвечать следующим требованиям не более:

- жесткость общая 50 мкг-экв/л;
- содержание железа 100 мкг/л;
- содержание меди 20 -"- ;
- содержание цинка 20 -"- ;
- содержание никеля 20 -"- ;
- содержанием кремнекислоты 150 мкг/л;
- содержание нефтепродуктов (типа масел и мазута) 0,5 мг/л;
- сухой остаток за вычетом окислов металлов (Ге, Cu, Zn, Ni)1 мг/л;
- хроматная окисляемость по кислороду 20 мг/л.

Если предприятие не может обеспечить качество конденсата, обусловленное этими величинами или если конденсат содержит или может содержать вещества, не вошедшие в указанный перечень, то следует применять испарители.

Те потоки конденсата, которые могут быть загрязнены соединениями, содержащими органически связанные серу, селен, мышьяк, фосфор, азот и другие элементы, образующие при термолизе минеральные кислоты используются только для питания испарителей или паропреобразователей если их полная кислотность в результате 100% термолиза будет выше 200 мкг-экв/л. При более низких значениях кислотности конденсаты могут направляться на конденсатоочистку.

Для снижения интенсивности коррозии конденсатопроводов предприятия, возвращающие конденсат, должны обеспечивать значение pH конденсата в пределах 8,5-9,5. В тех случаях, когда производственный конденсат имеет pH ниже 8,5 значение этой величины приводится

потребителем к указанным пределам дозированием в конденсат аммиака или едкого натра. Допускается введение в конденсат или пар, направляемый на производство, веществ, ослабляющих коррозию (амины, этилен и т.п.).

Потребитель пара должен обеспечивать непрерывный и равномерный возврат конденсата; насосы, подающие конденсат, должны обеспечивать течение жидкости по трубопроводам полным сечением.

Для приема производственного конденсата устанавливаются два бака каждый на двухчасовой возврат конденсата.

Дозирование на водоочистках растворов и суспензий реагентов осуществляется с помощью двух насосов-дозаторов (рабочий и резервный) для подачи каждого реагента в каждую точку ввода.

Рекомендуется индивидуальная импульсная система управления электродвигателями дозаторов.

Расходные емкости растворов и суспензий реагентов принимается не менее двух на всю водоочистку для каждого реагента, причем общая расходная емкость для каждого реагента принимается в размере 12-24 часового его расхода. Принятые устройства должны обеспечивать заданную крепость приготавливаемых рабочих растворов и суспензий реагентов, а также сохранение ее значения при срабатывании расходных емкостей между зарядками.

Для очистки конденсатов от продуктов коррозии, с учетом температуры конденсата могут применяться:

- механические фильтры, а также катионитные фильтры, загруженные либо сульфоуглем при температуре конденсата не выше 50°С, либо катионитом КУ-2 при температуре до 100°С;
- электромагнитные аппараты;
- намывные ионитовые фильтры;
- целлюлозные намывные фильтры.

В случае применения механических фильтров, а также катионитовых фильтров о сульфоуглем или КУ-2 предусматривается периодическая гидровыгрузка этих материалов в специально устанавливаемый для этого катионитный фильтр с подводом к нему растворов кислоты и сжатого воздуха.

Скорость фильтрации конденсата принимается, м/ч:

в целлюлозных и ионитных фильтрах намывного типа - 10,

в механических и в катионитных фильтрах - 50

Список литературы:

1. Лутошкин Г.С. Сбор и подготовка нефти, газа и воды. – М.: ТИД Алянс, 2005. 319 с.

2. Очилов А.А., Абдурахимов С.А., Адизов Б.З. Получение натриевой соли сульфированного экстракционного хлопкового масла для разрушения устойчивых водонефтяных эмульсий, образованных из тяжелых нефтей // Universum: Технические науки : электрон. научн. журн. – г. Москва , 2019, - № 10 (67) С.9-12.

3. Н.С. Серпокрылов, Е.В. Вильсон, С.В. Гетманцев, А.А. Марочкин Экология очистки сточных вод физико-химическими методами. – М.: Издательство Ассоциации строительных вузов, 2009. – 264 с.

4. Гудков А.Г.Механическая очистка сточных вод: Учебное пособие.– Вологда: ВоГТУ, 2003. – 152 с.

5. Abdurahim Ochilov, Izzat Eshmetov, Saidakbar Abdurakhimov, Bobirjon Adizov, Dilnoza Salihanova. Destruction of Sustainable Water Oil Emulsions Formed In Local Oil Sludge // International Journal of Advanced Research in Science, Engineering and Technology, Vol. 6, Issue 11 , November 2019 , - P. 11544-11547.

6. Очилов, А. А., & Суяров, М. Т. У. (2016). Образование устойчивых водонефтяных эмульсий. *Наука и образование сегодня*, (2 (3)).

7. Очилов, А. А., Кудратов, М. А., Аминов, М., & Артыкова, Р. Р. (2013). Изучения свойств деэмульгаторов используемых для разрушения эмульсий нефти. In *Современные материалы, техника и технология* (pp. 62-64).

TUPROQ EROZIYASI VA OQIBATLARI, UNGA QARSHI CHORA TADBIRLAR

Qudratova Aziza Xaydar qizi,
Choriyeva Qunduzxon Shuhratovna
Toshkent davlat agrar universiteti
Tuproq bonitirovkasi va yer resurslaridan
foydalanish yo‘nalishi talabalari

Karimova Nilufar Olimjonovna
Agrokimyo va tuproqshunoslik yo‘nalishi talabasi

Mirzahamdamova Shohsanam Komiljon qizi
Òsimliklarni himoya qilish (ekin turlaribo‘yicha) yo‘nalishi talabasi

Annotatsiya: *Insoniyat tarixida rivojlanishni kuzatmaslikni iloji yòq bir paytda aholiga ekologik toza oziq-ovqat mahsulotlarini yetkazib berish asosiy masalalardan biriga aylanib kelmoqda. Aholi sonining keskin oshib borishi natijasida yerlardan unumli foydalanish maqsadida turli agrotexnik tadbirlar, sug‘orish tizimlari ishlab chiqilmoqda. Lekin uquvsizlik, xato hisoblashlar va turli tabiiy faktorlar natijasida tuproqning unumdor qatlami yemirilib bormoqda. Bilamizki, qishloq xo‘jaligida foydalaniladigan yerlar maydonini oshirish qiyin bir masala bo‘lsa, shu yerlarni saqlab qolish undan ham muhimroq masaladir. Eng birinchi navbatda yuzaga kelayotgan vaziyatlarning sabablari o‘rganilib, unga qarshi chora tadbirlar ishlab chiqiladi. Bu maqola ham aynan shu mavzuda olib borilgan izlanishlar natijalarini, o‘rganishlar xulosalarini umumlashtirishga qaratilgan.*

Kalit so‘zlar: *Eroziya, suv eroziyasi, shamol eroziyasi, faktorlar, antropogen omillar, nishablik, agrotexnik tadbirlar, mikroflora.*

Kirish. Yerdan noratsional foydalanish natijasida insoniyat tarixiy rivojlanish davri mobaynida 1,5 milliard gektardan 2 milliard gektargacha hosildor yerni, ya'ni butun ekin maydonidan ko'prog'ini yo'qotdi.

Umuman olganda tuproq unumdorligining pasayishi hozirgi vaqtda butun yer yuzasining 30-50 foizida kuzatilmoqda. Ayni shunday ekan, tuproq eroziyasi o'zi nima? Tuproq eroziyasi turli xil ta'riflarga ega bo'lib, yerning unumdor qatlamining tabiiy faktorlar yoki antropogen omillar natijasida yemirilishiga aytiladi. Tuproq eroziyasidan suv, shamol eroziyalari keng tarqalgan bo'lib, anchagina yerlarni unumdorligini yo'qolishiga sabab bo'lgan. Suv harakati yer relefiga bog'liq bo'lib, nishablikning ortishi suv eroziyasiga sabab bo'ladi. Shamol eroziyasi natijasida tuproqning ayni unumdor qatlamiga zarar yetkaziladi. Tuproq yuza qatlamining yuvilib ketilishi uning tarkibidagi azot, fosfor, kaliy, gumus miqdorining kamayishiga olib keladi. Tabiiy sharoitda tuproqning 1 sm unumdor qatlamining qayta tiklanishiga 100 yildan ming yilgacha vaqt kerak bo'ladi. L.A.G'afurova ma'lumotlariga ko'ra, eroziya jarayoni birgina gumus va ozuqa elementlarini yo'q qilish bilan cheklanmasdan, ular bilan birgalikda ekotizimning biomassasida to'planadigan quyosh energiyasining ham kamayishiga olib keladi.

A.A.Xonazarov butun O'rta Osiyoda tog' va tog' oldi zonalarida eroziyani o'rganish va unga qarshi kurash chora-tadbirlarini tavsiya etishga katta hissa qo'shgan yirik olimdir.1970 yildan boshlab tabiiy va sun'iy o'rmonzorlarning (archazor, yong'oqzor va aralash o'rmonlarda) gidrologik o'rnini o'rganish bo'yicha chuqur statsionar ilmiy ishlar olim tomonidan amalga oshirildi. Bundan maqsad o'rmonlarning tog' daryolarini jilovlashdagi o'rni va eroziya, sel hodisalarining oldini olishdir. 20 yildan oshiq bu izlanishlar natijasida tog' qiyaliklari va soylardagi eroziya hajmini, jarlanishlarni, jarliklarning barpo bo'lishi aniqlandi. A.A.Xonazarov tog'lardagi o'rmonzorlarning suv saqlash, suvni jilovlash, tuproqlarni eroziyadan saqlash va ularning ekologik ahamiyatlarini birinchi marotaba ilmiy asoslab berdi. Buning natijasida eroziyadan saqlanishning gidrotexnik inshootlarning sodda turlari ishlab chiqarishga tavsiya etilgan.

Tuproq eroziya jarayonlariga qarshi o‘simliklar qoplami muhim ta’sir ko‘rsatadi. O‘simliklar qoplami tuproq eroziyasining boshlanishi va dastlabki rivojlanish jarayonlariga qarshi eng muhim chora-tadbirlardan biri. Aynan shu borada T.Sh.Shamsiddinov, X.M.Maxsudov, Z.Tillaxodjayevalar Toshkent viloyati Parkent tumanida tadqiqotlar olib borishgan. Tadqiqotlarning ko‘rsatishicha, eroziyalangan to‘q tusli bo‘z tuproqlarda donli ekinlarning rivojlanishi sustlashadi, o‘rtacha va kuchli eroziyalangan tuproqlarda hosildorlik va uning sifati sezilarli darajada kamayib ketadi. Eroziyalangan to‘q tusli bo‘z tuproqlarda suv-fizik xossalarini, ozuqali suv rejimini yomonlashishi umumiy qishloq xo‘jalik ekinlarining hosildorligiga salbiy ta’sir ko‘rsatadi.[2]

Tuproqlarning eroziyaga uchrashi uning agrokimyovik, fizik, mexanik xossalariga ta’sir etibgina qolmay, tuproq mikroflorasiga ham salbiy ta’sir ko‘rsatadi. Tuproqdagi mikrobiologik jarayonlarning jadalligi mikrofloraning miqdor va sifat ko‘rsatkichlari, tuproq harorati, mexanik tarkibi, organik moddalar bilan ta’minlanganlik darajasi, suv-fizik xossalari, eroziyalanganlik ko‘rsatkichlariga bog‘liq bo‘ladi. Eroziya jarayonlari va qiyalik ekspozitsiyasi o‘rganilgan tuproqlarni mikroorganizmlar miqdoriga ta’sir etganligi G.S.Sodiqova va A.R.Otaqulovlar tomonidan qayd etilgan. O‘rtacha eroziyaga uchragan tuproqlarda ammonifikatorlar miqdori yuqori qatlamda 350 ming ta bo‘lsa, pastki qatlamda 150 ming taga teng, eroziyaga uchramagan tuproqlarda esa 482 ming ta va pastki qatlamda 203 ming tani tashkil etadi. Ma’lumotlarga ko‘ra eroziyalangan tuproqlarda mikroorganizmlar soni kamayishini ko‘rishimiz mumkin. O‘rganilgan tuproqlarda denitrifikatorlar miqdori eroziyalanish darajasiga ko‘ra ham farqlanishi kuzatildi.[3] Yuqorida aytib o‘tilganidek eroziyaga uchragan tuproqlarning xossalari yomonlashuvi tarkibidagi foydali mikroorganizmlar faoliyati va soniga salbiy ta’sir ko‘rsatadi hamda tuproq unumdorligining kamayishiga olib keladi. Bu esa qishloq xo‘jaligi ekinlarining oziqlanish rejimining buzilishiga hamda hosildorligining kamayishiga sabab bo‘ladi.

Tuproq eroziyasiga qarshi chora tadbirlarni ishlab chiqish va ularni qo‘llash muhim masalalardan biri. Yuqoridagi ma’lumotlardan kelib chiqib, o‘simliklar

qatlamiga va sug‘orish tartiblariga e’tibor berish avvalo eroziyadan saqlanishda ahamiyatli bo‘lsa, yer yuzasidagi suvlar oqimini bir me’yorga keltirish, tuproqni yuvilishdan saqlash, sug‘orish jarayonida bir joyga suvni to‘planib qolishiga yo‘l qo‘ymaslik, eroziyalangan sug‘oriladigan tuproqlar, lalmikor, yaylov yerlarning unumdorligini oshirish, mikroflorasini yaxshilash kabi chora-tadbirlar natijasida eroziyaga qarshi kurash olib boriladi. Qishloq xo‘jaligi yerlaridan foydalanishda agrotexnik tadbirlarga e’tibor berish lozim. Ko‘p holatlarda meliorativ tadbirlarni xato tashkil etilishi natijasida ham tuproqning eroziyaga uchrashini kuzatamiz, shuning uchun meliorativ tadbirlarni to‘g‘ri hisob-kitoblar natijasida tashkil etish hamda olib borish eroziyalanishga qarshi profilaktik va samarali usullardan biri hisoblanadi.

Foydalanilgan adabiyotlar ro‘yxati:

1. “Tuproqshunoslikka kirish” A.Toxtasin, L.Tursunov, Z.Jabborov, H.Artikov, M. Qaxarova. Toshkent-2015
2. “Tuproq unumdorligi va boshoqli ekinlar hosildorligiga eroziyaning ta’siri” T.Sh.Shamsiddinov, X.M.Maxsudov, Z.Tillaxodjayeva
3. “Boysun tog‘i tuproqlari mikroflorasi va unga eroziya jarayonlarining ta’siri” G.S.Sodiqova, A.R.Otaqulov
4. “Dehqonchilik, tuproqshunoslik va agrokimyo asoslari” S.A.Azimboyev Toshkent-2006
5. “Tuproq eroziyasi va undan himoyalanish chora tadbirlari” S.T.Tuxtabayev, M.A.Gapparova “Tafakkur manzili”
6. “Tuproq eroziyasi dehqonchilik uchun ofat” Muhamedov Toshkent-1973
7. “O‘zbekistonda tuproq eroziyasi va unga qarshi kurash choralar” Muxitdinov Toshkent-1976

TABLE OF CONTENTS

7
Gavhar Abdullayeva Ro'zimurod qizi. (2023). IMPROVEMENT OF ADEQUATE MODELING SYSTEM IN PRIMARY CLASS NATURAL SCIENCE LESSONS. SCHOLAR, 1(26), 49–56. https://doi.org/10.5281/zenodo.8397188
8
Zhao Yong-feng. (2023). STUDY ON THE RELATIONSHIP BETWEEN SECONDARY EDUCATION AND REGIONAL ECONOMY IN INNER MONGOLIA AUTONOMOUS REGION, CHINA. SCHOLAR, 1(26), 57–68. https://doi.org/10.5281/zenodo.8397206
9
Zheng Hui. (2023). ANALYSIS OF COUPLING STATE OF MAN-LAND RELATIONSHIP REGIONAL SYSTEM IN DAIHAI BASIN: A CASE STUDY OF ULANQAB, CHINA. SCHOLAR, 1(26), 69–79. https://doi.org/10.5281/zenodo.8397211
10
Karimova Nilufar Homid qizi. (2023). TECHNICAL SITUATION OF THE PROBLEM OF COTTON PROCESSING IN COTTON PROCESSING ENTERPRISES IN UZBEKISTAN. SCHOLAR, 1(26), 80–85. https://doi.org/10.5281/zenodo.8397214
11
Jo'rayev Shoxrux. (2023). SEPARATE HEATING AND COOLING UNITS USED IN OIL DEHYDRATION. SCHOLAR, 1(26), 86–91. https://doi.org/10.5281/zenodo.8397224
12
Yusupova Yashnar Feruz qizi. (2023). ADAPTIVE EDUCATIONAL APPROACHES IN HIGHER EDUCATION INSTITUTIONS OF EUROPEAN (CIS) COUNTRIES AND THEIR IMPACT ON THE EDUCATIONAL SYSTEM. SCHOLAR, 1(26), 92–97. https://doi.org/10.5281/zenodo.8397792
13
Aslonova Husnida Botirjon qizi. (2023). KOREYS TILIDAGI EMOTSIONAL BO'YOQDORLIKKA EGA GAPLAR HAQIDA KOREYS TILSHUNOSLARINING NAZARIY QARASHLARI. SCHOLAR, 1(26), 98–105. https://doi.org/10.5281/zenodo.8397796
14
Ruzaliyev Xojiakbar Shermaxammad o'g'li. (2023). TYPES OF WRITING CONTROL PROGRAMS FOR CNC MACHINES. SCHOLAR, 1(26), 106–112. https://doi.org/10.5281/zenodo.8397798

15
Sattarov Ravshan Alimovich. (2023). INTERREGIONAL SOCIO-ECONOMIC COOPERATION ANALYSIS CASES OF FOREIGN COUNTRIES. SCHOLAR, 1(26), 113–124. https://doi.org/10.5281/zenodo.8397802
16
Ҳасанов А.М. (2023). ЖИНОЯТ ИШЛАРИНИНГ ВАКОЛАТЛИ, МУСТАҚИЛ ВА ХОЛИС СУД ТОМОНИДАН ОҚИЛОНА МУДДАТЛАРДА АДОЛАТЛИ, ОШКОРА КЎРИЛИШИГА БЎЛГАН ҲУҚУҚҚА ДОИР ХАЛҚАРО СТАНДАРТЛАР ВА МИЛЛИЙ ҚОНУНЧИЛИК НОРМАЛАРИНИ ҚЎЛЛАШНИНГ ТАҲЛИЛИ. SCHOLAR, 1(26), 125–133. https://doi.org/10.5281/zenodo.8397809
17
Умаров Алихан Ахмадович, & Очилов Абдурахим Абдурасулович. (2023). ТЕОРИЯ ОЧИСТКИ СТОЧНЫХ ВОД НА УСТАНОВКАХ ПЕРВИЧНОЙ ПОДГОТОВКИ ГАЗА. SCHOLAR, 1(26), 134–137. https://doi.org/10.5281/zenodo.8397811
18
Qudratova Aziza Xaydar qizi, Choriyeva Qunduzxon Shuhratovna, Karimova Nilufar Olimjonovna, & Mirzahamdamova Shohsanam Komiljon qizi. (2023). TUPROQ EROZIYASI VA OQIBATLARI, UNGA QARSHI CHORA TADBIRLAR. SCHOLAR, 1(26), 138–141. https://doi.org/10.5281/zenodo.8405026