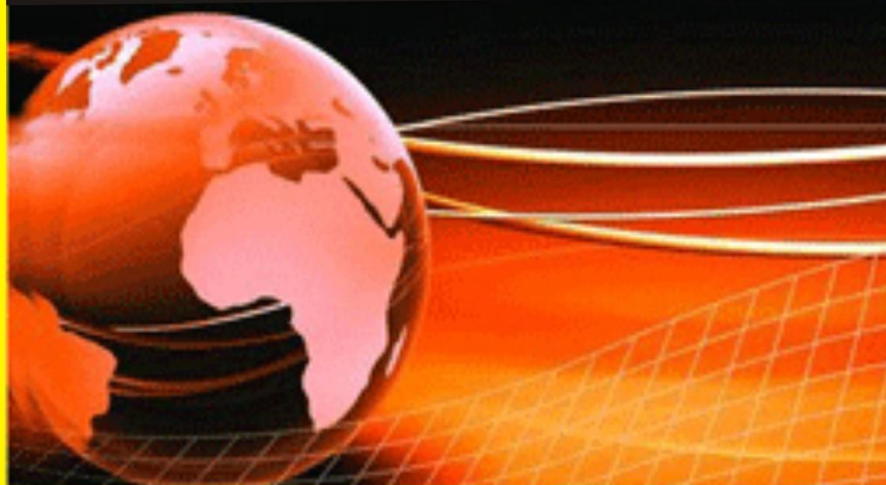


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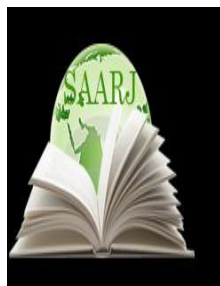
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VISION

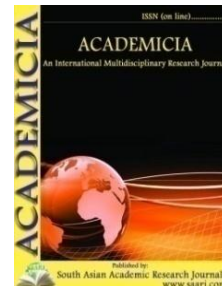
The vision of the journals is to provide an academic platform to scholars all over the world to publish their novel, original, empirical and high quality research work. It propose to encourage research relating to latest trends and practices in international business, finance, banking, service marketing, human resource management, corporate governance, social responsibility and emerging paradigms in allied areas of management including social sciences , education and information & technology. It intends to reach the researcher's with plethora of knowledge to generate a pool of research content and propose problem solving models to address the current and emerging issues at the national and international level. Further, it aims to share and disseminate the empirical research findings with academia, industry, policy makers, and consultants with an approach to incorporate the research recommendations for the benefit of one and all.



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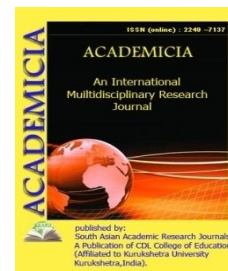
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THE USE OF MOBILE PHONES IN THE ENGLISH CLASSROOMS



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ABSTRACT

In this technological and digital era, web-based technology seems to be indispensable in all domains. Without any hesitation, one can say that man is addicted to technology and it is evident that he/she cannot survive without using the available technology now. Apparently, the use of technology in the field of education, especially in EFL/ESL classrooms, is significant and it makes the teaching-learning process more effective and flexible. In this regard, the English language teachers need to welcome or embrace the latest and innovative technologies into their classrooms, as it is essential for learners, to prepare them to make use of the available technology and make their learning environment more attractive, interesting and lively. At this juncture, the usage of mobile phones or smart phones is focused because it enhances the learners' learning skills as well as solving their problems, related to their courses, instantly in the classrooms. Moreover, the learners' confidence immensely increases in this process so that they try to learn the things comprehensively in their classrooms and also get valuable information regarding the topic that they learn from their teachers. Hence, the English language teachers should always encourage their learners positively to use mobile phones or smart phones in their classrooms to make teaching-learning process a fruitful one. This paper brings out the significance of technology that is useful for both the teachers and the learners. This paper also discusses the necessity of using mobile phones in the English classrooms in a detailed way. Moreover, it expounds the benefits of using these mobile phones in the EFL/ESL classrooms thoroughly and it also emphasizes the impact of these mobile apps on both the learners and the teachers. Finally, some useful suggestions are given for the teachers to implement novel techniques in their English classrooms and also for the learners to develop their learning skills in and outside the English classrooms with the help of the technology available now.

KEYWORDS: *EFL/ESL, English Classroom, the Internet, Learners, Learning Skills, Mobile Phones, Teachers, Technology,*

INTRODUCTION

The twenty-first century is known for drastic changes that are taking place rapidly in the lives of human beings. Due to the discoveries and inventions of this digital and technological era, there has been a revolutionary transformation in each and every field. The intellectual and insightful scientists and researchers put their efforts in finding out the new technologies in their fields and the people of the present generation are enjoying the fruits of these innovations. So the progress in science and technology leads people to live in a safer and more comfortable life and perform their work systematically and easily without much difficulty. There have been tremendous changes in all fields and the same scenario is witnessed in the field of technology. It is a fact that today's technology has changed the entire world and the people of one country are able to communicate with the people of other countries in this globalized world in no time. Because of this instant shift in technology, there have been vast or rapid changes in the field of science and research, business, education, travel and tourism, communication, entertainment and so on. As science progresses, most of the scientists and researchers can communicate easily with the world and even they are now in a position to send satellites to the space. Moreover, the international trade and commerce has become so easier that the multi-national companies are doing most of their businesses online and selling their products to their clients or customers all over the world. At the same time, due to their busy schedule, customers also order for everything online and today there is a great demand for online business. Even the tourists who wish to travel to a foreign country or to any place in the world book their reservations for flights and hotels online and plan everything using the available technology.

Furthermore, technology has brought incredible changes in the field of education also. It has changed the entire educational system so that the teachers as well as the learners are able to gain knowledge about the subjects without going to any place or asking anybody for help. In some modern educational institutions where they use the state-of-the-art technology, the e-books have replaced the normal textbooks and smart boards or digital boards have replaced the blackboards and even the e-libraries have replaced the normal libraries. With the advent of the internet, most of the research in education has become easier and more flexible for those who wish to do genuine research in order to bring the desired changes in methodologies and teaching strategies. The recent trend in the educational institutions is that they use online resources in the classrooms. In some cases, even the teaching is done by virtual presentations where the teacher teaches from one place and the learners from all over the globe can see the teacher online and listen to the lecture using the technique of virtual teaching. As the technologies advance, the learners make use of them in various ways to learn new things. For example, the learners can learn many things by watching the videos from YouTube, TED, Metacafe, The Internet Archive, Myspace and so on. Even the social media has become a tool for instant communication to spread the messages to the whole world in a fraction of seconds. Due to this digital technology, the learners, teachers and researches get the information that they need to know about anything within a short span of time. Thus, a majority of learners and almost all the teachers depend on the available innovative technology.

It is evident that technology has also influenced the English language teaching-learning situations after introducing various new electronic gadgets into the English classrooms. There

have been many changes in the teaching of English in terms of materials, methods and technology usage. With the advent of the internet, it has become easier for teachers to get the required material to teach the subject in a novel way so that there is a shift from the normal teaching. Then it also helps the learners to grasp the content of the lesson easily. It is also an advantage for the teachers to adopt suitable methods and techniques in their teaching in order to make the learners understand the subject well. As the teaching of the modern educational system is purely done with the concept of learner-centred approach, the role of the teachers remains as facilitators or moderators where their main duty is to prepare the learners to work on their own.

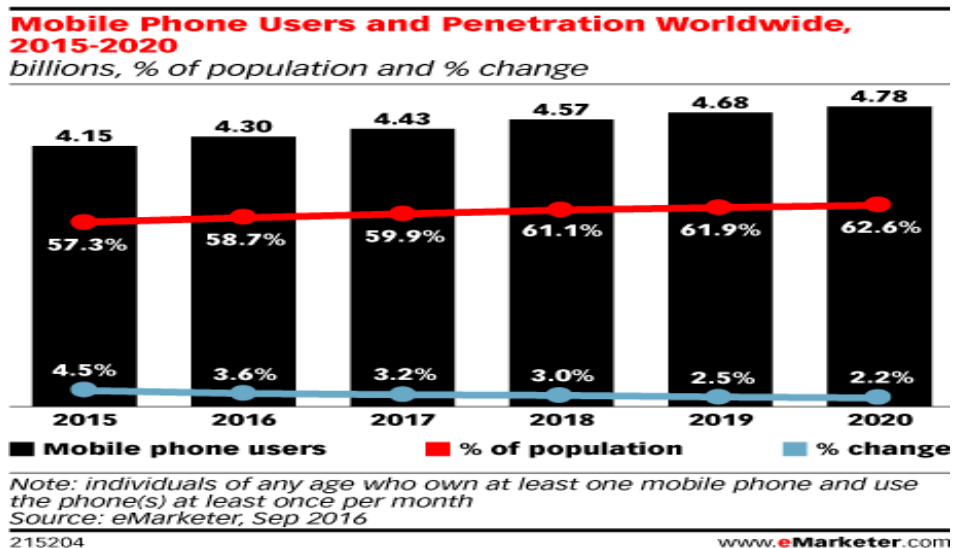
Due to the latest trends in education, the teaching-learning process has become much easier in these days. Most of the teachers are using televisions, computers, projectors, tape recorders and video players in their classrooms and some others are even using digital boards and smart boards while teaching English in their classrooms. So the lessons surely attract the learners as the teaching is done different from the routine and the learners pay more attention towards the subject taught. Furthermore, the usage of the internet in the English classroom has got several advantages for the learners as well as the teachers. The teachers can bring the whole world into the English classroom using the internet. Moreover, the teachers can demonstrate their lessons in the classrooms with audio-visual clippings where the learners concentrate more and learn the lesson in a congenial atmosphere.

With the dawn of mobile technology, the communication has become so simple that people not only can communicate with one another but also can get the relevant information instantly. Among all the available computing devices, mobile phones are the most wide-spread devices that have a special place in the young generation of learners' lives. According to Salameh (2011), "Other than being available and portable, many of these phones are equipped with functionalities including Bluetooth, internet access, mp3/mp4 player, digital camera, video recorder and many are Flash-enabled and/or Java-enabled and can run multimedia contents including audio and video".

In this digital era, most of the teachers and learners use mobile phones or smart phones and they use them to get information about their subject(s) or to get their doubts clarified on the subject using the mobile devices. When the learners use their mobile phones in the classrooms, particularly in the English classrooms, these mobile phones help the learners in getting the right information about the content. While using mobile phones in the classrooms, the learners can also communicate with their peers, teachers and parents and their bond will strengthen as they can communicate even outside their classrooms. Moreover, the teachers can also communicate regularly with the learners by sending assignments or some additional worksheets related to the topic. Then the learner scan finish the tasks and send them back to their teachers so that the teachers can go through them in their leisure time and send the feedback to the learners. In this way, mobile phones play a vital role in motivating and influencing the learners and enhancing their learning skills. Therefore, there is a need to encourage the learners to use the available mobile technology in the English classrooms as it promotes their learning skills. Moreover, it helps the learners get information instantly about any concept which is explained by the teachers in the classrooms. Thus, it helps the learners understand the concepts quickly and improving their English language also.

There is a revolution in communication technologies in the twenty-first century and it is witnessed that anyone carry mobile devices such as mobile phones, smart phones, laptops, notebooks, palmtops, iPad, smart watches, pagers, thumb drives, e-readers, tablets, GPS devices, wireless debit/credit card payment terminals, two-way radios and so on from one place to another place. With the advent of the internet, we use mobile phones for communication and other devices for various purposes. These portable electronic devices are used for various purposes such as browsing the web, sending and receiving mails and messages, sharing photos and videos, making presentations, reading books, watching movies videos and movies, listening to music, playing video games, looking at maps, doing online business, getting the information about the subjects, communicating with the people of various regions and countries and so on. Among these devices, mobile phones or smart phones have become popular as everyone uses them because of their portability and their usefulness. Yamaguchi (2005:57) states, “.....mobile phone is superior to a computer in portability. And some students don't have their own computer”. A study by Chen, Chung & Yen (2012) shows that cell phones are flexible tools which have the potential to be exploited to cater to the needs of language learning students”. Miller (2014) states, “Smartphone's are being adopted unprecedentedly by youth and they are potentially the tools for future study technologies”. Moreover, Huang & Lin (2012) say, “Cell phone technologies are attracting the attention of both the teachers as well as students being low cost, small sized, easy to handle and fast”.

The first handheld mobile phone was invented in 1973 and the first cellular network was launched in 1979. Then onwards, people all over the world have come to know the importance of mobile phones and started using them for their personal as well as business purposes. Now, with the usage of the internet, there is a new trend among the people to use mobile phones to do all their online transactions. So, the number of mobile phone users has been increasing rapidly and the related data is mentioned in the graph given below.



The above report given by e-Marketer (Sept, 2016) unfolds that the number of mobile phone users are increasing year by year. It reveals the fact that there were 4.5 billion people used mobiles in 2015 and 4.30 billion users in 2016. They also report that the number will increase by 4.43 billion in 2017 and 4.57 in 2018, 4.68 in 2019 and 4.78 in 2020. It is a fact that the number

of mobile phone users has been increased tremendously and these days most people are using them for various reasons.

As there are several advantages from mobile phones, people go for them and use them for various purposes. The mobile phones are used to send and receive text as well as video messages, send emails, watch videos and movies, get information about anything, install some useful apps, take pictures, make videos, listening to music, do online purchases, refer to various educational books and journals, read newspapers online, use the internet and so on. So the users communicate with the entire world and get the required information from all the available sources instantly.

There are several advantages of using the mobile phone technology. As smart phones evolved from the initial communication devices, they have been used to improve people's way of communicating with each other. With the advent of smart phones, there have been revolutionary changes in the present modernized communication. It has paved the way to call, video chat, text messaging, SMS, app, etc. which allow people to instantly communicate with the people all around the globe. These smart phones are more convenient for web surfing. As these devices are integrated with mobile browsers, people use them to access websites and also to do research anywhere and anytime. As there is a huge demand for taking pictures in this "selfie" generation, people go for smart phones as they have high resolution. Moreover, these smart phones are also used as a source of entertainment such as books, movies, music and games. Furthermore, these smart phones help the learners, at any level, in their education. Learners can have a more interactive learning by using apps related to education and watching education videos with easy access to helpful content and information. With the help of apps, we can do everything on smart phones. As there are more than 1.5 million apps in Apple App Store and more than 2 million apps in Google Play Store, people access these apps by spending 90% of their time with an average user installs 36 apps on their smart phones and the functionality of these apps varies from each other. As smart phones are also used to locate certain address and area all around the world, people are using them not only for communication but also for transportation. These smart phones are a boon for those who want to use them for their privacy. They can save pictures in a photo library with a password and do any online transactions through smart phones.

Levy (2005) states, "Archetypal examples of the devices used for mobile learning include cell phones, smart phones, palmtops and handheld computers, tablet PCs, laptops and personal media players. M-learning is already popular in some subjects such as languages". Ally (2009) says, "Mobile learning is the process of using a mobile device to access and study learning materials to communicate with fellow students, instructors or institution". According to the Horizon Report (Johnson, Smith, Willis, Levine & Haywood: 2011), "M-learning would finally become part of mainstream higher education". Smart phones are widely used by both the teachers as well as the students since the modern education system is purely based on the internet. As the internet is a treasure trove of information, everything is found online. Students can go through their lessons online taking assistance neither from their teachers nor from their parents. Unlike the usual textbooks, e-books and web-based content are updated in real time, the students get the latest information and get more knowledge on the subjects even outside the classroom setting. Technology also prepares students for their bright future. As there are many more advancements in technology, the future digital and technology-focused education will be more useful for the present generation of learners to make use of the technology to collaborate and communicate as

early as now, there is a possibility for them for getting better employment opportunities in their future attempts. Therefore, there is a need for the learners to have familiarity at least with one form of technology at their early ages so that it helps them develop some other skills that are needed to handle over the innovative processes and devices in their lifetime.



Since most of the textbooks are available online and with resources more accessible with great abundance, there is no need for the learners to buy the textbooks. The students can save the content in their mobiles or computers whereas they can keep their textbooks in their classrooms. Moreover, the tuition cost also decreases when the learners' learning is done online rather than doing it inside their classrooms. Since technology is integrated with education, teachers create an exciting way to teach their learners. The modern teachers make use of the available technologies such as computers, digital boards, smart boards, OHPs, laptops, video players, smart phones and so on in their classrooms. As technology integrated with education, the resourceful teachers are now incorporating videos, images and other graphics while delivering their lessons. The teachers also go through some related websites, programmes and apps to make changes in their teaching methods and provide useful and reliable material to their learners. Most of the teachers make use of the other available technology like smart boards or interactive whiteboards, PowerPoint, email, Skype and so on.

With the latest technology, the teachers can use the latest, more advanced and novel teaching methods such as blogs, podcasts and social media in their teaching. While working with a specific group or one-to-one, the teachers take the advantage of web conferencing technologies and some other online communication tools. As technology provides some unique and universal

tools which enable the teachers to educate the students of various types such as students who are struggling or students who have special needs that include voice recognition, translator, volume controller, word prediction software, text-to-speech converter and other assistive technologies.



Information technology is a powerful tool in promoting teaching-learning environment. One of the most powerful and attractive devices is the mobile phone that represents a revolutionary changes in the field of education. The traditional and ole-fashioned classrooms, blackboards and textbooks can no longer satisfy the need of the present generation learners as they are handling the technological tools since their childhood. In this modern era, almost all learners use mobile phones which equip with all the advanced features including internet access, video chatting, text messaging, running games, blue tooth, multimedia programmes, software, apps and so on that enhance the quality of language learning. The young generation of learners makes use of smartphone extensions for various purposes to keep in touch with their families and friends, online shopping, mapping, finding the locations of hotels, restaurants, etc. and a few of them use these smartphones to improve their learning in the formal educational courses. A research study in South Africa shows that there are 20 million smartphone users whereas a majority of them are students. In a research study conducted at the University of KwaZulu-Natal revealed that 92% of students feel opine that it is easier for them to use their mobile devices to improve their access to information. Moreover, 95% of the students declare that they have faster communication with their lecturers and colleagues with the use of mobile phones. As there is instant communication with mobile phone technology, teachers or learners can send or receive messages instantaneously. Even the PowerPoint presentations or e-books can be saved on the smartphones and the students can go through them at their leisure time.

The demands of the present generation of learners at all levels are increasingly moving towards taking the advantage of using mobile devices to pursue their studies. The same scenario reflects in learning English language also. Almost all the leaners have mobile phones and they use them to learn and improve their English language skills. Three studies were conducted on Japanese university students by Thoronton and Houser (2005) and they have done three receiving studies

on e-mail exchange of short mini-lessons in the mobile phones three times a day, receiving vocabulary lessons by SMS to the mobile phones at regular intervals and finally, using video-capable mobile phones for explaining English idioms. The results of these three studies conducted by Thoronton and Houser (200) state, “Students receiving instruction via mobile phones scored twice higher than students receiving their lessons on paper. Students feel that using mobile phones in learning is a valuable teaching method and they highly rated its educational effectiveness in the English classrooms”. Little wood (1981 & 2011) and Cheng et. al. (2010) assert, “The use of mobile phones help improve English language skills”. Furthermore, Park and Slater (2015) say, “A large number of L2 students of English language are already employing mobile devices every day for diverse purposes, including language learning”. In the similar vein, Pellerin (2014) found out in his study on the use of mobile technologies for teaching of language, “The use of these modern devices allowed students to create their own language tasks”. Likewise, Alemi, Sarab and Lari (2012) found out, “There is a significant difference in the performance of those who used mobile phone-based SMS”. Cherian and Williams (2008) say, “M-learning technologies may continue to broaden the boundaries of the conventional classroom, making it possible for the learning strategy to become as prolific and, possibly, as effective as FTF (face-to-face) learning”. However, Dalstrom (2012) says, “Students are still predominantly using mobile devices for social uses rather than in formal learning”. Therefore, the learners should concentrate on using mobile phones for language learning and for other purposes related to education rather than using them for social media.

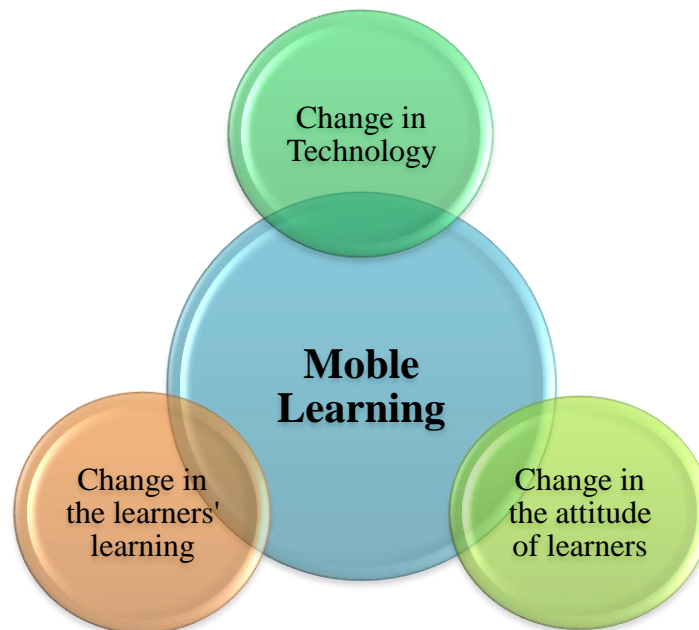
According to the Survey of over 300 US institutions done by Bichsel (2013) asserts, “The significant investment that is now occurring in providing access to mobile technologies in the US”. The mobile terrain is entirely different from that of the early studies in the field: the iPhone was released in 2007 and then it was followed by the iPad in 2010 and it is apt to say that, with the advent of these two devices, everything changed in all the fields. Moreover, the entire mobile industry has been created with the new mobile applications called apps facilitating communication and engagement in hitherto unimagined ways. Hence, it is the right time to make the best use of mobile phones for the enhancement of the English language skills.



Some English language learning mobile apps are very useful for the learners to improve their vocabulary and their grammar as well. The learners can also develop their language usage and other language skills using these mobile apps. Since these apps are designed to improve the learners' English language skills in fun-filled environment, the learners do the tasks given in a

joyful environment. Another advantage using these mobile apps is that the learners can use them anytime and anywhere during their free time. Therefore, the teachers should encourage the learners to download some useful apps such as Babbel, Duolingo, Memrise, Speak Well, Sentence Master Pro, Learn English Grammar (UK ed.) and Busuu in order to improve their English even in the absence of their teachers.

Using the mobile phones, the learners can also learn extra material about the subject taught in their classrooms. Moreover, the learners are able to get useful information faster and learn the relevant topic whenever they want. Furthermore, the learners can communicate with their peers and share their ideas in doing some assignments, projects and even to discuss and clarify their doubts. Mobile phones are really very useful language learning tools that supplement teaching instruction and these are the most powerful participation devices in the EFL/ESL classrooms. Moreover, mobile phones are also used for quick reference in the English classrooms. When the learners want to check word definitions, spelling or even to get some substitute or alternative choices of words, there are some easy-to-use resources such as Webster's Thesaurus App and Merriam-Webster Dictionary App. With mobile learning, the learners work with peers and they also share the information with them. As the same information is available in all mobile devices, the learners can use any mobile device to continue their learning. Moreover, the learners complete their tasks easily and they also understand the lessons well.



The above diagram discloses that through mobile learning, the learners will have a new experience in learning their lessons. As the learners learn English using their mobile phones, they can also use the latest technology related to their learning and they download them on their mobile phones. Mobile learning brings radical changes in the learners learning because the learners learn the lessons on their own by using the mobile phones in and outside the English classrooms. Hence the change in the learners' learning is clearly observed.

Therefore, the advantages of mobile phones are many. Teachers and learners can get information instantly regarding any topic on mobile phones with the internet. Learners can exchange

information, give their feedback, get feedback from teachers and peers, send mails and so on. The teachers need to monitor the learners and guide them when they use mobile phones for learning purposes. At the same time, the learners have to keep in their mind that they should not misuse mobile phones for other purposes and they should always try to use mobile phones only for learning. They can be benefited from these mobile phones as they are useful in developing language skills. Moreover, students can take pictures, make videos, read news, carry out tests, write down ideas, listen to music, read e-books, share notes, make presentations, listen to music, watch cartoons and movies, listen to news and even play games using their mobile phones. As vocabulary learning is assisted by the pictorial annotation, the learners' retention of vocabulary will be highly effective. Thus, mobile phones have brought a great impact upon EFL/ESL learning due to its more convenience of usage and it is otherwise an effective alternative of the conventional teaching.

CONCLUSION

In this paper, the significance of technology that is useful for both the English language teachers as well as the learners has been discussed in detail. Moreover, the need to use the mobile phones in the classrooms has also been discussed thoroughly. Furthermore, the benefits of using these mobile phones in the EFL/ESL classrooms have been explained. As there is a drastic change in the learning attitudes of the children and they prefer to use the available digital technology, the need to use the mobile apps has been comprehensively expounded. In this regard, some useful mobile apps and their effectiveness in learning the English have also been thoroughly elucidated. Finally, the EFL/ESL teachers are suggested to advise their learners to make use of these mobile apps that are useful for the learners to improve their language skills both in and outside the classrooms with the present available mobile phones.

Mobile technologies are very useful in the classrooms and they provide entirely a novel experience for both the teachers and the students to make their work effective and achieve the best results. Therefore, teachers of English should not go on simply adding technology to make the learning environment effective and efficient. They should plan for the creative and efficient use of these latest innovative technologies as well as teaching techniques, methods in their classrooms in order to make the learners more active and energetic. Technology can be used in various ways to make teaching and learning environment more effective and powerful. So the teachers as well as the learners should try to think differently to get some unique, creative and innovative ideas in order to make their classroom teaching-learning environment more productive and successful. As most of the language learning tools are now available on the internet, there is ample number of opportunities for the learners to make use of them anytime and anywhere. The teachers can also assign some tasks to the learners related to what the learners have learnt in the classrooms and ask them to finish those tasks outside the classrooms. Since learning a language has a multitude of benefits such as improving our memory, building our multitasking skills, making us smarter and more perceptive, learning English in EFL/ESL classrooms using the useful mobile apps will be very useful for the learners to develop their language skills even in the absence of their teachers.

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A CROSS SECTIONAL STUDY: THE RELATIONSHIP BETWEEN FIBONACCI RATIO AND TRIGGER FINGER

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ABSTRACT

Introduction: Trigger finger is one of the most common causes of hand pain in adults. The path physiology is unclear but inflammation and age-related degeneration have been suggested. The equiangular spiral is one of the most engaging patterns which perfectly formed flawlessly executed by transitory movement of the digits in the adaptability of the human hand. This study was done to find out the relationship between the Fibonacci ratios of the finger with trigger fingers. Method: Forty-eight patients who had trigger finger and undergone A1 pulley released were being identified and collected. From the hand radiograph, the length of each metacarpal and proximal phalanx was measured manually. The ratio of the metacarpal bony length to the length of the respective proximal phalanx is the Fibonacci ratio of the digit.

Results: There was a significant linear relationship found between trigger finger and Fibonacci ratio ($p < 0.001$). Conclusion: Finger Fibonacci ratio significantly determines the smoothness patterns of its tendon movements.

KEYWORDS: *Fibonacci sequence, Fibonacci ratio, trigger finger, equiangular spiral.*

INTRODUCTION

The reported prevalence of trigger finger is roughly 2.2% in the general population, and is more common among women than men in the fifth or sixth decade of life (Moore JS, 2000; Shah A and Rettig ME, 2017). The person-year incidence rate was 2.6% for non-tool use workers (Gorsche R, 1998). It can occur in one or many fingers in each hand and can be bilateral. The prevalence of trigger finger is also higher among patients with diabetes mellitus, rheumatoid arthritis, or conditions that cause systemic deposition of protein such as amyloidosis (Moore JS, 2000; Saldana MJ, 2001). Trigger finger is occasionally observed in children. The most commonly affected digit is the thumb, followed by the ring, long, little, and index fingers (Fahey JJ and Bollinger JA, 1954).

One study on high-resolution ultrasound examination performed in 20 trigger fingers (no thumb recruited) and 20 normal contra lateral digits (Chuang XL, et al., 2017). It found that, during full finger flexion, the greater thickening of the FDS tendon bifurcation will move proximally beyond the proximal end of the A1 pulley, which in this region that leads to the sticking or triggering problem. However, the thumb does not consist of flexor digitorum superficialis (FDS) tendon but the thumb is among the commonest digit which is triggering. Although the patient may have diabetes mellitus (DM), aging degenerative process or have underlying hypothyroidism or gout, but why one of his or her finger is higher predominantly affected than the others?

“The Motion Path of the Digits”, as described by Gupta A et al. (1998), which had verified evidence of digital motion executing an equiangular spiral. The path of the finger during flexion and extension closely follows that specific pattern which allows unrestricted grasp and release. The normal unrestrained arc of flexion and extension arc of the fingers are consistent with this equiangular spiral and it is one of the most intriguing designs in nature. Deviations from this equiangular spiral may help in recognition of conditions that interfere with normal hand function such as arthritis or hand injuries. The lengths of the metacarpals and phalanges are related intimately to their motion path in flexion and extension (Park AE et al., 2003). For their motion to follow the equilateral spiral, the phalangeal and metacarpal bone lengths would theoretically need to follow the Fibonacci relationship because the 2 are mathematically linked by the Fibonacci rectangles (Littler JW, 1973).

The Fibonacci series is a sequence of integers, starting with 0 and 1, and proceeding as such that the next number is equal to the sum of the preceding 2, thus 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, and so forth. The ratio of each 2 adjacent numbers, $1/1$, $2/1$, $3/2$, $5/3$, $8/5$, $13/8$, $21/13$ and so forth, approaching but never quite reach the value of 1.618, closer and closer in an oscillating manner, to infinity. Therefore, the mathematicians, architects, artists, physicists, and biologists have been interested in the intrinsic properties of this irrational number. This ratio has been reputed to be ubiquitously found within nature, including the spirals of the galaxies, seashells, flowers and DNA structure. Importantly, it has been suggested to be found in human structures, including the hand and heart (Coldea R et al., 2010). The ultra structure of our human hand and heart are made up by this intricate proportional relationship and sequential cytoskeletal and myofibrils proteins aggregations, respectively (Jason YS Chan and GH Chang, 2009). The propensity for this ratio to appear in nature may be because this ratio optimizes the efficiency of packing structures in a limited space in such a way that wasted space is minimized and the supply of energy or nutrients

is optimized (Gibson et al., 2003). Deregulation of the underlying patterning law may manifest as variation in hand-heart structure away from that as would be determined by the golden ratio. Besides that, deviation or interruption from this ratio in hand-finger proportion could possibly correlate with similar clinical implications in terms of disease screening and risk prediction (Jason YS Chan and GH Chang, 2009).

This led us to think about whether the bony phalangeal and metacarpal length of the fingers will predispose the finger to trigger because of the deviation from the equiangular spiral as well as the Fibonacci ratio. The aim of this study was to find out is there any relationship between the Fibonacci ratios of the finger anatomical length with trigger fingers.

METHODOLOGY

The patients who had confirmed to have trigger finger and had underwent A1 pulley released were being identified and collected from the registration books in the Day-care operation theatres (OT) as well as the Elective and Emergency General OTs. All of the trigger finger released patients are recruited from January 2014 to June 2018 and the patients' demographic data were recorded in the data collection form.

Patients who having multiple triggers fingers in one hand, previous trauma or fracture of the triggered finger phalanges or metacarpal, previous infection in the hand or fingers, previous Ray's amputation or congenital deformities, skeletal immaturity and joint contracture over finger were excluded from the study. In additional, patients who do not have proper hand postero-anterior (PA) radiographic film and no thumb proper antero-posterior (AP) radiographic film were also excluded from the study.

For those patients who have the hand radiographic film, the mid-axial (mid-diaphyseal) line will be drawn manually on each metacarpal and phalanx. The length of the each metacarpal and proximal phalanx was measured manually by orthopaedic medical officers and recorded (in millimetres). The mid-axial length of the each bone is measured from the distal end of the articular surface (head) to the proximal end of the articular surface (base). The ratio of the metacarpal bony length to the length of the respective proximal phalanx will be the Fibonacci ratio of the finger and thumb. Even though different patient hand radiograph films have different magnification, the result of the ratio of each finger is numerical unit.

One study had identified that the ring finger is the most prevalent trigger finger (35.2%), followed by the thumb (31.5%), the long finger (27.8%), the index finger (5.6%) and 0 for the little finger (Makkouk AH et al., 2008; Shah A and Rettig ME, 2017). The incidence of the ring finger, thumb, and long finger together accounted for almost 95% of the trigger digits. This study found that no strong association between trigger finger and comorbidities, such as diabetes or hypothyroidism.

RESULTS

A total of 48 patients with trigger finger were recruited in this study with range from 37 to 71 years old and mean age 56.54 ± 8.11 years old (Table 1). Majority of the patients were female (70.8%). The patients recruited for this study were from three different ethnic groups which were Malay (66.7%), Chinese (22.9%) and Indian (10.4%). Majority of the subject were right hand dominant (95.8%) but the distribution of the hand in which the finger had triggering were almost the same for left (47.9%) and right hand (52.1%). From the 48 patients, 20.8% with trigger

thumb, 8.3% with triggering index finger, 22.9% with triggering long finger, 47.9% with triggering ring finger and none of them have triggering little finger. The premorbid of the patients were identified in this study where half of the patients were diagnosed with diabetes mellitus, 2.1% had gout and 47.9% without any premorbid.

TABLE 1: CHARACTERISTICS OF RESPONDENTS

	Frequency (percentage)	Mean (sd)
Age		56.54 (8.11)
Gender		
Male	14 (29.2)	
Female	34 (70.8)	
Ethnic		
Malay	32 (66.7)	
Chinese	11 (22.9)	
Indian	5 (10.4)	
Dominant hand		
Right	46 (95.8)	
Left	2 (4.2)	
Trigger finger		
Thumb	10 (20.8)	
Index	4 (8.3)	
Long	11 (22.9)	
Ring	23 (47.9)	
Little	0 (0.0)	
Triggered hand*		
Right	25 (52.1)	
Left	23 (47.9)	
Premorbids		
Diabetes mellitus	24 (50.0)	
Gout	1 (2.1)	
No premorbids	23 (47.9)	

*The hand of the trigger finger.

Ten triggering thumbs and 38 not triggering thumbs were identified in the study. The mean Fibonacci ratio of triggering thumb and not triggering thumb were 1.53 ± 0.07 and 1.56 ± 0.10 respectively (Table 2). The independent t-test showed no significant different of mean Fibonacci ratio between triggering thumb and not triggered thumb. ($p=0.370$). Only four triggering index finger were identified in the study ($n=48$). The mean Fibonacci ratio of triggering index finger and not triggering index finger were 1.72 ± 0.09 and 1.66 ± 0.08 respectively. No significant

different of mean Fibonacci ratio between triggering index finger and not triggered index finger were found ($p=0.176$).

Out of 48 long fingers, 11 of them were diagnosed with triggering finger. The mean Fibonacci ratio of triggering long finger was 1.42 ± 0.07 and 1.44 ± 0.07 for not triggering long finger. No significant different of mean Fibonacci ratio between triggering long finger and not triggered long finger were found ($p=0.602$). Besides that, 23 triggering ring finger and 25 not triggering ring finger were compared in this study. The mean Fibonacci ratio of triggering ring finger and not triggering ring finger were the same (1.35 ± 0.07). There is no significant different of mean Fibonacci ratio between triggering ring finger and not triggered ring finger ($p=0.890$).

No little finger was diagnosed with triggering finger in this study. Therefore no comparison can be done. The mean Fibonacci ratio for little finger was 1.56 ± 0.07 .

TABLE 2: MEAN FIBONACCI RATIO FOR EACH FINGER

Fibonacci Ratio	Mean (sd)	Mean difference (95% CI)	*t-statistics (df)	p-value
Thumb				
trigger finger	1.53 (0.07)	-0.03 (-0.10, 0.04)	-0.91 (46)	0.370
not triggering finger	1.56 (0.10)			
Index				
trigger finger	1.72 (0.09)	0.06 (-0.03, 0.15)	1.37 (46)	0.176
not triggering finger	1.66 (0.08)			
Long				
trigger finger	1.42 (0.07)	-0.01 (-0.07, 0.04)	-0.53 (46)	0.602
not triggering finger	1.44 (0.07)			
Ring				
trigger finger	1.35 (0.07)	-0.00 (-0.04, 0.04)	-0.14 (46)	0.890
not triggering finger	1.35 (0.07)			
Little				
trigger finger	-	-	-	-
not triggering finger	1.56 (0.07)			

*independent t-test was applied.

The association between independent factors and Fibonacci ratio for all trigger digits were determined by using simple linear regression as showed in Table 3. There were significant linear relationship found between trigger finger and Fibonacci ratio ($p<0.001$). The mean Fibonacci ratio of triggering finger and not triggering finger were 1.44 ± 0.13 and 1.53 ± 0.13 respectively. There was no significant linear relationship found between the Fibonacci ratio with patient's age, gender, ethnic, underlying premorbid and hand dominance. A triggering finger had 0.10 unit of Fibonacci ratio lower than a not triggering finger (mean difference -0.10, 95% CI -0.14, -0.06). Multiple linear regression analysis was proceeding with variables which had p-value <0.250 and showed that only triggering finger was significantly associated with Fibonacci ratio after

adjusted with all other confounders. The Fibonacci ratio could be predicted lowered by 0.10 unit in the trigger finger.

TABLE 3: ASSOCIATE FACTORS OF FIBONACCI RATIO USING SIMPLE LINEAR REGRESSION

Variables	Mean (sd)	Regression coefficient, b (95% CI)	t-stat	p-value
Age		0.001(-0.002, 0.003)	0.59	0.555
Gender				
Male	1.53 (0.14)	0		
Female	1.51 (0.13)	-0.02 (-0.06, 0.02)	-1.11	0.269
Ethnic				
Malay	1.51 (0.13)	0		
Chinese	1.53 (0.14)	0.02 (-0.02, 0.06)	0.94	0.346
Indian	1.52 (0.13)	0.005 (-0.05, 0.06)	0.19	0.851
Premorbid				
No	1.51 (0.13)	0		
Diabetes Mellitus	1.51 (0.14)	-0.005 (-0.04, 0.03)	0.29	0.773
Gout	1.54 (0.14)	0.03 (-0.09, 0.15)	0.48	0.634
Dominant Hand				
Right	1.51 (0.14)	0		
Left	1.49 (0.14)	-0.02 (-0.11, 0.07)	-0.45	0.650
Triggering finger				
No	1.44 (0.13)	0		
Yes	1.53 (0.13)	-0.10 (-0.14, -0.06)	-4.63	<0.001

*Simple Linear Regression was applied.

DISCUSSION

The majority of trigger fingers are idiopathic. The pathogenesis of trigger finger is mostly unclear and some observational reports suggesting an association with occupational or repetitive activities, but this are somewhat controversial. The precise pathobiology of tenosynovium in trigger fingers is also unclear. The main histopathological finding at the first annular (A1) pulley is fibro cartilaginous metaplasia of the tendon sheath with secondary reduction in the cross-sectional area of the fibro-osseous canal (Sbernardori MC and Bandiera P, 2007). In 2014, K. Uchihashi et al. reported that inflammatory infiltrate in only 37% (14 specimens) of trigger fingers. This laboratory study had identified chondrocytoid cells that produce hyaluronic acid and a hypocellular collagen matrix in the tenosynovium of trigger finger, suggesting that excess hyaluronic acid synthesis and an edematous swollen collagen matrix are involved in the progression of trigger finger.

There is a mathematical harmony between human finger phalanges bones with each respectively metacarpals in terms of the Fibonacci sequence for smooth gripping or make a fist. The functional lengths of the phalanges and metacarpal of the little finger do follow actual Fibonacci series and it explained why little finger rarely gets triggered (Alan and Richard, 2010; Yilmaz A, 2010) (Table 1). In comparison of the mean Fibonacci ratio of each individual digit, there is no significant different of mean ratio between trigger finger and not triggering finger (Table 2).

However, by using linear regression tests, the current study found out that there is significant linear association between Fibonacci ratio and trigger finger ($p < 0.001$) but do not have significant linear relationship with the patient's age, gender, ethnic, underlying premorbid and hand dominance (Morsi DA and Hawary AA, 2013) (Table 3).

The efficiency of packing structures in a limited space in finger flexor tendon sheath and its energy or nutrients supply are optimized by this Fibonacci sequential digital length. Each of the ring and the middle finger metacarpophalangeal joint (MCPJ) are connected by deep transverse metacarpal ligament (DTML) on both radial and ulna sides whereas the index and the little only have one DTML on ulna and radial sides respectively (Kaplan EB and Spinner M, 1984). Besides that, there are present of two bipennate dorsal interosseous and two unipennate palmar interosseous musculotendinous structures passed thru on each radial & ulna sided of the ring and the middle finger MCPJ. This cause limited space for the packed flexors to glide efficiently and getting adequate energy and nutrients. Repetitive motions in edematous collagen matrix leading fibrocartilaginous metaplasia of the tendon sheath. At the volar surface of the thumb MCPJ, there have one thumb adductor, two sesamoids and 3 intrinsic thenar musculotendinous units, this limited and packed space may possibly correlates with higher predisposition or risk in getting flexor stenosing tenosynovitis (Jason YS Chan and GH Chang, 2009).

The motion arcs of the joints during digital flexion are consisting of a series of circles with a progressively decreasing radius. Flexor tendon motion within the sheath involves continuous angular gliding over a series of cruciate and annular pulleys, synovial sheath and the volar plate. Not only are pulleys and sheath over the joint curved along with joint angulation, but the curvature of the pulleys over the proximal and middle phalanges were increased with flexion of the fingers (Lin GT et al., 1989; Zhao CF et al., 2000). Because movements of the finger are constantly a process of tendon glide over the sheath with changing curvature, therefore the relationship between the nature of a gliding curve and changes in tension on the tendon is variable for all tendons undergoing finger motion (Tang JB et al., 2003). When the tendon is tensioned angularly over a pulley, the tendons are subjected to both an angular tensile load and a compressive load (the bending force). Different in the gliding curvature create a differential loading on both the superficial is and profundus flexor tendons. In relatively stenotic sheath, this differential gliding of both flexors will catch and resulting in mechanical impingement.

In finger kinesiology and biomechanic, there is indirect participation of the finger extensors during normal finger flexion (Kaplan EB and Spinner M, 1984). Such agonistic-antagonistic coactivation creating forces exerted at the tendons and consequently at the same time creating stretches on the opponent tendons (Beek N., 2018). Tendon displacements in the fingers will probably not only be the result of finger tendon movement, but also of tendon stretch. Thus, higher tendon displacements during active finger flexion compared to passive finger flexion, despite equal ranges of finger movement, have previously been described (Korstanje J.W. et al., 2010) as finger enslaving. In all four fingers, besides the common extensor tendons, the index finger and little finger are having Indicis Proprius tendon and Digiti Minimi tendon, respectively. The long and short extensors of the thumb also exerted as antagonist for the flexors in the highly-mobile thumb in different plane of motions. The presence of discrepancy tendon stretch by this anatomical factor during active and passive finger movements may also contribute for a certain finger to have more predisposed to get trigger finger.

LIMITATIONS

Radiographic assessment of trigger finger usually not required because the diagnosis can be made by characteristic findings in the history and physical examination. Therefore, the patients who did not have hand or thumb x-ray films are excluded from this study. This will eventually cause the amount of the sample size getting smaller. Studies on the radiographic parameters of normal adult hands were adequate (Alan and Richard, 2010; Yilmaz A, 2010; Morsi DA and Hawary AA, 2013) and having a hand radiograph investigation on a typical trigger finger patient is practically unethical. In this current study, the patients who have radiographic hand assessment were those who have finger night pain or associated joints pain at other body parts

CONCLUSION

The observation of the Fibonacci sequence is existent in almost all aspects of life ranging from the leaves of a fern tree, architecture, and even paintings, makes it highly unlikely to be a stochastic phenomenon. This sequence optimizes the finger in such a way that wasted space is minimized in the propensity of repetitive motions in a packed space (Gibson et al., 2003). The current study found that the Fibonacci ratio could be predicted lowered by 0.10 in the trigger finger. By demonstrating an equiangular spiral in hand movement, we can now understand that conditions interfere with normal hand function.

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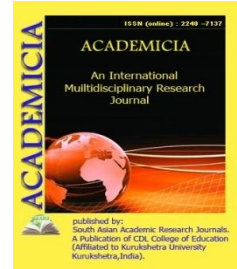
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EDUCATIONAL PRINCIPLES IN A CHANGING WORLD

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ABSTRACT

Our country is full of young people, 35% of our population is below the age of 20 according to the 2011 Census. They are the future of our nation. At the same time we are in the midst of revolutionary changes brought about by the new technologies on the one hand and globalization on the other. The big challenge for educators today, be it parents or teachers, is not just to impart knowledge and contents to young people, but how to help them apply their knowledge to life and imbibe the values that will help them live healthy, happy and meaningful lives. It is in this context that ten educational principles for a changing world are presented in this article.

KEYWORDS: Education, Changes, Learning Communities, Pedagogical Principles, Human Values

INTRODUCTION

Ours is a knowledge society and with the help of the net, youth are able to access information at the click of a mouse. However, while youngsters often know the what and the how of things, they often don't know the why of it or fail to understand how to apply their knowledge to life. The fast pace of life does not allow for healthy practices which were commonplace in former times: such as proper food habits, proper time table or daily schedule, which includes time for family, prayer and service to others. Unless this is done, our young people tend to grow selfish and self-centered and in the long run they end up being disgruntled individuals who expect the whole world to be at their service instead of vice versa.

THE CONTEXT

The world of today is changing so rapidly that the changes are in the nature of 'revolutions'. The youth of today are caught up in a bewildering world that is fast, calculating and competitive. It is a world that is materialistic, sensual and noisy. It is a world that is ruled by the "clock rather than by the compass", as Steven Covey puts it in his best seller "First things First". The clock determines that you reach speedily and even instantly. But it does not ensure that you are going in the right direction. However the compass does.

One of the aspirations of educators, and it is one of mine as well is to help our students to 'look beyond' and to 'rise above': to look beyond the examinations, to look beyond one's career and to prepare oneself for life. To raise one's eyes to higher goals and loftier aspirations and to see the bigger picture and the place that one holds in it. In other words: to *transcend* and to *transform*. With the pressure of competition and the scramble to get a job, students today are focused on exams and careers. This is good and desirable. But it is not enough. Discovering the deeper meaning of life is more important than being merely successful in exams or career.

In the educational field, the commitment to study is a given. Educators are committed to the scientific advancement, and they have the mission to make it accessible to their students, making them "*fall in love*" with the desire to know, to learn. But here there is also the danger of mediocrity, believing that we have already arrived, that it is enough to know a little bit more than the students. It is precisely here, and in view of all the current pedagogical innovations, that we all must be called to see ourselves "on the journey", building knowledge together with those who participate in our socio-educational activities, walking the path of learning in order to foster a more fulfilled life for everyone.

THE PEDAGOGICAL PRINCIPLES

It is with this in view, that these ten principles of pedagogy for our changing world are presented.

1. *Contextual:* Any kind of education that is effective today has to be contextualized and help the students to contextualize. Our present day world poses many challenges, such as globalization, exclusion, growing inequalities, multiculturalism, a mass media society, technological and scientific developments, centralization of markets, etc. Young people have to be able to read the signs of the times in order to find a proper response to the different situations that they meet in the course of their careers and life in general. For this they need to be helped to fine-tune their antenna to capture the sound waves of events, analyze them and understand their implication for life.

2. *Human:* The human person is the centre of any educational endeavour. Therefore in order to educate it is necessary to know the person being educated: without this knowledge, even the best means will be totally useless. The centrality of the person is one of the fundamental triumphs of modern pedagogy. The human person has a dignity of his own irrespective of his functions, capacities and productivity. At times there is a tendency to reduce education to another consumer good, geared to a society that holds the market, individualism, and competitiveness as part of its fundamental basis. Education however is not just a function of what the person *does* but who the person *is*. It is the right of every person to develop himself fully in all aspects and dimensions, not just in the functional aspects.
3. *Diverse, inclusive:* Education caters to the diversity of personalities, temperaments, cultures, ways of life, etc which aim at fulfilling the persons being educated. The challenge is to promote mutual recognition and respect among the mainstream and those considered to be “different”. It has to foster exercises that enable youth to see the perspective from another’s viewpoint. This calls for systematic processes of interaction with the “others” and learning to relativise ones own vision and ways of facing situations as if they were the best, the truest and the only valid ones. It calls for a capacity for mutual acceptance and acknowledgement that collective construction is possible if all are willing to go together.
4. *Holistic, Interdisciplinary :* Education in today’s world must necessarily be holistic, catering to the development of the whole person. Education if it is to be effective must cover the physical, mental, emotional, moral and spiritual dimensions of the person. It must aim at building well balanced and integrated persons capable of taking the knocks of life and transcending them.

Secondly, reality is complex and calls for multidisciplinary solutions. Interdisciplinary projects based on an “essential question” allow for the theme or topic to be studied from the angle of different disciplines. This gives the participants an opportunity to see reality from a holistic vantage point.

5. *Equity:* Education is the greatest catalyst of social change. It is therefore indispensable to encourage and promote the essential values of people, such as the personal and collective dignity, their physical integrity, their rights to participate in the political and social life, their cultural identity, their freedom, and above all the right to exercise their civil, political, economic, and cultural responsibility without discrimination or fears. To advance in this direction will help the development of everyone in the line equality and justice.

The second aspect, which is closely related to the previous one, and that we consider very necessary in the educational process has to do with the empowerment of individuals and socio-cultural groups, especially the most excluded in the societies where we live. The empowerment starts by liberating the possibility, the power, the potential that each person has to become his/her own self and a social agent. Empowerment favors self-esteem, self-concept, and encourages the multiplicity of experiences through which people can explore and discover their different gifts. Empowerment has a collective dimension as well. It is connected to the recognition, organization, and active participation in civil society of minority, economically backward and marginalized groups fostering their full citizenship.

6. *Peace*: One of the characteristics of our present times is that it is marked by violence, war and terrorism much more than in previous times. Present day society is marked by manifestations of aggressiveness and violence within and among the different social, political, cultural, and religious groups. We live in violent societies and relate to persons and groups who experience an abundance of violence. Violence is not outside ourselves but within us, in what we hold as personal convictions and it is expressed in our personal and social relationships, or in our political options. It is important to unmask our capabilities to generate violence and to acknowledge it, to admit that we live in a violent culture. It is the first step in establishing dynamics for non-violence, for peace, for kindness.

As educators we face the challenge to build persons of dialogue. Nothing is more empowering than the feeling of being listened to, of being acknowledged. It is to move from the hearing to the understanding; it is to sharpen our attention to the “other” and to ourselves.

7. *Participatory*: The big task of the educator in this area is not to transfer, deposit, offer, give, their understanding of reality and the world to others as passive objects. The great task of the educator who exercises the practice and the unavoidable right to think and understand is to challenge the students with whom they communicate, to produce their own understanding of what is being communicated. It is therefore imperative to create an environment and spaces for participatory learning processes that encourage critical thinking and reflection on knowledge and practices prevalent in our times and contrasting them with the values and principles held by the young persons. This will help transforming the practices that do not promote a better understanding of reality and create social practices that are more liberating. The challenge before the young students are how to be able to articulate theory with practice, thought with action in their daily work; to develop the capacity to know the world by intervening in it. It requires that there be a balance between theory and practice, between the idea and the method,
8. *Learning community*: One of the challenges of educational practices today is to move from “a school that teaches to a school that learns”, to foster so called “learning communities”. In learning communities the relationship between the student and the teacher is redefined, one experiences the building of a process of mutual learning, the permanent cooperation that leads teachers and students to rethink their beliefs and recreate a pedagogy based on mutual dialogue: in this way the building of knowledge, team work, and evaluation is not seen as a product but as a proposal, the involvement with parents, students and families as an integral part of the educational process. Having acknowledged the value of study as something fundamental in our mission as educators, this also implies an ongoing learning with an attitude of continuous searching as we go through our daily life, trying to integrate theories and practices.

Given the importance of knowing and constructing knowledge collectively in order to respond more effectively to the challenges and needs of today’s world, a challenge for our institutions, which sometimes run the risk of only emphasizing the action, is to articulate action with some reflection, creating places, groups, and communities able to stimulate a studious and researching attitude as a serious trend.

9. *Team spirit*: In order to reach such a high goal, *all have to cooperate* to contribute so that the human and educational communities may experience the mutual help and the dynamic

participation of their members. Only then would it be possible to shape a more inclusive society, a more participative education, and above all a less self-centered personal and collective attitude. This de-centralization allows the person to have a more reflective and practical understanding of the new challenges of a social and educational organization that values the team work of individuals and the richness of their plurality of views, ideas, and practices.

This poses a constant challenge for the State, for the family, the teaching institutions and other socio-educational communities to join hands in creating the policies, practices and processes needed to offer such educational opportunities to the youth of our country.

10. Transforming: Education and culture are fundamental to bring about change and a new horizon to society at the local and global level. Our success and challenge as educators is to maintain the vivid conviction that change and transformation are possible, that we need to change reality, that we cannot pact with structures and situations that keep a great part of the global population in poverty and misery. We cannot pact with situations that perpetuate injustice and exclusion. This conviction that knowledge becomes a principle of action and opens up practical constructive paths for other crucial disciplines that in turn generate processes of new types of knowledge.

We understand study as an activity that builds up the human being through the constantly renewed searching for truth, that prepares us to serve others, and that makes us commit ourselves with the surrounding reality inviting us to transform it in collaboration with those present in such reality. Study enables the educator to live with an open attitude in order to discover profound wisdom and to listen to and learn from others.

CONCLUSION:

Thus, this approach goes beyond the understanding of education and study as something merely academic, or intellectually “fashionable”, or as another object of consumerism. It sees it rather as an option connected to an intellectual and moral autonomy of the educator.

Our study should always be accompanied by questions that in many cases will have to do with those that may help us look at how we work. What life experiences become true learning experiences? What lessons do I find in expected or unexpected events? How do I use for serious reflection and analysis my readings and other materials concerning data and facts for? Do I offer only repetitive information? Or do I foster a farther research and analysis of reality? Am I attracted to a more complete understanding of the human being? Do I inquire about the ethical questions that accompany scientific developments? Do I have a keen sensitivity so that the analysis of reality in which I am involved in may contribute to advance the sense of solidarity, justice and equality? In all my work, do I keep the concern for human dignity and the rights of the people?

This perspective invites us to call upon both interior and external resources to act, prioritizing the capacity of life giving communication that is transforming and empowers social responsibility and team work. Therefore the methods, strategies, content for reflection and study that we employ in the practice of education have as a goal, the community, networks, relationships and agreements that will move us forward.

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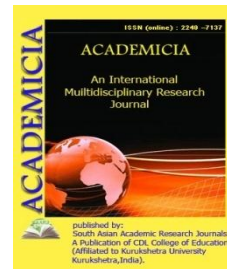
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ASSESSMENT OF RANGELAND ISSUES, CHALLENGES AND OPTIONS IN THE WESTERN REGION OF AFGHANISTAN

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ABSTRACT

Rangeland supplies forage for the livestock industry, habitat for wildlife, and water for people and animals, beauty and pleasure for everyone and an economic base for rural communities, as well as it occupies 45% of the Western Region of Afghanistan. The issues and challenges around sustainable rangeland management are intertwined with social, environmental and economic dynamics of the pastoral communities. Our objectives are to investigate and identify the issues, challenges and options for sustainable grazing systems in the Western Region of Afghanistan. Several tools and methods were used sequentially or jointly to collect data in relation to the specific situation on the field and by adapting the method/tool/technique to facilitate the achievement of the objective, such as quantitative and qualitative questionnaire and expert survey. In this research, 100 Interviewees were selected randomly and interviewed during year 2012. The results of this research evidenced that lack of alternative energy resources to replace fire fuel collection, increasing conversion of rangeland into cropland, excess of grazing pressure, recurrent droughts and inaccessibility of grazing animals to water are also issues of fundamental importance in this area. Poverty of rural population, inequitable access to rangeland, especially pastoral communities, and limited capacity of the government to mitigate the impact of natural disasters are also major challenges. Participatory approaches based on closed collaboration between local communities and improvements of their traditional

institutions are vital for identifying options for the sustainable management of rangeland resources.

KEYWORDS: *Challenges, Livestock, Rangeland Issues and Western Region*

INTRODUCTION

Western Region (WR) of Afghanistan includes four provinces: Herat to west, Ghor to east, Badghis to north and Farah to south of this region, and covers an area of 169,617 km². More than 61% of the region is mountainous or semi mountainous while near to 38% of the area is made up of flat to semi flat land. In Western Region, rangelands are known to be lands where the predominant vegetation consists of grasses, herbs, shrubs, and may include areas with low-growing trees. The terms rangeland resources' refers to biological resources within specific rangeland and associated ecosystems, including vegetation, wildlife, and open forests (canopy coverage less than 30%). Today, rangelands cover 46% of the total Western Region territory.

In the Western Region, traditional animal production systems provide people with food (milk & meat), manure (for fuel and fertilizer), wool, hides, transportation, added security and the possibility to accumulate capital. Livestock is also important in association with arable agriculture, because livestock provides the power for cultivation and manure for increased soil fertility, whilst livestock consumes crop residues, which often has no or little other value, except that straw can be used as roofing material or to make baskets. Improvement of the rangeland management and disease control method could have serious implication on long-term stability of the grazing system and in turn on food security of the country.

The management of rangeland resources with livestock represent historically the most important activity bearing relevant economic and ecologic implications for the country. A big number of livestock (7.1 million head), of which (6.2 million sheep and goats) are reared in WR and the main food source of these animals is rangeland. In the last decades, the quantity and quality of livestock production is decreased, therefore there is an urgent and strong need to identify new options for improvement of rangeland resource management in this area, which has implications on social and economic development. The government of Afghanistan is facing a significant challenge to meet the Millennium Development Goals (MDGs) that address equitable and sustained pro-poor growth. It is the national priority to tackle the poverty that is deeply embedded in rural areas. On the other hand, degraded natural resources need to be protected from overexploitation by rural inhabitants. Rural life is nowadays deeply dependent on natural resources: in Western Region 90.2 % of the population are living in rural areas. The paths of change towards the sustainable development of the Western Region communities of Afghanistan may be strongly supported through strategies and policies aiming at improving the grazing systems. Western Region people's livelihoods depend entirely or partially on agriculture and animal husbandry, whether they are from *Kuchi* (Afghan nomadic pastoralist) or sedentary communities, which are the main typologies of grazing systems. However, the fragile, arid environment, years of conflict, social disruption and drought have resulted in almost total denudation of vegetation cover through uncontrolled grazing and intense pressure for fuel supplies, particularly in the lowlands.

The following study provides evidences that will be interpreted in the light of the principles of holistic management. Various sources of information were used to describe the context in which rangeland management occurs in the Western Region. The main topics of this study are:

Rangeland issues (drought, fire fuel, rangeland conversion to cropland, grazing pressure, land tenure, animal drinking water), rangeland challenges and rangeland options. The options for sustainable grazing systems can emerge from the integration of existing knowledge on the biophysical constraints and the local knowledge and perceptions of the stakeholders about issues and challenges.

REVIEW OF LITERATURE

The major part of world land (50%) is covered by rangeland (Mannetje, 2002) and rangeland is an important land cover type in most dryland countries, extending over 30 to 50 Percent of their territories (FAO, 2011). Furthermore, drylands are home to more than 2 billion people, about 35 % of human population on earth. Afghanistan is one of the countries with arid to semi arid climate and lies on the Asian continent with an area of 652,089 km², between lat 29°30'-38°30'N, long 60°30'-74°50'E. It is a mountainous land. In terms of rangeland ecology, the quality and quantity of rangeland production depends on climate and a range of other environmental factors that influence seasonal fluctuations in growth rates, dormancy periods and seasonal variations in quality (Kirkman and Carvalho, 2003). The grazing ecosystems are among Earth's most endangered terrestrial habitats (Frank et al., 1998).

The capacity of rangelands to provide feed for livestock and securing sustainable livelihoods of *Kuchi* has been drastically reduced due to a combination factors such as degradation due to overgrazing, expansion of cultivation and desertification of large areas in arid and semi-arid lands (Zaroug and Mirreb, 2010). Livestock grazing in many arid lands of Afghanistan has reached a point where the sustainability of the rangeland is at risk due to disruption of traditional systems and livelihoods (Aleem, 1980; Mohammad, 1989; Umrani et al., 1995; Umrani et al., 1996). Pittrof (2011) through a problem analysis indentified that water, livestock and fire fuel are of fundamental importance of the intertwined roles of agriculture and natural resources in Afghanistan. In particular, diminishing access to water is one of the significant risks for *Kuchi* communities (Jacobs and Schloeder, 2012). Rangelands are crucial in supplying this region with livestock products, fuel, building materials, medicinal plants, and providing habitat for wildlife. The grazing of small ruminants, mainly closely herded flocks of sheep and goat, over the last 5,000 years has been an important factor in shaping the development of Afghanistan's plant biodiversity. Biodiversity provides goods and services that underpin sustainable development in many ways, so biodiversity is at the heart of many cultural values (NEPA, 2008).

In such contexts, scientific knowledge has limitations in identifying appropriate solutions for rangeland conservation, therefore the combination of local and scientific knowledge could contribute to identify adaptive managing strategies to address sustainable rangeland management and conservation (Reed et al., 2006; Ison and Russell, 2000). For a technology to be adoptable, it must be compatible with the environmental and socio-cultural context in which it is introduced, addition to farmer needs and objectives (cited by Reed and Dougill, 2010). The Ministry of Agriculture Irrigation and Livestock (MAIL) of Afghanistan introduced a significant new policy /strategy in 2006 when advocated "*the transfer of effective management responsibility for forest and rangeland resources to communities within defined community geographical areas*".

Glatzer (1996), Weijer (2007), Stanfield et al. (2008) and Pittroff (2011) discussed on land tenure context, at national level, as a key issue for development in Afghanistan. Toulmin (2006) found that secure rights to land and property depend on a combination of two key elements: (i)

legitimate by the local population and (ii) legality by the state. Bruce (1998) showed that land tenure security is as landholders' confidence that neither the State nor other people will interfere with the landholder's possession or use of the land for an extended period. Therefore, the analysis of rangeland policy issues and trend of rangelands should become a national priority for the Afghanistan country (Pittroff, 2011).

OBJECTIVE

The general objective of the study is to address issues and challenges for sustainable grazing systems in the Western Region of Afghanistan, it is necessary to integrate the available scientific knowledge about biophysical constraints, contextualized in the social economy background, with the local knowledge of stakeholders around relevant issues.

HYPOTHESIS

The improvement of the grazing system in this region has relevant implications on the overall social and economic development of the pastoral society.

Large scale grazing system in the Western Region of Afghanistan have changed over time under different disturbances and pressures and the path of change is an essential part of their identity to be addressed in order to contextual policies and actions

MATERIAL AND METHODS

The framework developed by Caballero et al (2009) in the context of the LACOPE project (www.lacope.net) was adapted to the specific study area. An expert's survey was made in the Western Region and it was integrated by semi-structured interviews to livestock owners and shepherds of different typology of grazing systems.

For livestock owners, a simplified separate questionnaire was designed and used for structured and semi-structured interviews in Dari language, to facilitate the discussion and the data collection at local level. The collected data were integrated with a literature review.

The analysis was implemented in summer 2011 and 2012 through interviews were made with different stakeholders groups and experts from university, UN organization and NGOs. Totally 100 interviewees from different typology of grazing system were involved in this study.

Participatory techniques (Cavestro, 2003) were used during the interviews especially when interviewees were villagers. Villagers were involved in a participatory mapping exercise (Duvail et al., 2006) at village level to illustrate the village resources and the location of the managed rangelands and *Quruq* (a traditional practice for resting of rangeland). The collected data were summarized to derive relevant information on issues, challenges and options of WR rangeland..



Figure (1) Interview with stakeholders and *Nimeh Kuchi* shepherds

RESULTS AND DISCUSSION

1. RANGELAND ISSUES

1.1. DROUGHT

In the last 30 years, recurrent drought contributed to reduce the rangeland area in Western Region.

TABLE 1. DECLINE IN AGRICULTURAL PARAMETERS IN SURVEYED VILLAGE OF GHOR, BADGHIS AND HERAT PROVINCES (DECLINE RECORDED IN 2004, A DROUGHT YEAR VS. 2003, NORMAL YEAR).

Provinces	Crop diversity (%)	Area cultivated (%)	Yield (%)	Area irrigated (%)	Water table (m)	Number of animals (%)	Social effects
Herat	25-70	21-67	17-88	51-86	2-4	20-50	M, IC
Ghor	40-65	20-60	25-75	50-75	2-4	25-55	M, CL, IC
Badghis	30-60	15-70	20-78	50-75	3-4	20-60	M, CL, IC

Source : Bhattacharyya et al., 2004

Note: M = Migration, CL = Children labor, IC = Illegal crops.

Communal grazing lands have been eliminated in many parts of the country, especially in the western and southern parts, due to drought and the movement of sand dunes. Even when the communal grazing land persisted, its productivity and carrying capacity have been greatly reduced. When asked about the current levels of productivity of rangelands as compared to normal and average rainfall years, the farmers in Ghor and Badghis indicated that the productivity level was below 50% of expectations. Also in Ghor, Badghis and Herat provinces the animal population has decreased significantly because of five years drought from 2000 to 2004 (except 2003). In that period the number of sheep and goats decreased by 40–65%. The

degradation of the rangelands has resulted in a significant decrease in the available forage for the livestock of the *Kuchi* and the selling price of animals has gone down by 15–30% as compared to the number of animal in non-drought years. In some areas, it was also observed a significant, increase in the number of desert mice (e.g., around Chaghcharan city/Ghor province) which cause damages to many different plant roots with negative effects on natural vegetation of rangeland. Drought negatively influenced the carrying capacity of rangelands, so degradation of vegetation increased runoff and sedimentation and decreased infiltration, which negatively influenced the quantity and quality of available irrigation water. Population suffered from shortage of drinkable water and falling groundwater levels. Most of interviewees explained that the water level of their well, excavated by some national and international NGOs, decreased, or some of these wells dried and not more usable. They mentioned that drought has a return period of about 20-30 years.

A strategy to improve the resilience and mitigate the recurrent drought for pastoral households is urgently needed. An intervention at the Governmental level is required but the capacity of the government particularly in this context is very limited, “*because Afghan government anti-drought policies and practices were at embryonic stage* (Bhattacharrya et al., 2004)”

1.2. FIRE FUEL

The rise of population of this region as well as in other part of country, increased the pressure on fire fuel collected from rangelands and woodlands particularly from all the rural and important sectors of activity of the urban population having no access to the electric grid or other energy resources. Fire fuel collection is the responsibility of men and children. Any burnable vegetation is collected: sticks, woody herbs, thorny plants (*khar*) and uprooted saplings. Villagers often lend donkeys to other families, in rotation, for fuel collection expeditions. For example one man and two or three childrens with three donkeys make more than 10 hours round trip in Herat province (but in Highland such as Ghor and Badghis provinces this round trip is estimated less than 10 hours) to the remote hills to collect up to 150 kg of firewood. This is adequate for one average household compound for a month. The demand for fuel material is estimated at about 0.60 kg per person per day.

An average estimate indicates that in the households in Western Region some 59% of the energy consumption for cooking comes from firewood and bushes in summer and 65% in winter. Through an assessment based on household consumption (NRVA, 2005) revealed the percentage of total energy resources for cooking and heating derive from bushes and firewood. In summer, the highest consumption of bushes was estimated in the highland Ghor province (76%) and the lowest in the lowlands of the Farah province (33%), while the highest consumption of firewood was in Farah (34%) and lowest in Badghis (1%) which has intermediate altitude between Ghor and Farah. In winter, the highest consumption of bushes was found in Ghor (70% of total energy consumption) and the lowest in Farah (24%); firewood highest consumption was found in Farah (49%) and lowest in Badghis (3%).

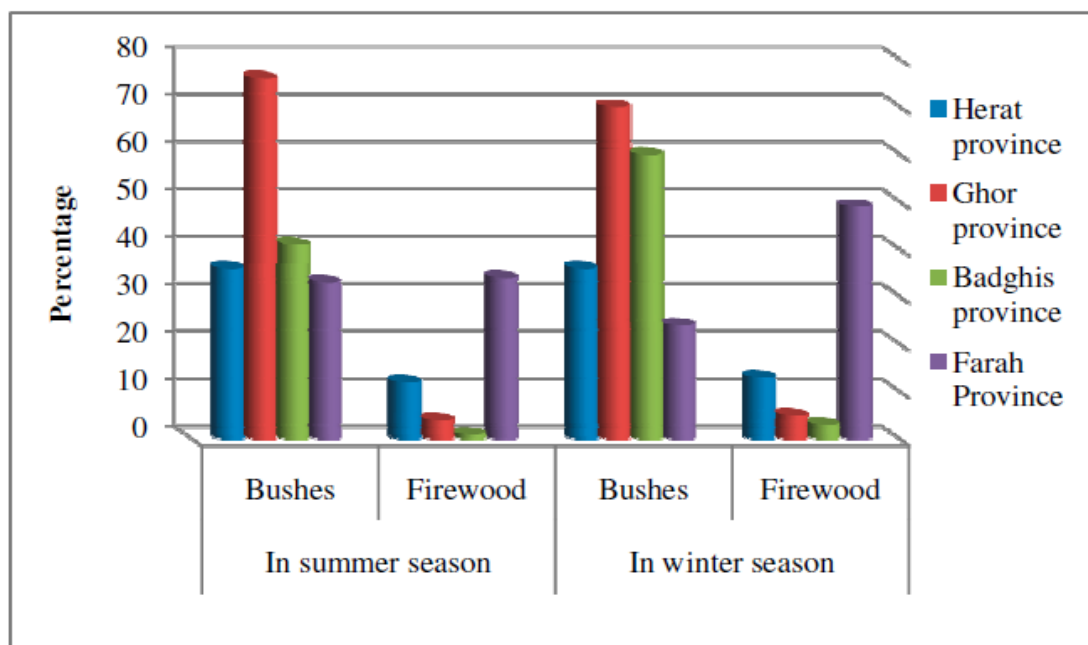


Figure (2). Sources of cooking fuel during the summer and winter season

Source: MRRD and SCO (2007), Modified by this study

McArthur et al. (1979) described that the bush plant *Artemesia herba alba* is extensively used for fire fuel and cutting practice is known to kill this plant.

Furthermore, collection of medical plants by people without any technical information or technical knowledge helped to accelerate the decreasing of rangeland vegetation cover and the increasing of soil erosion.

The other negative effect of the fire fuel collection that interviewees emphasized is the increasing wind erosion. The 120-days wind “called *Boadhahi sadubistroz*” is a northerly wind that blows across the western and southern regions along the summer months of June to September. This wind is usually accompanied by intense heat, drought, and sand storms. In addition, dust and whirlwinds frequently occur during the summer months on the flats, rising at midday or in the early afternoon, highest speed of this wind as average reach up to 16 m s^{-1} , and raising high clouds of dust.

1.3. RANGELAND CONVERSION TO CROPLAND

The conflict between different groups and parties resulted into many rangelands treated as a free for all. In the past decades, each person that had power and access to rainfed cultivation tried to plow the rangeland to cultivate food or fodder crops. In the Herat and Badghis provinces, in relation to the topography and climate, cropland is cultivated with wheat, barley, caraway (*Carum carvi*), chickpea, melon and watermelon. In the Ghor province farmers cultivate mainly wheat and barley under rainfed condition.

The President of the *Kuchi shura* (council) in Western Region, clarified that rangeland conversion in Western Region is one of the main problem. He identified some areas that recently were converted to rainfed cropland such as; *Dorudi*, *Chehartakhta*, *Chah Muradak* and *Chah*

Kohsani that are located north of *Gulran* district, some 70-80 km away from the district center, where now 60-70% of the rangeland has been converted into cropland.

Also in the *Kushk Robatsangi* district, in places such as *Chah Gulby*, *Yekah chah*, *Gala cha*, *Shah Ghulam* and *Barginak* located in the northern part of the district and *Shur Arabe* area located between *Rubatsangi* and *Kushk Kohna* districts, rangelands were converted into cultivated rainfed crops. During the Taliban regime, most parts of *dashte Ghoryan* were plowed by tractor to cultivate caraway.

Most people are regretful about this action but others continue because they get some economic benefits from the cultivation of these areas. They have a particular regulation for the rotation of different type of plants: they cultivate wheat before *C. carvi* and when they cannot get enough benefit from these plants because of decrease in soil fertility and soil structure they cultivate melon and watermelon under rainfed condition. Traditionally rainfed cultivation (*Lalmi*) is used in slope and hilly topographical condition, which expose soil to water erosion, particularly when soils are tilled with tractors.



Figure 3. *C. carvi* cultivation under rainfed condition in Herat province

1.4. GRAZING PRESSURE

Rangeland degradation is generally a consequence of a mismatch between livestock density and the capacity of the rangeland to recover from grazing and trampling. Ideally, the land to livestock ratio should be continuously adjusted to the conditions of the rangeland, especially in dry climates. However, because of the weakening of the traditional grazing institutions, the increased pressures on rangeland resources and the increased barriers to livestock movements, such adjustments are often not possible. This is particularly the case of the arid and semi arid communal grazing areas. Increasing human population and encroachment of arable farming on grazing lands have severely restricted the mobility of the herds and limited options for their management. Where widespread grazing has reduced vegetation cover and exposed soils to

erosion many communities have had to significantly reduce livestock stocking because of the reduced quality of the rangeland. Overgrazing seems to be more problematic in lowlands than in highlands in Western Region, where rangeland is used all year round. During the latest decades the problem has intensified, as long distance mobility of *Kuchi* is decreased and short distance migration increased because of security problems for *Kuchi* and semi nomadic people. Therefore, the areas that are most suffering major overgrazing damage are closest to the larger settlements.

The livestock sector is one of the key drivers of rangeland-use change; more than 70% of the whole country is vulnerable to desertification. (Breckle et al. (2010) showed that vulnerability to desertification in Afghanistan is 0.5% low, 6.0% moderate, 6.8% high and 67.4% very high.

1.5. LAND TENURE

Different typologies of grazing systems use rangeland with different objectives, but the lack of clear institution and land administration information constrains land accessibility rights. Due to these factors, insecurity of rangeland tenure increased and finally helped to generate the conflict between villagers and *Kuchi* people in many areas. The land tenure problem in Western Region is less relevant than in other regions of the country but it is a fact that security problems have specific impacts on this issue. Some *Kuchi* explained that particularly for summer grazing areas they faced with this issue or they must pay for some grazing units.

The conflicts and induced poor management system during the last decades have also resulted in inequitable access to and misuse of rangeland resources. Because of the conflicts, many rangelands are treated as a free-for all, everyone getting what can, and this is driving destruction of the vegetation cover (Pittroff, 2011).

From a legal point of view, rangeland is public land and can't be privately owned. However, this study showed clearly that in practice the rangelands of the Western Region, especially those located in the highlands, are classified by the communities in two groups:

- Rangeland opened to all users (e.g., *Kuchi* and other pastoralists).
- Rangelands which belong to a village or a particular community, identified as “community rangelands”.

There are two main uses of the second type of rangeland: the area of the rangeland nearest to the village (<10 km) is managed as winter grazing area; the area distant more than 10 km around the village is that mostly located in closed mountain and valley areas and are managed as summer grazing area, where people move from their village to spend the summer months.

1.6. ANIMAL DRINKING WATER

In the Western Region of Afghanistan, water is a major issue for the grazing animals. Traditional *kariz* (underground tunnels that tap aquifers in the foothills and lead to villages) are a vital source of water for domestic livestock and irrigation supplies. Traditionally, the community used wells (*Chah*) in lowlands (e.g., Herat province) and Kariz and springs in the grazing area. During the drought years, a big number of these Kariz and wells were dried and therefore unusable. Shortage of animal drinking water has become a big problem for *Kuchi* communities and people who use rangelands to feed their animals. Interviewees clearly emphasized on shortage of animal drinking water in *Dashte Hamdam Ab* and *Dashte Ghoryan* during the summer season in Herat province. In early spring season, grazing animals use rainfall water in these areas. Most

communities that used these areas have complained from the limitation of water for their animals and from water salinity.

Water is becoming an extremely scarce resource in WR, as demand has increased and users have multiplied while supply has become erratic. Water has become a source of conflict between many communities.

2. RANGELAND CHALLENGES

The Western Region, as other parts of the country, is facing a high level of poverty and natural resource degradation. The conflicts induced by the poor management system that has been implemented at different levels in the society during the last decades resulted in inequitable access to and misuse of rangeland resources. To address this issue, policymakers are confronting serious challenges to mobilize natural resources to enhance employment opportunities, domestic products and services,.

The land tenure/rangeland dispute is one of the most important and growing issues at national level. It has caused many local security issues in recent years, it is linked with tribal identity and government reduced capacity and ability. Pittroff et al. (2009) found that “*Sustainable land management is the most important environmental problem in Afghanistan; solutions can only be found and implemented at the community level*”. To introduce an alternative fuel/energy resource for cooking and heating in Western Region, particularly for those inhabitants from the rural community, the government or international community interventions have the objective to decrease fire fuel collection pressure from rangeland resources and the improvement of livelihood.

The priorities that emerged from the interviews to *Kuchi* communities were focused on livestock and rangeland improvement, while the interviews to sedentary communities consider more important the availability of water for agriculture and of farm inputs. The literacy level of both communities indicates that education is the priority need for both systems. A more comprehensive approach to planning is needed to integrate rural development and natural resource management to be able to combat these complex, diverse, and deeply rooted issues.

In addition, corruption (Emadi, 2007), continuous war, droughts and other natural disasters (Bhattacharyya et al., 2004) are undermining the social confidence in the willingness and capacity of public institutions to fulfill their obligations to the people.

3. RANGELAND OPTIONS

3.1 IMPROVEMENT OF RANGELAND RESOURCES

Improved rangeland management requires a non-threatening environment in which rangeland users, through their representatives, can make their voices heard. Local decision-making bodies are required (e.g. *Shura*) to open new learning spaces to address agreements for managing rangelands at the community and territorial level. According to the evidence provided by sedentary and semi sedentary of *Taiwara* district, since 10 year rangelands in most villages of *Taiwara*, Ghor province, (e.g., *Waras*, *Dahan jal*, *kham zard*, *Khaleshkak*, *Zarbeed*, *Jawz*, *Pushtmaqa*, *Sarda*, *Khairbed*, *Mulahgharah*, *Jarghoja*, *Zaghand*, *Gharplang*, *Esfowr*, *Gariwa*, *Qalam Chashmah*, *Now sheer*, *Kali*) have been preserved through *Quruq* (A traditional practice for resting of rangeland) by the community, which is supported by the local authorities and heads

of clans. In addition, for each area, including a number of villages, one person was hired to keep or protect the *Quruq* areas from fire fuel collection and bush uprooting. This person received 4 kg of wheat by each family per year. If other districts and communities would implement this practice, this would result into big changes on rangeland vegetation and productivity in a few years over the whole Ghor province.

On the other hand, it is important to recognize that communities are not homogenous groups but made up of different sub-communities and clans, sometimes with conflicting interests. Therefore, in the short-term, these local management committees, representatives from different groups must be involved in order to ensure representativeness of different communities' ethnicity and age. In the longer term, the enhancement of social cohesion could be addressed through new learning spaces for the community education including children, young, women and families. The acknowledgements of the role of all social components and levels, which are at the basis of the pastoral society, could be a first significant step.

Sustainable development options include non-destructive strategies. In this region, there is a good opportunity to design a learning process around rangeland management and grazing system typologies, which are perceived from all communities as endangered from human induced degradation processes. The heavy dependence of these communities from rangelands and natural resources is key to consider rangeland development as a "socio-technical object" (Toderi et al., 2007) that is a central topic for the communities that could be used as a facilitation tool for de-constructing and building the dialogue among the different clans and communities.

A number of options for development emerged from the expert survey, interviews and participatory processes implemented in this study:

Restoration of rangelands through traditional ways such as *Quruq*: in some parts of this region such as Ghor and Badghis province there is a clear potential for restoration through the traditional *Quruq* practices. Most interviewees claimed that a concrete decision from the central and state government is required, providing that this happens in close collaboration with the local communities.

For instance, the restoration of rangeland through the traditional ways such as *Quruq*, integrated with a strategic plantation of local adaptive, multipurpose shrubs and trees can be a starting point to improve the primary rangeland resources. Hassanyar et al. (1983), Virgo et al. (2006), Groninger et al. (2012) and Bell (2012) recommended different multipurpose species of trees and shrubs to provide home fuel and possibly feed needs.

3.2. ALTERNATIVE ENERGY RESOURCE OPTIONS

The introduction of alternative energy sources has the objective to decrease the pressure of fire fuel collection from rangelands. Western Region has a great potential of hydropower electricity production through *Hari Rud*, *Farah Rud* and *Murghab* rivers. An electricity dam is currently under construction in the east of Herat province (*Bande Salma*) by Indian government. In this context, efforts are required to establish community-managed forest lands close to the villages, socially protected and managed and equitably available for use by all households.

On the other hand, availability of high speed of wind for 120 days (called *Boadhai sadubistroz*) during summer is a good opportunity to utilize as sustainable source of energy in WR provinces (e.g. wind pump, electricity) and installation of solar energy will be another option for multiple purpose.

3.3. WATER RESOURCE MANAGEMENT OPTIONS

Rainwater harvesting managed by local communities based on traditional systems is another promising option that emerged from the interviews. This would contribute to providing drinking water for animals and irrigation water for crops. A sound programme of improvement of water resources management implies the inventory of available and potential water resources (well, springs, *Kariz*, rainfall, snow) considering quantity and quality and the seasonal availability in each rangeland management unit and along the *Kuchi* paths. The maximum sustainable number of animals in each sub-unit should be quantified accordingly. In this context, the collection of quantitative hydrologic and hydrogeologic data to assess the variability of water availability between seasons and years is essential to take decisions about the sustainable livestock stocking rates and in relation to community needs.

The construction of new water reservoirs is a priority in many areas. However this process must be designed in close collaboration with the pastoral communities with the aim to save the rain and snow water to be used during the periods of water shortage in rangelands. The improvement of the existing traditional small and medium irrigation systems and a rehabilitation programme of existing infrastructures is also important for the community development.

3.4. RANGELAND COMMUNITY TRAINING OPTIONS

The wild medicinal plants in the region are an important potential economic resource for the country. Training and education programmes are needed on how to collect or cultivate medicinal plants in a sustainable way, in order to preserve them from extinction and enhance the production of natural pharmaceuticals.

A special education service is required for *Kuchi* communities that should take into account of their mobility needs. Among the many topics, the following appeared as strategic for new learning spaces in the short and medium term: natural resources management, human health, animal health, rangeland conservation. Many *Kuchi* suggested this option as a viable and good solution. Although the rangelands are under the government's ownership, local communities and *Kuchi* people are the daily users of rangeland resources and should be regarded as its custodians other than just users. Seasonal grazing in which flocks move in relation to the availability of forage and water is a good practice that is supported by scientific evidence, and well suited to dealing with extremes in weather conditions and unpredictable climate, as Toulmin (2006) found: "*maintaining mobility for livestock is key to managing semi-arid grazing lands*".

Finally, most interviewees emphasized that government should be active in building a new sense of trust around rangeland management at central, province and district level by interacting with respect and fairness with local communities.

RECOMMENDATION

Participatory rangeland management requires a design of new social learning processes in which local communities are supported to take their own responsibility in the guarantee of the rangeland conservation. The government or international organization aid should be designed in close collaboration with the pastoral communities starting from the identification of the challenges and options as emerging from social learning processes as the one designed for our study. While the design and the assessment of the process can be under the responsibility of rangeland experts, the implementation requires the design of new learning spaces for local experts and members of the pastoral communities that will take these responsibilities. The process should be addressed to enhance and use the local knowledge that has historically

informed the rangeland management practices that proved to be effective for centuries, by triggering people's active collaboration.

CONCLUSION

The prevalent way of rangeland utilization in the Western Region is through sheep and goat-grazing systems, which have a strong seasonal pattern. Two main typologies of large scale grazing systems were identified; *Kuchi* (nomad) and *Deh nashin* (sedentary), each type affects rangeland development in a particular way.

The main challenges that emerged from this study are related to poverty of rural population and limited capacity of the government to mitigate natural disasters and to the shortage of an alternative source for fire fuel collection. The outcome of our study clearly indicates that to address such challenges it is very important to take into account of the structure of the different typologies of grazing system.

Participatory approach based on closed collaboration of local communities and an external support aimed at the improvement of their traditional institutions is vital for the sustainable management of rangeland resources and development of large scale grazing systems in the Western Region of Afghanistan.

The government must play a fundamental role in providing support, also through international aid programs, providing that government representatives are sufficiently sensitive to the rangeland issues and to the value of the local knowledge in identifying effective options.

Rangeland improvements in rural communities are crucial for their socio-economic development and for the reduction of poverty, uncertainty, vulnerability, and such improvement could be strategic in increasing the overall security in the Western Region of Afghanistan.

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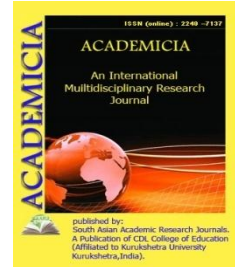
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ANCIENT RUINS OF SAMARKAND

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ABSTRACT

The work presents the ancient ruins of Samarkand on the example of the Registan, Amir Timur's Tomb, the ensemble of Shahi Zinda and the Bibi Khanum mosque using paintings and ornaments that are historical heritage and sources of the study of architecture and visual art of Central Asia. For the same reason, this land was brought to fame as the horse Samarkand. When the Arabs arrived they said Samarkand. It is said in the book "The haft climate" that a man named Samar from the Queens of Yemen Tubba broke the wall of this city. The son of the Turkish Afrosiyob Iraj overcome Minuchehra and settled in it making it a place in which the land of Turan was the capital of that time, when he went into his own hands. Muhammad died at the age of 27 and died before the mausolium of Gur Amir. The Registan Ensemble is an architectural complex consisting of three madrasahs (madrasa Ulug'bek, Madrasah Tillakori, Sherdor Madrasah) on the Registan Square in Samarkand. The process of studying the ruins of Afrosiyob begins from the end of the XIX century and continues to this day. At present, the ancient ruins of Samarkand are studied by the International Uzbek – French archeological expedition.

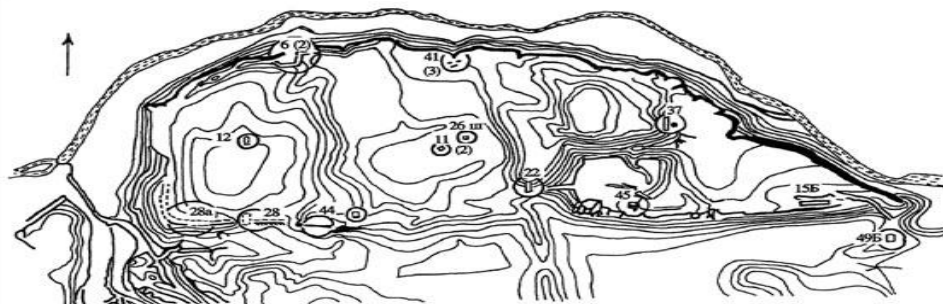
KEYWORDS: Ancient Ruins, Samarkand, Afrasiab, Architecture, Visual Arts, Painting, Ornament.

1. INTRODUCTION

Ancient ruins of Samarkand are located in the north – east of the city. The total area of Afrosiyob is 220 hectares of land. It is known that 2750 years ago exactly in this territory the city of Samarkand was built in the year 1220, the city was demolished by the troops of Genghis Khan, and later restored from Afrosiyob to the southern area. The process of studying the ruins of Afrosiyob begins from the end of the XIX century and continues to this day. At present, the ancient ruins of Samarkand are studied by the International Uzbek – French archeological expedition.

They said a few reasons about the “Samarkand” release of Samarkand City. The first reason: In the book “Burhoni Qora” it was reported that a man named Samar was located here and gathered the people on his own right. Therefore, this earth was called “Samarkand” in the head. When the Arab Army captured this land, they said “Samarkand”, changing their language.

The second reason: In a book called “the Masolic ul – mamolik”, the name of Samar came from the sides of a Khan of Fergana and Koshgar from the name of the immortal, which in the face of hostility to the people of this region, it was in violation of the excavations of the walls of the city. Therefore, this city was in the sense of “Samar diggers”. Persiya is called Samarkand. After the Arab Army captured this city they called Samarkand. The third reason: It was presented in his book called “History Tabory” that a Khan named Samar had casted (made a building) this city; The Turkish bear, formerly called “rugar” settled here. Therefore, from this city was named Samarkand. After receiving this city with the Arab Army “Samarkand”. The fourth reason: In one of this city there was a fountain, which was excavated by someone called “Samar”. Ulu had devised to accumulate those fountain waters. For the same reason, this land was brought to fame as the horse Samarkand. When the Arabs arrived they said Samarkand. It is said in the book “The haft climate” that a man named Samar from the Queens of Yemen Tubba broke the wall of this city. After the arrival of the Arabs say Samarkand and again Allah knows better. In the book “Osor ul – Bilod” it is written that the boy Kaykovus was born from the beginning of the Samarkand fortress.



1-drawing. General plan of the northern part of the ruins of Afrosiyob

2. Main part

This is the first Imom of the city from Kaykovus. It turns out that Kirhosib found a Tarai gold while passing through here. From the same gold, he hargessed to the image of this fort and for the second time drew a wall between Turkistan and Movorounnahr. But the true narration is that



he was laughing at the son who hered the wall. The second imonati at the Samarkand region, the first at which is Maliki Tubba. Maliki Tubba was is from the bowels of Yemen and Arabia and had taken the city of the Ushbu. The third Imom is Malik Alexander. Malik built a wall on the grandchild of the Samarkand Principality of Isaak; he left the wall and was called the reserruction of the wall. Malik Iskandar laid this wall so that in the conspiracy and in the butterfields, the el on the granddaughters at inside together with the people of the city, guarding the land and keeping their peace. In some times the wall of Alexander was Obed by ichra el, where the gardens and yards were laid. The fourth Castle is Amir Temur Kuragon. Whrn Faridun gave his country three sons, when the transferred India to Salim, Turan, Iran to Iraq among the countries of the Iraj with the species now named the Amudarya, appointing the river Jayhun as a border The city of Samarkand built a new fence on it, which is visible in the eyes of the wall of the trail and the foregather on the Earth, which was the city of Samarkand, when the city was looking for a worthy place.

The son of the Turkish Afrosiyob Iraj overcome Minuchehra and settled in it making it a place in which the land of Turan was the capital of that time, when he went into his own hands. Muhammad died at the age of 27 and died before the mausolium of Gur Amir. There were madrassah, mosque, dining room and other monuments.

The grandfather of the tomb of Muhammad Sultan Amir Temur and his uncles Shohruh, Near Mironshoh and Ulughbek. With the Decree 565 of the Governor, he was renamed to the Old Patriot Street, Muhammad Sultan Street, December 28, 1994.

Saroymulkhanim (Bibikhanim) was a daughter of the Chig'atoy Khan, who was born in 1341. He married Amir Temur in 1370. He was awarded the title "BibiKhanim" (KattaKhanim) due to the Han tribe. Saroymulkhanim was a politician and humane woman. In many historical books such as Nizamuddin Shamiy, Sharafiddin Ali Yazdi, Hafiz Abru, Abdurazzak Samarkandiy, Fahsh Havofiy, Ibn Arabshah, Klavixo are honored by Saroymulkhanim's qualities and personal qualities.



Ambassador Ryu Gonzales de Klavixo wrote in his book “A travel Agenda for Amir Temur’s Palace in Samarkand”, in which the wise queen BibiKhanim was to take part in the reign of Amir Temur, to attend the congresses and congresses, and to appoint amirs. On October 17, 1404, SaroymulKhanim this confirms once more that SaroymulKhanim was actively involved in the affairs of the Amir Temur, in state affairs. He constructed a huge madrassah in Samarkand with the permission of Amir Temur. His father used to sell a pair of herds from Kazanhan and use the money for the construction of a madrasa. At the present day Mosque of Samarkand, It will be constructed next to Bibi Khanim Mausoleum. She took care of the students of the madrassa and provided financial support to them. The madrasah was very magnificent and had been closely tied to the Mosque of Amir Temur, but the madrasah was later destroyed for various reasons. He had never had children in life, but he was the Temurid’s personality.

She died in 1408. His body was erected in a mausoleum next to a madrasaah he had constructed. The Amir Temur, the elderly Tamerlane, built a magnificent mosque after the Indian triumph. Today, this mosque is famous among the people as Bibi Khanim. The 95th district governor, on May 7, 1998, was renamed BibiKhanim Street on March 8, 1998.

Amir Temur is a great statesman of the land of Turan. He has created a mighty state. Amir Temur always went to Samarkand, the capital of Samarkand, to destroy the son of the grandson of Jahongir Mirza the son of Amir Temur. Sheikh Mir Sayyid Baraka is from the town of Kerman, Amir Temur, who died in 1404 in Mozandaron and was buried in Andhud, Afghanistan. According to Amir Temur’s order, the body was brought to Samarkand by Shohruh Mirzo. The great ruler ordered his corpse to be placed on his legs. By the decree of the governor of Samarkand on July 10, 1992, in Nekrasov Street, Sayyid Umar was the fourth son of Sayyid Amir Kulal, the famous Sufi poet Sayyid Umar, who lived in Samarkand in the lifetime of Amir Temur, who died in 1400, according to “Rashahot” and was buried in the Quarter neighborhood near Samarkand. Later, his grave, Amir Temur, was taken to the dome. The grave under the roof of the Timurid Qibla is Sayyid Umar. Shahrukh Mirzo is the fourth ruler of the Amir Temur, the great ruler of the Temurid’s state. 1396-1409 after the death of Amir Temur, he a was the ruler of the Temurid’s state in Greater Khurasan and Movorounnahr. Shahrukh moved the capital from Samarkand, Herat and

Marv were built several buildings and fortifications, science and culture developed. Ulug’bek and Boysunongur Mirzo also carry out a great deal of work. On May 19, 1996, the governor’s office issued a decree to the former Kommunisticheskaya Street named Shohruh Mirzo.



Muhammad Targ'ay Ulug'bek – he is the son of Shohrukh Mirza, The youngest son of Amir Temur. He is a great astrologer and mathematician. He is a craftsman in Samarkand during the reign of Ulug'bek. Ulug'bek architecture, literature, and commercial prosperity. At his initiative madrasaahs will be built in Samarkand, Bukhara, Gojduvon and Marv. Ulug'bek Observatory and Zijji Guragoniy are a great contribution to the world science. His grave is in Gur Amir Mausoleum. Karl Marx street in the city is called Mirzo Ulug'bek Street. Mirza's son. Registan ensemble The Registan Ensemble is an architectural complex consisting of three madrasahs (madrasa Ulug'bek, Madrasah Tillakori, Sherdor Madrasah) on the Registan Square in Samarkand. The Ulug'bek madrasah is built (1417 – 1429), later constructed Ulug'bek's room (1424), to the east of the square, the Mirzoyi caravanserai to the north, The Aliko Kukaldosh Juma Mosque (1430) to the south and Muqatta and Abusaid madrasaa in the wood- carving style. In the 1840's Registan became a luxury ensemble. In the seventh century Samarkand's ruler Yalangto'sh Bahodir replaced Ulug'bek's mausoleum at the Sherdor madrasah (1619-1635), instead of Mirzoyi's caravanserai built the Tillakori madrasa mosque (1646-1659).

3. CONCLUSION

The ancient ruins of Samarkand and Afrasiab are a historical heritage and a source for studying the architecture and fine art of Central Asia.

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THE GENEALOGY OF TAJIK POETRY IN UZBEKISTAN (IN THE CASE OF JAFAR MUHAMMAD GHAZALI)

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ABSTRACT

This paper investigated the major points of the genealogy of Tajik poetry in Uzbekistan in the example of Ja'far Muhammad Ghazali. In this case, Tajik and Uzbek poetry in the points of the research as the whole. Different features of the Tajik poetry were underlined through lyric poems. Finally, it was suggested main outcomes of the Tajik poetry with some example. The person familiar with Ja'far Muhammad's romanticism will find the poet's love for his parents, relatives, and the world and all living and lifeless creatures, life and beauty of love, from the romantic experiences of the beloved. In poetry poetry, almost all of the images of popular love used in classical and modern poetry can be found. Just as we have already noted, Ja'far Muhammad attempts to use these images in a specific way. It should be noted that among the poets of Uzbekistan, who are living and working in Uzbekistan today, there are many creatures in the grave genre that can be seen in the works of these poets, from classic ignorance to modern forms of gaze.

KEYWORDS: Genealogy, Tajik Poetry, Uzbekistan, Science, Lyrics.

1. INTRODUCTION

The ghazal, one of the main genres of classical Persian-Tajik and Uzbek poetry, which has many centuries-old history and rich heritage, also holds its place in modern poetry. Although he has lost his position as a major poet in the poetry of the early 20th century, especially after the October 1917 revolution, he survived the disappearance of the poet's efforts (Çağlayan, Şak, Karymshakov, Çağlayan, & Sak, 2012; Cohen, 1979; Martin, 2014).

The Tajik literary researchers also mention the three-generation gazelles in the modern Tajik poetry, from which Sadriddin Aini and Abdusalam Dehoti to M.Tursunzodova M.Kanoat, the first generation, who served as the keeper of the traditions of hunting and subsequent transmission to the next generation, Bozor Sobir, Gulrukhsor Safieva, as well as the second generation of modern Tajik peasants, such as Rustam Vakhobyan, Salim Khatloniy, Farzona Khudjandi, read poems while other genres uniforms to use as a third generation.

It should be noted that among the poets of Uzbekistan, who are living and working in Uzbekistan today, there are many creatures in the grave genre that can be seen in the works of these poets, from classic ignorance to modern forms of gaze. In the last century, the tradition of ghaznalism has been dominated by the poet Jonibek Kuvnak and some of them, such as Salim Kenja, Izzatullo Kenja, and Kholboy Djalil, in the Tajik literature of Uzbekistan, and nowadays, Paymon, Ja'far Muhammad, Normurod Karimzoda, Abdullo Rahman, Abduqayyum Hasanzod, Fozil Shukurzoda, Xusrav, as well as the poet's creativity.

So far, Ja'far Muhammad Tirmizi's "Chashmi Boron" (Termez, 1997), "Mijgoni oftob" (Dushanbe, 1999), "Tului sabzi color", composed of poems by Persian-Tajik, "Mirror of Life" (Tashkent, 2003), "Tajalliy" (Tashkent, 2008) and "Oshiq oshqiz" (Tashkent, 2011) and Uzbek Poems) were presented to poetry fans. The "Singing Love" campaign, which includes samples from poetry poems in Persian-Tajik, was released in 2011 in Persian script at Sukhvaron publishing house in Iran (Baxtishodovich, Suyunovich, & Kholiqulov, 2017; Glantz et al., 2008; Kringos, Boerma, & Pellny, 2009; Kushwaha, Halevi, Dobrzynski, & Djafari-Rouhani, 1993).

It should be noted that some of Jafar Muhammad Tirmizi's poems were translated into Russian, English, French, Arabic and Uyghur and published in a number of foreign collections and publications.

2. LITERATURE REVIEW

Zullionnien's poet Jafar Muhammad Termiziy, especially his ghazals in Uzbek and Persian-Tajik languages, and his free and white poems, attract a large audience of researchers. Professor Abdullaev Ahmad, Doctor of Philology, Professor Hamidjon Homidi, Candidate of Philological Sciences, Associate Professor Ramazon Abdulloev, Doctor of Philology, Professor Najmiddin Kamilov, Candidate of Philological Sciences, Associate Professor Sultonmurod Doctor of philological sciences, professor Hotam Umirov, doctor of philological sciences, professor Jumakul Khamrayev, candidate of philological sciences Nargis Shoaliev, candidate of historical sciences, docent A Dull Tohiriyon, doctor of philological sciences, professor power Jura, candidate of philological sciences, professor, associate professor Farhad Isomiddinov Asliddin Qamarzoda, literary Rūziboy Kurbanov, Oriental Shokirjon scientists, writers waste, Qurbonaliev donations and by others a hundred scientific and literary articles and brochures.

In this article, we will talk about the love of the poet Ja'far Muhammad Tirmizi and the love affair, the love affair, and the love of love in the process of transforming love into an object of love, as well as turning it into a relationship of love.

One of the most prominent representatives of Uzbek literature in Tajikistan, Uzbek poet Ja'far Muhammad (Ja'far Kholmuminov) tested himself in all genres, from gazous and rubay to poetry, and, despite all of these trials successfully passed on various subjects written, vitality and irreconcilable ghazals, and free and white poems are the poems of this poet's poetry.

Ja'far Mohammed is one of the poets who continue his long history with his beautiful and unique ghazals. Indeed, if we look closely at Ja'far Muhammad's poetry, we can see that the classic Persian and Turkic gazelle traditions with centuries-old history are revived in this novel's gazelle. Rumi, Saadi, Hafiz, Bedil, Navoi, Mashrab, as well as the modern Tajik and Uzbek poetry, such as Mirzo Tursunzoda, Sherali Layik, Erkin Vakhidov, Abdulla Aripov, the spirit of modern ghosts, whose tradition of classical evolution has not been violated because of its adherence to it.

Jafar Muhammad Khamraev, a literary scholar in Jafar Muhammad, writes: "The poems of Ja'far's poems are full of poetry created by seven pink poets of the Forbidden Poetry. In other words, the more he is loyal to traditionality, the more inclined he is. Irfânî writes ghazals, from which Hafifu Mawlawi's smells are soggy, but not old and unwavering."

In addition to literary scholars Ahmad Abdulloev and Jumabul Khamrayev, Ja'far Muhammad is one of the poets not only in today's Tajik poetry, but also in today's Uzbek poetry, who is poised to engage in the Ghazal genre and continue the tradition of the grave.

3. Main part

Jafar Muhammad Ghazals are written on various topics, from the subject of eternal love to the character of the motherland and the nature, from the relationships between humans, to the disclosure of the existence and the secrets of life, to the ghosts of their various aspects. The poet says in his ghazals that he is angry:

Ғазале суруда рафтаи зи дараши, ки беамон аст,
Пайи жустужуйи ёре, ки ҳабибу хушзабон аст.

(Purpose: I searched for a compassionate and virtuous way, and I went out from that hollow door.)

Or:

Қасдам набуда гар дар дарраҳо ғизол,
Дар бешаи ғазал сайёд будаам

(Purpose: I did not intend to hunt on the slopes, but I became a hunter in the jungle forest.)

Love theme Ja'far Muhammad occupies one of the central places in his poetry and is a complement to such topics as human beings, homeland, life, beauty. In other words, not only the gazelles of the poet, but also all poems written in all genres, have an emotionally-charged feeling called Ishq. The person familiar with Ja'far Muhammad's romanticism will find the poet's love for his parents, relatives, and the world and all living and lifeless creatures, life and beauty of love, from the romantic experiences of the beloved.

Note the following examples:

То бо ту будаам, дилшод будаам,

Аз қайди дарду ғам озод будаам.

(Purpose: When I was with you, I was delighted, I was released from the grief and grief dungeon.)

Эй дилбари дилсўзи ман, хуш омади, хуш омади,

Эй шамъи шомафрўзи ман, хуш омади, хуш омади.

Бу ту насибам оҳ буд, бе ту дилам даймоҳ буд,

Эй идии Наврўзи ман, хуш омади, хуш омади.

(OBJECTIVE: O heartbreaker, welcome, welcome, // welcome to sham, welcome, welcome.)
But you are welcome, welcome you.)

In Jaafar Muhammad's Uzbek ghazals there is also a flame of love in the heart of the heart:

Ҳар кишиким ул париваш зулфини ёд айлағай,

Ақлу иймон тоғини бир пасда барбод айлағай.

As we have already noted, Ja'far is the only source of love, love, affection, love, love, love and affection. He is known as "Kujo" (where), "Kalidi dinu dunyo" (Dinu Dunya kaliti), "Dar Bukhara" (Bukhara), "Shahri carrots love" (green city of Love), "Geography of love" (geography of love) In his ghazals the love and love of the poet is a sacred land of his poet, his love for various cities and towns such as Bukhara, Samarkand and Shahrizabz,

То Самарқанд ошкоро дўст медорам Туро,

Зикр дар дил то Бухоро, дўст медорам Туро.

(Purpose: I love you as openly as Samarkand,

I love you as much as I can in remembrance in my heart.)

In Ja'far Muhammad Ghazals love theme is not limited to the love statement of love. In other words, there are two other aspects related to the concept of love, apart from a common love statement in these poet ghazals. The first of these features is love-related images or romantic images, and the second one is the subject of love relationship. In other words, in the poems of this poet's novel, the lyrical hero's love story describes the process of transforming the process (dynamics of the transition from the love descriptions to the description of love images, that is, love images,) we can see: love story → hacking love → convert love to object of communication. As a result of this evolving process, the topic of love in the Jafar Muhammad ghazal is as follows: a description of love → love images → love relationships.

4. Analyses

In his ghazals, Ja'far Muhammad describes and describes the inner experiences of the lyrical hero - the lover of love, in order to provide a complete and effective explanation of this description and description, we use the art of emotional expression with the word "love" to describe a love that we can call love images how many images are created. We get two types of these images, which are conditional symbols representing the symbols of love and symbols of love. In Jafar

Muhammad's ghazals there are "love city", "romantic love", "shroud romantic love", "market love", "shakhsori love", "Love for the river", "city of carrots love", "love for love" and "love boom", "love romance", "fiqh love" (love fiqh), "authentic love" Love affair "(love tax) We can also watch many images that make sense.

It is well known that the use of expressions with the word "love" creates images in classical literature and modern poetry. In particular, in the Navoi ghazals there are "love", "love desert", "love world", "romance", "love of love", "love of love", "love of love", "Love river". However, it is possible to see that the images created by such expressions have their own place and characteristics for each poet's creativity. In the Jafar Muhammad Ghazals, the poems created by the poet have their own peculiarities and colors. For example, in the following bytes of the poet, the phrase "week-long love" (Seven cities of love), filled with the words "week" (seven) and "vigorous" coming from "city of love" (love city) and "love romance" and "romantic love" (a huge love belt) creates new images:

Дар ҳафт шаҳри шиқ яке дарбадар манам,
Дардо, ки хайри халқи худо бар гадо намонд.

(Purpose: I'm the only one in the seven romantic cities, but Elohim is not good for God's people.)

Корвон гум кардаам дар дашти бепоёни шиқ,
Корвону сорбону маҳмилу манзил кужост?

(Purpose: I lost the caravan in the bush of love, // Where is the caravan where the caravan is?) The phrase "city of the week" (seven cities of love), which means "all the cities of love" and "the whole world of love," creates a new image that is totally different from the image of "the city of love," with the expression "love of the wild love" a strong, deeper look of the image of love.

Ja'far Mohammed also used the image of "chari love" (Persian lace) used in Persian poetry in a new light:

Дар кафи пойи дили мо хори шиқи ин жаҳон,
Бо чунин аҳвол то манзил расидан мушкил аст

(Purpose: The world has put a stick on the paw, It is difficult to reach this location.)

5. CONCLUSION

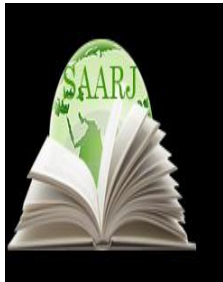
The images of love in Jafar Muhammad's ghazals are not limited to these. In poetry poetry, almost all of the images of popular love used in classical and modern poetry can be found. Just as we have already noted, Ja'far Muhammad attempts to use these images in a specific way.

Conclusion Getting acquainted with Ja'far Muhammad's gazelles in Uzbek and Tajik languages, we conclude with the following conclusions on the first points and observations on the issues discussed:

Ja'far Mohammad's ghazals are used in classical literature and in modern poetry as well as in popular poetry, with unique features and dyes, while at the same ghazals we see the unusual or unused love images of other poets.

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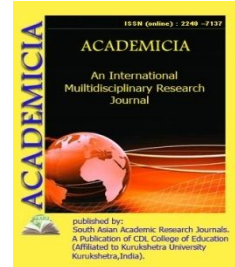
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THE INTEGRATION OF PROBLEMATIC TEACHING METHOD AND INNOVATION IN EDUCATION

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ABSTRACT

This article analyzes the content of the educational content linking the problematic teaching methodology with information and pedagogical technologies, interactive teaching methods in the teaching of future teachers and coaches in order to implement the pre-school education reform and the requirements of this sector. It also focuses on creating a psychological environment that is related to achieve designing the learning processes. The Competence approach requires the development of creative, intellectual and communicative activities of students in contemporary education, in designing educational processes to ensure interrelationship between the objectives, content, methods, forms and tools of education. The purpose of the learning process (the development of a single piece) is the result. This result is achieved by the purpose of acquiring the next part, that is, as a means of achieving the goals. As a result, there is a tendency of traditional teaching methodology and conformity of modern pedagogical technologies in education. As a result of the differentiated and individual approaches of the teaching process design and the joint learning of the students, the results of each student's education are evident.

KEYWORDS: Education, Problematic Teaching, Pedagogical Technologies, Interactive Methods, Pre-School Education.

1. INTRODUCTION

"The primary and most important part of pre-school education is the system. Raising a healthy gene pool, mature staff, first of all, starts with this system. Pre-school education institutions have not introduced educational, social, personal, emotional, speech, mathematical, physical, psychological, physical, and creative development programs for children "- critics point out that the analysis of reforms carried out in preschool education on December 19, under the chairmanship of President Shavkat Mirziyoev and a video platform meeting on the future tasks (Frehywot, Vovides, ..., & 2013, n.d.; Hamidov, Thiel, & Zikos, 2015; Hong, Park, Surrender, Reddy, & Jurn, 2001; Hornidge et al., 2011; Redfoot, 1984).

Today, special attention is paid to this sphere, which plays an important role in the future and prosperity of the country. The Decree of the Head of the State "On measures to radically improve the system of pre-school education management" dated 30 September this year outlines priorities and priorities for the sector.

In this regard, the most important task of improving the quality of education is to train highly qualified educators and trainers. Creating a psychological environment that is related to achieving the design of educational process for learning future pedagogues and coaches is a problem posed by a specific approach to problem-based learning in the education system through the use of information and pedagogical technologies, learning content and interactive methods of teaching. The Competence approach requires the development of creative, intellectual and communicative activities of students in contemporary education, in designing educational processes to ensure interrelationship between the objectives, content, methods, forms and tools of education. Designing educational processes to teach creative, learning, communicative, socio-emotional, physical, and gambling activities, taking into account the competencies of the pre-school age children's development program, will be aimed at applying problematic education in future teachers and trainers and, on the contrary, problematic training methodology has proven to be As a result, the problem of problem-based learning in education and the harmonization of modern teaching technologies in education - it is desirable to achieve innovation in education.

2. METHODOLOGY

The solution of this issue of state importance depends on the introduction of modern educational programs and technologies in educational process in the field of preschool education. Therefore, we are going to learn about the following problem situations in terms of improving the quality of preparing students for preschool education:

- Application of new methods of teaching preschool education;
- Designing of preschool educational process;
- Importance of future teachers and mentors education;
- Pedagogical technology in preschool education;
- Educational activity of future teens (reproductive, productive);
- Innovation of preschool education.

The next stage of implementation of the "National Program of Personnel Training" demonstrates that the components of the educational process in the field of pre-school education are a complex of problems connected with the incompleteness of education, education, personal development, and use of modern pedagogical technologies in preschool education. These problems are to study

the problems of quality of education, ie, teaching future teachers and coaches to master the culture of communication, while the student's learning content is designed to design the learning process. Cooperative learning creates a favorable psychological environment for students to fully demonstrate their abilities in education.

Understanding the educational content of preschool education (perception, perception, imaginary process), that is, understanding the purpose of learning and learning about the content of education; the content of the training material - the formation of new knowledge (based on analysis, synthesis, conclusions); reinforce new knowledge (through exercises, independent work, and supplementary comments); including four stages, depending on the teacher's ability to apply the applied knowledge. The design of the learning process ensures consistency between student learning processes and the purpose, content, method, form and means of education, which are components of education. Learning objectives are knowledge acquisition, knowledge and skills, and broader and more meaningful in learning activities, the student's role in society, the desire to engage with others (peer-to-peer), prepare for positive human habits and habits, to choose between one of the subjects and to pursue new goals such as interest, the process of learning involves the problem of learning content, the solution to these problems and the learning methods or the relationships between the two. The student's learning activities consist of three steps, such as collecting all information on the subject, processing the collected information, and applying information. If one of these steps is insufficient, there will be no knowledge or knowledge in the learning activities(Blank, 2013; Cohen, 1979; Hamidov et al., 2015).

Access to mental information includes working with them. The basis of this knowledge work is to get information, work with information, work with text, find the most important information, define key points, search, analyze, summarize, generate conclusions, and work with every piece of information. Mental knowledge is provided through the methods of mental activity (analysis, synthesis, comparison, abstraction, generalization, inductive and deductive conclusions). Creative methods include the ability of students to apply their knowledge and skills in various situations, to look for different ways of solving the problem (teacher does not say or do). Such methods are among the problematic methods. Getting creative knowledge is, first of all, the idea that students have the ability to learn in a variety of fields, solving problems in a single, but not limited to, multiple solutions, and predict the outcomes and consequences of this solution. Communicative skills include the ability to communicate primarily with the students, focus on listening to and discuss their point of view, make their point of view, argue, argue, and reach out to a decision-maker. In modern education, students need to develop their creative, intellectual, communicative skills.

3. THEORETICAL BACKGROUND

Pedagogical technology is based on the programmed learning method. "The programmed learning method is based on the study of the content of every teaching material on a small part (step, episode, chapter), based on basic concepts and basic concepts, with the least ability to learn the pupil. Each small piece is tested and evaluated to determine how much the student is learning. Then, students should be inspected and assessed through specially trained supervision based on taxonomy (learning objectives) (as far as possible) using the subject matter entirely. "

The cognitive activity is subdivided into components that have the target, motive, and result. In the teaching methodology based on programmed learning, each small segment has its own goals,

motives, tools, and outcomes. The goal (a predetermined, planned outcome) requires the student to pursue an informed goal (goal-oriented). The purpose of the learning process (the development of a single piece) is the result. This result is achieved by the purpose of acquiring the next part, that is, as a means of achieving the goals. That is to say, based on pedagogical technologies, the problem is to solve a specific problem, which is to ensure the reproductive level of learning and the development of each piece. Provides reproductive levels of initial learning and memory recovery based on methodology of programmed learning. However, the achievement of next productive and creative abilities requires the use of problematic learning methods. The student's acquired knowledge (in reproductive style) is the result of a learning outcome, which is the subject of the curriculum (Carter, Gartner, & Reynolds, 1996; Kalpakjian & Schmid, 2014; Kuvnakov & Kasimov, 2010).

The knowledge gained by analyzing and summarizing the facts of the subject matter is the main aspect of the activity. Adaptation of the content of education to the programmed learning method (though very often requires a lot of time, effort and effort) provides a wide range of opportunities for students to participate in joint learning, and consequently, achieving results in education. Thus, studying a topic tackles the chain of problems that are interconnected.

In the traditional teaching experience, the lack of a mechanism for effective use of the programmed approach, the dynamics of knowledge acquisition, ie the principle of "knowledge abilities, and the ability to qualify" (mental development dynamics) does not give the expected result. There is a lack of access to advanced in-service experiences. The traditional teaching methodology can not be integrated with innovation in education. Innovation is the innovation in education, based on science, scientific methodology and innovation development, where innovation, innovation in education, special emphasis on educational processes, and relying on new knowledge based on science and synthesis and integration. Pedagogical and information technologies, based on technological approach, are also innovative in education.

Modern education is based on a technological approach. The problem lies in the problem of technology (or chain of interconnected problems).

The learning process, based on the problematic learning method, is divided into four problematic situations:

- Formulate and solve the problem;
- Verification of the given solution;
- Applying for theoretical and practical issues;
- Regulation and systematization.

4. DISCUSSIONS

The student issues an important discovery for himself. This is the confidence in it. The traditional approach to education is that of the problematic teaching methodology.

It is desirable to lean on the problem-based teaching methodology in designing the modern educational process. It is known that the design of educational process is based on modern information and pedagogical technologies (based on experimental psychology), and problematic education is based on traditional teaching methodology (classical psychology and pedagogy). Creative and projecting methods are also part of the problematic learning methods. The design of

teaching processes has been proven to be a direct use of problematic learning and vice versa, resulting in the design of the curriculum. As a result, there is a tendency of traditional teaching methodology and conformity of modern pedagogical technologies in education. As a result of the differentiated and individual approaches of the teaching process design and the joint learning of the students, the results of each student's education are evident. At the same time, the responsibilities of the trainee and the responsibilities of educators are clearly marked. Such design of educational process summarizes, clarifies the curricula of the teaching staff working in the educational system and creates the convenience of teaching and learning.

5. CONCLUSION

In general, the above mentioned educational technologies and design are for students studying for preschool education:

- Designing a pedagogical process (knowing what is known, understanding the meaning and striving to resolve it);
- Motivation (needs, benefits, goals, interests);
- Giving (engine, way, method, activity)
- Concepts such as education (education, training, development).

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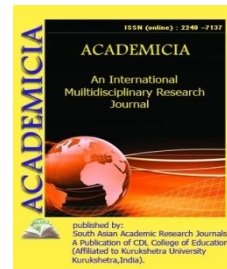
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APPLICATION OF THE METHOD OF MATHEMATICAL PLANNING IN ORDER TO SELECT THE OPTIMAL COMPOSITION OF THE GEL COMPOSITION

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ABSTRACT

This article presents the results of the scientific substantiation of the composition and development of the technology of the gel dosage form of dexpantenol using the method of mathematical planning of the experiment. The type and concentration of the gelling agent, as well as the type of plasticizer, were chosen as factors. The amount of active substance released during the in vitro studies was the response. In most cases, multivariate methods are used, i.e. The effect of several factors at the same time is being studied. Both qualitative and quantitative indicators can serve as responses in these methods. Thus, as a result of the research carried out using the method of mathematical planning of the experiment, it was found that the type of gelling agent and plasticizer used has a significant impact on the release of the active substance from the gels, which is consistent with the well-known biopharmaceutical concept of the technology of dosage forms.

KEYWORDS: *Dexpantenol, Gel, Mathematical Planning Of An Experiment, In Vitro Studies, Gelling Agents, Plasticizers.*

1. INTRODUCTION

Successful and scientifically based selection of the optimal composition and development of a rational technology of drugs is difficult without the use of methods of mathematical planning of the experiment. At present, in the process of planning an experiment, mathematical methods are used not only to process the observations made, but also at the initial stage of research — in the course of creating an experiment plan.

The current literature describes methods of one-, two- and multi-factor (Latin, Greek-Latin cubes, hyper cubes and parallelepipeds) of analysis of variance. In most cases, multivariate methods are used, i.e. The effect of several factors at the same time is being studied. Both qualitative and quantitative indicators can serve as responses in these methods. Proper use of mathematical planning methods of an experiment not only significantly reduces the total number of experiments, which, respectively, entails a decrease in both time and financial costs, but also provides an opportunity to analyze the experiment and get reliable results [1,2]. Such a result is not possible when applying subjective approaches or primitive empirical methods.

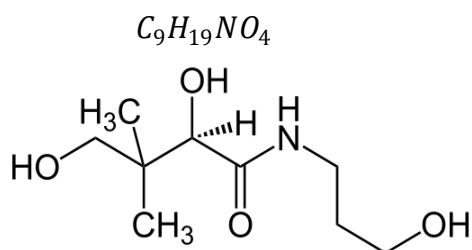
To date, there are a large number of works highlighting the use of various methods of mathematical planning of an experiment in various industries, including and in the pharmaceutical industry [3, 4, 5, 6].

Gel dosage form includes a whole range of excipients, such as gelling agents (thickeners), plasticizers, penetrants, preservatives, pH value regulators, etc., that perform various functions. Each of these components has an impact on the release of the active principle, and hence on the therapeutic efficacy of the drug.

Given the above, the goal was to conduct research using the method of mathematical planning of an experiment on a scientifically based selection of the composition of the gel composition containing dexpanthenol as the active principle.

Experimental part. Dexpanthenol (2R) -2,4-dihydroxy-N- (3-hydroxypropyl) -3,3-dimethylbutanamide (Mm 205.3) - vitamin B - a derivative of pantothenic acid.

Dexpanthenolum



Dexpanthenol, being an integral part of coenzyme A, is present in all healthy cells. Its local application significantly reduces transdermal water loss and increases the hydration of the stratum corneum and, accordingly, replenishes the normal balance of skin moisture. Consequently, the two main indications for the use of dexpanthenol are skin moisturizing (restoring the skin barrier) and accelerating wound healing [7,8].

2. MATERIALS AND RESEARCH METHODS.

At the initial stage of research, dexpanthenol gels were prepared using various gelling agents and humectants (plasticizers). It was decided, in the selection of auxiliary substances, to use the method of two-factor analysis of variance with repeated observations [5]. At the same time, the effect of the type of gelling agent and its concentration (factor A), as well as the type of plasticizer (factor B) on the release of dexpanthenol in in vitro experiments was studied. Factors and their levels are shown in Table 1.

In vitro studies were performed by the method of equilibrium dialysis according to L. Kravchinsky [9]. Cellophane (grade MC AT-100), 50 microns thick, was used as a semi-permeable membrane. Purified water served as a dialysis medium. In vitro studies at the temperature required for the diffusion of drugs through the membrane, i.e. at $37^{\circ}\text{C} \pm 10^{\circ}\text{C}$. The amount of dexpanthenol transferred to the dialysis medium was determined by the developed high performance liquid chromatography method.

TABLE 1. FACTORS AND THEIR LEVELS USED IN THE EXPERIMENT

Factor and its levels	The name of the excipient	ND
Gelling agents		
a ₁	carbomer 1%	British Ph. 2009, Ph Eur monograph 1299, 2009)
a ₂	carbomer 1,5%	British Ph. 2009, Ph Eur monograph 1299, 2009)
a ₃	carmellose sodium 1,5%	British Ph. 2009, Ph Eur monograph 0472, 2009
a ₄	carmellose sodium 2%	British Ph. 2009, Ph Eur monograph 0472, 2009
a ₅	polyethylene glycol 1,5%	British Ph. 2009, Ph Eur monograph 1444, 2009
a ₆	polyethylene glycol 2%	British Ph. 2009, Ph Eur monograph 1444, 2009
a ₇	hydroxyethyl cellulose 1,5%	British Ph. 2009, Ph Eur monograph 0336, 2009
a ₈	hydroxyethyl cellulose 2 %	British Ph. 2009, Ph Eur monograph 0336, 2009
Plasticizers		
b ₁	glycerol	British Ph. 2009, Ph Eur monograph 0496, 2009
b ₂	propylene glycol	British Ph. 2009, Ph Eur monograph 0430, 2009
b ₃	sorbitol solution	British Ph. 2009, Ph Eur monograph 0437, 2009

Chromatography conditions: column: Eclipse XDB-C18, 3.0 x 100 mm, 3.5 μm , wavelength: 210 nm, column thermostat temperature 45°C , flow rate 1.0 ml / min, deposition volume 20 μl , chromatography time: 5 min .

Mobile phase: prepare a filtered and degassed mixture of buffer solution and acetonitrile in a ratio of 75:25.

Preparation buffer: dissolve 0.69 g of monobasic sodium phosphate in 400 ml of water. Bring the pH = to 2.2 ± 0.5 using 88% phosphoric acid, bring to 500 ml with water and mix.

Preparation of a solution of the working standard sample (RSO) dexpanthenol. About 100.0 mg (exact weight) of a standard sample of dexpanthenol was transferred into a 100 ml volumetric flask, 50 ml of purified water was added and shaken until completely dissolved. The volume of the solution was brought to the mark of the flask with the same solvent and mixed well. 5 ml of the resulting solution was placed in a volumetric flask with a capacity of 25 ml, brought to the mark of the flask with the same solvent and stirred. The concentration of the resulting solution was about 0.2 mg / ml.

20 μ l of the test solution and the solution of RSO dexpanthenol were alternately chromatographed on a liquid chromatograph, obtaining at least 5 chromatograms for each of the solutions. The retention time of the dexpanthenol peak on the chromatogram of the test solution corresponded to the retention time of the peak of dexpanthenol on the chromatogram of the standard solution when quantified.

The content of dexpanthenol in the test sample (X, mg) was calculated by the formula:

$$X = \frac{S_1 \cdot m_0 \cdot 5 \cdot 1000 \cdot P \cdot b}{S \cdot 100 \cdot 25 \cdot m_1 \cdot 100} = \frac{S_1 \cdot m_0 \cdot P \cdot b}{S \cdot m_1 \cdot 50};$$

where; S_1 – the average value of the peak area of the analyte in the chromatogram of the test solution.

S_0 - the average value of the dexpanthenol peak area on the chromatogram of the standard solution.

m_0 – the weight of the sample of RSO dexpanthenol, mg;

m_1 – sample weight, mg;

P – the actual content of dexpanthenol in the standard sample, in %

b – 1000 mg.

The plan of the experiment 8x3 and the results of the study of gels for the release of dexpanthenol for 4 hours are presented in table 2.

Based on the data table.2. assessments of the effects of levels gave the following results: for factor A, four effects were positive ($a_1=9,15$, $a_2=12,06$, $a_5=5,65$, $a_6=3,66$), the other four effects were negative ($a_3=-10,14$; $a_4=-11,03$, $a_7=-3,21$ and $a_8=-6,18$). For factor B, one effect has a positive sign ($B_1=5,1$), and two effects have a negative sign ($B_2=-2,34$; $B_3=-2,78$). The response (% of the released substance) should be increased, therefore the use of carbomer in concentration as a gelling agent 1% and 1,5% (a_1 и a_2), as well as polyethylene glycol in concentration 1,5% and 2% (a_5 и a_6) increases the release of dexpanthenol from gels. Use of glycerol (B_1) as a plasticizer also increases the release of the active substance from the gels in experiments in vitro. When considering interaction effects, positive results give a_1B_1 , a_1B_3 , a_2B_3 , a_3B_3 , a_4B_2 , a_4B_3 , a_5B_1 , a_5B_2 , a_6B_1 , a_6B_2 , a_7B_1 , a_8B_1 , a_8B_2 . Interaction effects indicate a complex influence of factors. For example, the a_1 level on average has a positive effect, but its effect depends on a combination

with other levels: so, in combination with B_1 and B_3 it increases the% dissolution and, accordingly, the release of the active substance.

TABLE 2. THE PLANNING MATRIX AND THE RESULTS OF DETERMINING THE CONCENTRATION (%) OF RELEASED DEXPANTHENOL FROM GELS IN A TWO-FACTOR PLAN OF 8X3 WITH THREE REPEATED EXPERIENCES.

Factor A	Factor B			Amounts of factor levels A
	b_1	b_2	b_3	
a_1	79,64	69,83	72,75	672,52
	82,36	72,14	74,38	
	78,10	72,04	71,28	
	240,10	214,01	218,41	
a_2	80,15	70,48	79,22	698,67
	84,73	76,37	76,18	
	82,71	72,53	76,30	
	247,59	219,38	231,70	
a_3	58,13	53,27	55,37	498,86
	62,62	51,94	54,15	
	57,06	53,58	52,74	
	177,81	158,79	162,26	
a_4	56,38	51,11	53,14	490,87
	57,24	54,94	54,25	
	53,07	54,56	56,18	
	166,69	160,61	163,57	
a_5	75,14	67,82	65,65	641,00
	79,51	68,16	66,40	
	79,66	71,58	67,08	
	234,31	207,56	199,13	
a_6	76,34	67,94	62,52	623,10
	75,82	69,60	66,15	
	76,62	66,83	61,28	
	228,78	204,37	189,95	
a_7	68,11	58,82	58,16	561,21
	70,31	62,34	61,80	
	67,37	56,57	57,73	
	205,79	177,73	177,69	
a_8	65,94	61,58	53,09	534,48
	63,70	55,46	54,72	
	65,48	58,08	56,43	
	195,12	175,12	164,24	
Amount on factor B	70,67	63,23	62,79	4720,71

To test the homogeneity of the dispersions, the Cochren test was used. Tabular value of the Cochren test for $f_1=2$ and $f_2=24$ at the level of significance $\alpha=0,05$, accounted 0,2354, which is much more experimental value ($y_{\text{эксп}}$ equal to 0,09606). This ratio confirms the uniformity of experiments. Variance analysis of the results obtained are presented in table 3.

TABLE 3. DISPERSION ANALYSIS OF EXPERIMENTAL DATA TO DETERMINE THE RELEASE OF DEXPANTHENOL FROM GELS

Sources of variance Number of degrees of freedom Sum of squares Average squares	Sources of variance Number of degrees of freedom Sum of squares Average squares	Sources of variance Number of degrees of freedom Sum of squares Average squares	Sources of variance Number of degrees of freedom Sum of squares Average squares	F_{exper}	F_{tabular}
Factor a	7	4928,87	704,12	172,16	2,21
Factor B	2	942,08	471,04	115,17	3,19
AV interaction	14	216,41	15,46	3,78	1,90
Mistake	48	196,30	4,09		
total amount	72	6283,66			

Gathered data, $F_{\text{exper}} > F_{\text{tabular}}$ ($172,16 > 2,21$; $115,17 > 3,19$; $3,78 > 1,90$) are evidence of the direct influence of the type of gelling and plasticizer on the release of the active substance from the gels, as well as the presence of interaction between factors A and B.

To conduct a study on the differences in the mean values of the release data of dexpanthenol from gels, Duncan's multiple rank test was used [5]. It was revealed that according to the influence of the type of gelling agent and its concentration on the completeness of release of dexpanthenol, they can be placed in the next row: $a_2 (a_1, a_5, a_6) > a_7 (a_8) > a_3 (a_4)$. The difference in the effectiveness of plasticizers on the studied response can be ranked as follows. $B_1 > B_2 (B_3)$.

As a result of the research, it is advisable to use carbomer at a concentration of 1% and 1.5%, as well as polyethylene glycol at a concentration of 1.5% and 2%. As a plasticizer, the use of glycerin is desirable.

3. CONCLUSION

Thus, as a result of the research carried out using the method of mathematical planning of the experiment, it was found that the type of gelling agent and plasticizer used has a significant impact on the release of the active substance from the gels, which is consistent with the well-known biopharmaceutical concept of the technology of dosage forms.

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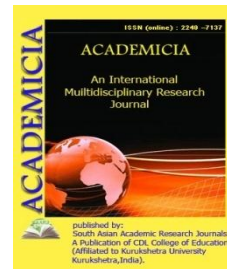
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FROM ACTIVITY OF THE TEST COTTON PLANTATION IN SAMARKAND LATE XIX BEGINNING OF XX CENTURY

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ABSTRACT

In this article, based on archival material, the formation and activity of the test cotton plantation in Samarkand late XIX beginning of XX century. Also, studied intact metropolis to develop cotton in Samarkand. Finally, papers conclude major points of the development with some recommendations for the further research points. The annual expenses for the plantation work and repair of the premises, ie the sum of 1602 rubles, were envisaged to be paid from the district revenues fund next year. The governor also pointed out the importance of continuing the work on cultivation of American cotton in the local area. Although the machine can clean all types of cotton, it should be inexpensive for the locals to be affordable, and to be used in the modern and joint territory of the United States. Since empirical industrial spheres have so far been concentrated on cotton processing, they have been experimentally focused on semi-finished products, and have no experience in primary cottonseeding and harvesting. At the end of the 19th and early 20th centuries, the history of this period was highlighted in the history of the region through the disclosure of the Samarkand Cotton Experimental Plant. For this purpose in Samarkand was planned to establish experimental firm for development of farming, horticulture and vegetable growing.

KEYWORDS: Cotton Plantation, Auction, Cotton, Land Tenure, Local Merchants.

1. INTRODUCTION

The role and the role of agriculture in the development of each country. Particularly, cultivation of raw cotton is an important branch of the national economy(Jalilov, Desutter, & Leitch, 2011; Luong, 2004; Ruziev, Ghosh, & Dow, 2007).

The central regions of Central Asia, in particular, the central regions of Uzbekistan, occupy leading positions in other regions of the country in the production of these raw materials. This necessitates the use of special methods for managing these territories.

At the end of the 19th and early 20th centuries, the history of this period was highlighted in the history of the region through the disclosure of the Samarkand Cotton Experimental Plant.

XIX century was a political, economically significant period in the history of the Russian Empire. This period entered the history pages with the colonialist movements in the foreign policy of the Russian Empire, trying to restore its position on the world political arena. In 1861-1865, the United States was in a state of instability, with civil war in the country. As a result, the country was economically more losers, which, in turn, had an impact on the European countries and the textile industry in the eyes of American cotton. The lack of raw materials from textile textile industry in America has accelerated the planned implementation of Russia's long-term goals. Since the first days of the Russian empire's occupation of Central Asia, particularly from Samarkand, the main focus of the Russian system is to establish the rules of the Russian administrative system and to deport the poor, and began to implement the policy of rusization through creation (Draper, 1997; Hornidge et al., 2011; Sahadeo & Zanca, 2007).

At a time when the issues regarding the development of cotton growing, which is the main source of raw material supply to the Russian textile industry, are being discussed between the administration and industry representatives of the upper empire, Zarafshon county local government officials and military personnel also meet the climate and conditions began to make suggestions on the construction of a cotton plant in Samarkand. The first initiatives and proposals on this issue were raised by Abramov, the head of the district and Ravskiy, the lieutenant colonel of the Turkestan line(Raupova, Kamahara, & Goto, 2014)

2. LITERATURE REVIEW

In particular, Lieutenant Colonel Rayevsky has appealed to Abramov, the head of the district on September 24, 1870, to make a contribution to the development of cotton growing in the district. Cotton development proposals indicate that it is necessary to establish a special committee in the district and to ensure that it is responsible for improving the cotton varieties and spreading it among the population. Also, the necessary measures included allocation of state land for experimental plantations, allocation of five thousand rubles for the seeds, cotton ginneries and feeding equipment at the committees and exemption of experimental cotton plantation tax. At the end of Rayev's appeal, he is asked to submit his proposals to the governor-general of Turkestan and obtain a governor's consent for the implementation of the proposed proposal [1].

Abramov wrote in his letter to the governorship of Turkestan on 25 November 1871 that the state of agriculture, the basis of the region's incomes, the shortcomings in the development of the industry and its solution, the usefulness of the sector's cotton industry for the imperial economy and industry, tried to explain. The letter also highlights the need to allocate 8 land plots and

additional 20 additional land plots for the implementation of the measures envisaged, while requirements for planting activities and expenditures are also listed in [2].

In the District Local Administrations Plan, there was the goal of developing other agricultural sectors along with cotton growing. For this purpose in Samarkand was planned to establish experimental firm for development of farming, horticulture and vegetable growing. The experimental firm was expected to undertake the responsibility of cultivating, cultivating and cultivating native and foreign crops, which are economically important, and the experience of farmers in the field of crop yields(Dennis et al., 2007; Oberkircher, 2011).

Abramov's proposal to build a cotton plant was soon approved by the Turkestan General-Governorate. On December 12, 1871, the governor of the Turkestan General's Office sent a letter to the mayor of Abramov asking him to agree with the proposal of the governor to establish a cotton plant. The demand for Abramov's expenses is also fully met, with 3400 rubles allocated for construction of additional land, grooming machines, and palaces, warehouses and additional facilities. The annual expenses for the plantation work and repair of the premises, ie the sum of 1602 rubles, were envisaged to be paid from the district revenues fund next year. The governor also pointed out the importance of continuing the work on cultivation of American cotton in the local area. At the same time, it should be emphasized that the general manager of the cotton-plant plant should pay special attention to the personal qualities of the plant worker, noting that the plantation worker should be well-informed and experienced, but also have sufficient power reserve and management capacity 'he shouts [4].

3. THEORETICAL BACKGROUND

The experiment was arranged for Poruchik Sultanov, who was originally employed in the cotton plantation. In his first experimental test, Sultanov has been briefing the administration on how to organize the work at the cotton plant, mainly on the preparation of land and the required amount of seeds, as well as the sowing capacity, the amount of cotton seeds and the amount of expenses.

The head of the Zarafshon district was soon appointed as Captain V.Mikhaylov, the head of the cotton factory, on April 3, 1872, following the instruction of the General Manager of the Turkestan General Directorate of Plants Management.

In the case of cotton growing, the empire government was ready to pay any expenses. Abramov, a plantation organizer, and his dependent businessman were immediately satisfied with any request for plantation needs.

At the time of the work under Sultonov's leadership, annual expenses for the organization of work at the cotton plant amounted to 330 rubles, including 200 rubles for land treatment, 80 rubles for 10 months and 50 rubles for his assistant.

The 1872 budget estimate shows an increase in the amount of land and costs. Including 28 tannery, harvesting and other expenses, from 20 rubles for 1 year to 560 rubles, planting worker from 25 rubles to 300 rubles a year, his assistants from 10 and 6 rubles, 192 rubles per year, 200 for cotton cleaning rubles, buildings and equipment for repairing 350 rubles, totaling 1602 rubles [7]. In general, the amount of wage earning per plantation worker and his assistants during the plantation work increased from 41 to 65 rubles in 1872-1882 [8].

Cotton production measures have also led to the initial industrialization process associated with the cotton industry. As a result of Abramov's efforts, Prince Urusov, the governor of the Turkestan general-governor's office, took over the task of buying cotton ginneries. Abramov's instructions to the district treasury on August 14, 1872, were given to Urusov for the amount of 1,200 rubles allocated for ginneries. Abramov, well aware of any demand for cotton growing, asked Urusov not to stop negotiating the acquisition of cotton gear, but to report the missing funds immediately (Morrison, 2009; Todd et al., 2009).

In his letter sent to Abramov on October 20, 1872, Urusov reported that he appealed to several factories in the southern US cotton ginneries, and expressed his opinion on the requirements for the cars being purchased. In his opinion, cotton grooming machines are handmade, but simple, but with good quality, uncomplicated mechanisms, in the case of defects, can be repaired by a simple ironman and able to move from one place to another without disassembly. It was necessary. Although the machine can clean all types of cotton, it should be inexpensive for the locals to be affordable, and to be used in the modern and joint territory of the United States.

Urusov concludes that taking into account the approximate time spent for negotiating and transporting cars to Samarkand, the cars may reach their destination in June-July next year [10].

However, the Samarkand Cotton Plant has its own cotton-cleaning machinery shorter than expected. On January 16, 1874, the Department of Trade and Commerce of the Ministry of Economy, in his address to the Zarafshon district, stated that Urusov appealed to the Russian Consulate General in Bodyshevo for the machine and Bodisko's request to the plant administration was satisfied. Another positive aspect was that the plant would give the Russian government a number of ginneries. Departure to the city of Sankt-Peterburg to transport Samarkand cars to the Kamensky brothers company. Grooming machines were brought to Samarkand in early March 1874 [11].

4. Main part

The plantation products are sold through auctions organized by the public. In particular, on February 19, 1883, the manager of the cotton plant appealed to the head of the Zarafshan district, suggesting selling a plantation products of auction sale [12].

The Plantation Officer has a list of products with the name and quantity of the products for which the auction will be sold, with the composition of the commission with the participation of the police officer and the appraisers. A public announcement about the auction has been prepared and distributed among the population. In particular, Russian businessmen of the city were informed about the auction on April 21, including Rodionov, Fabri, Ponamarev, Shnayderman, Sharapov, Granovsky and many others. Along with the auction announcement, it also provides information on the name and quantity of products sold, as well as the starting price [13].

In order to attract representatives of the Muslim population to the auction, the Product Valuation Commission was composed of representatives of the local population. The composition of the commodity evaluation commission of 1883 consisted of the city elder Shodibek, merchants Hidirboy, Giyosiddin, Raimboy and Husainboys.

Auctioned products included several types of grain products and other local and foreign products, except for cotton. For example, in the dairy products sold in American, French and varieties of

potatoes, rye, winter and spring red, zoologir, avliyoo, protiteyer varieties, several varieties of tariq, French pepper, pskov linter, china shade and mosh products were available.

Plantation did not fully sell its existing products. Some of the products are reserved for plantation needs and distribution among the population. In particular, the plant planted 26 seedlings of 7 cotton seeds, 210 poods of rice seeds requiring less than 4 packages of water, and 10 packed sowing seeds for planting and distribution among the population. The spring was divided between 6 pounds of barley seeds to 25 packs 5 poods, 6 pounds of French peppers, 12 pounds of pistachio fennel for seeds of the next crop and population [14].

At the auction held on April 26, 1883, local traders, including Imamnazar and Bobobek, were among the Russian businessmen, including G. Shumarsky, T.Saharov, G. Jijimsky, A. Kolsov. All sold products were sold for a total of 358 rubles at a price of 53 kits [15].

In general, the Samarkand experimental cotton plant's contribution to the development of cotton in the Turkestan region can be analyzed by the conclusions of M. Virsky and I.Sllusky's articles on the cotton industry and industry.

Establishment of the experimental plant started with the process of formation of the primary industry of the cotton industry in the urban population. The Samarkand city experimental cotton plant has contributed to the accumulation of its experience not only in the country, but also in the whole empire. Since empirical industrial spheres have so far been concentrated on cotton processing, they have been experimentally focused on semi-finished products, and have no experience in primary cottonseeding and harvesting. These traits also appear in the letter of Urusov to Abramov in his article about the requirements for the cars planned to be purchased.

The Cotton Plant, along with its cotton-growing activity, has also contributed to improving the cultivation of other types of agricultural crops among the population and providing them with seeds. As a result, transformational processes have emerged, such as the emergence of the military network in the economy of the population (Abdullaev, De Fraiture, Giordano, Yakubov, & Rasulov, 2009; Bobur & Alimova, 2017; Kienzler, Rudenko, Ruzimov, Ibragimov, & Lamers, 2011).

5. CONCLUSION

At the same time, the plantation has been the centerpiece of the introduction of new trade and economic relations among the population. The auction, organized by Plantation, is a kind of new type of trade-economic procedure, and has laid the basis for dialogue between local and Russian businessmen of various sizes.

Noting that the Samarkand city experimental cotton plant has a number of positive features, it is important to note that these processes are one of the events in the empire's colonial interests and, accordingly, are aimed at turning the country into a raw material base of the Russian empire.

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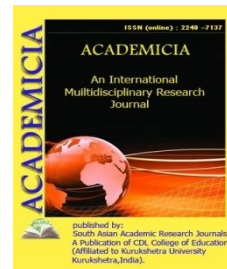
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FREQUENCY OF MEETING THE MAIN COMPONENTS OF THE METABOLIC SYNDROME DURING DISTURBANCE OF DIFFERENT PHASES OF GLYCEMIC CURVE

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ABSTRACT

New data on the frequency of violation of the sympathoadrenal phase of the glycemic curve were obtained. It has been established that all categories of hyperglycemia, including the violation of the sympathetic distribution phase of the glycemic curve, are closely related to the main components of MS. This coefficient reflects the activity of the sympathoadrenal phase of the glycemic curve and in our study it is designated as the hyperglycemic coefficient) —the Rafalese ratio is the ratio of fasting blood glucose to glucose 2 hours after exercise. This coefficient reflects the activity of the sympathoadrenal phase of the glycemic curve and in our study it is designated as the hyperglycemic coefficient) —the Rafalese ratio is the ratio of fasting blood glucose to glucose 2 hours after exercise. Disruption of the sympathoadrenal phase of the glycemic curve is more related to the incidence of HTG than to the frequency of HC. Thus, an analysis of the frequency of occurrence of HC and HTG showed that various categories of hyperglycemia in one degree or another are associated with impaired lipid metabolism. Moreover, the frequency of overweight in patients with diabetes was slightly lower than in patients with fasting hyperglycemia.

KEYWORDS: Hyperglycemia, Hyperlipidemia, Abdominal Obesity, Arterial Hypertension.

1. INTRODUCTION

The prevalence of MS in the world ranges from 10% to 84%, depending on the region, urban or rural area, composition (gender, age, and ethnicity) of the studied population and the definition of the syndrome used. Overall, IDF estimates that one quarter of the world's adult population suffers MS [6].

Cameron et al. Concluded that a genetic predisposition, diet, physical activity level, smoking, a family history of diabetes, and education affect the prevalence of MS and its components [3]. According to NHANES [2], MS was 5% among subjects with normal body weight, 22% among overweight people, and 60% among obese people. Its incidence also increases with age: 10% in individuals aged 20-29 years, 20% in the age 40-49 years and 45% in the age 60-69 years. The prevalence of MS (based on NCEP-ATP III criteria, 2001) ranged from 8% to 43% in men and from 7% to 56% in women [4]. It should be noted that, according to some data, the prevalence of MS in women increases in postmenopause: 32.6% -41.5% [5].

The report of the Framingham study of the heart showed that an increase in body weight of more than 2.25 kg over 16 years is associated with a 45% increase in the risk of developing MS [7]. It was also shown that every 11 cm increase in waist circumference is associated with an 80% increase in the risk of developing the syndrome within 5 years.[2].

Under this syndrome is a combination of many risk factors (RF), however, according to most authors, the main components of MS are: hypertension (AH), insulin resistance (IR) in the form of type 2 diabetes mellitus (DM) or impaired glucose tolerance (NTG), hyperlipidemia, overweight or obesity and, above all, abdominal obesity [1].

2. PURPOSE OF THE RESEARCH

To study the frequency of occurrence of the main components of the metabolic syndrome in various categories of hyperglycemia

3. RESEARCH METHODS

In order to study the prevalence of the main components of the metabolic syndrome in various categories of hyperglycemia, an epidemiological study was conducted among 793 people representing a representative sample of men and women aged 20–59 years. In order to study the dynamics of the activity of the sympathoadrenal phase of the glycemic curve, 5 years after the initial screening, individuals who had hyperglycemia at the start of the study 1 hour after glucose exercise were reexamined. We used diagnostic criteria for MS recommended by the International Diabetes Federation (IDF) in 2006. According to these recommendations, MS was recorded when the patient had the following components: NTG or diabetes, BMI and obesity or abdominal obesity, hypertension, hyperlipidemia.

Cholesterol (CL) and triglycerides (TG) were determined in venous blood using a Hospitex analyzer. At cholesterol levels > 6.1 mmol / l, hyper-cholesterolemia (HC) was fixed, and the TG level > 1.7 mmol / l was taken as hyper-triglyceridemia (HTG).

Abdominal obesity (AO) was recorded at waist circumference for men > 94 cm, and for women > 80 cm. Overweight was determined by the Quetelet Index (IQ) and calculated using the formula: weight (kg) / height (m)². IQ levels from 25 to 29.9 were assessed as overweight and IQ levels ≥ 30 were considered obesity.

Blood pressure (BP) measurement was performed twice on both hands, with an interval of at least 5 minutes and when assessing BP, the average values of 2 measurements were taken into account. Systolic blood pressure (SAP) ≤ 139 was taken as normal blood pressure; diastolic arterial pressure (DAP) ≤ 89 , Arterial hypertension (AH) - SAP ≥ 140 ; DAP ≥ 90 . AH was also recorded regardless of the blood pressure indicators, in cases when the patient was on antihypertensive therapy for 2 weeks preceding the survey.

The state of glucose tolerance was studied using an oral glucose tolerance test with the determination of glucose in capillary blood on the GlucoDr automatic glucoanalyzer. Glycemia levels were studied on an empty stomach, as well as 1 and 2 hours after administration of the examined 75 g. glucose. Evaluation of blood glucose levels was carried out according to WHO criteria (WHO, 1999). To assess the correlation of sympathoadrenal and vaginal insulin phases, the following glycemia factors were studied: Baudouin coefficient - the ratio of glycemia 1 hour after glucose load to fasting glucose. This coefficient reflects the activity of the sympathoadrenal phase of the glycemic curve and in our study it is designated as the hyperglycemic coefficient) —the Rafalese ratio is the ratio of fasting blood glucose to glucose 2 hours after exercise.

4. RESULTS AND DISCUSSIONS

According to the data obtained (fig.1), among persons without hyperglycemia, the frequency of AH is 11.2%. In hyperglycemia on an empty stomach and 1 hour after glucose loading, hypertension occurs more than in every fourth patient (26.9% and 27.0%, respectively) and exceeds the frequency of hypertension among individuals with normal glucose tolerance by 2.4 times. Among those with hyperglycemia, after 2 hours of glucose loading, the frequency of hypertension reaches 40.3% and is almost 4 times higher than the frequency of hypertension among those without hyperglycemia. The highest incidence of hypertension occurs in patients with DM, among whom it occurs in 70.7% of cases.

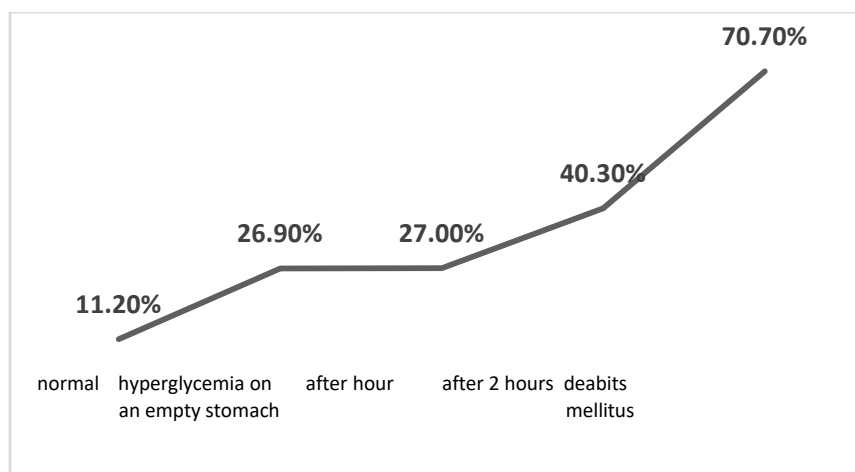


Figure 1. The frequency of hypertension in different categories of hyperglycemia

Further, the frequency of BMI and obesity among individuals with different categories of hyperglycemia was analyzed. As it turned out (Table 1), in all categories of hyperglycemia, there is a higher frequency of BMI and obesity.

TABLE 1 THE FREQUENCY OF OVERWEIGHT AND OBESITY AMONG INDIVIDUALS WITH DIFFERENT CATEGORIES OF HYPERGLYCEMIA (%).

Glycemic categories	Normal weight	Overweight	Obesity	Overweight + Obesity
Without hyperglycemia	72,23	22,54	5,23	27,77
Hyperglycemia on an empty stomach	42,31	30,77 *	26,92 *	57,69 **
After 1 hour	42,77	32,70 *	24,53 **	57,23 ***
After 2 hours	17,91	26,87 *	55,22 ***	82,09 ***
Diabetes mellitus	19,51	26,83 *	53,66 **	80,49 ***

Note: The table indicates the significance of differences in indicators relative to the group without hyperglycemia.

The fact was revealed that the frequency of BMI in patients with hyperglycemia 1 hour after glucose load was higher than in patients with impaired blood glucose 2 hours after glucose load and in patients with DM. Moreover, the frequency of overweight in patients with diabetes was slightly lower than in patients with fasting hyperglycemia. This fact can be explained by the fact that obesity is more developed in patients with diabetes and its frequency is 2 times higher than in patients with fasting hyperglycemia and 1 hour after loading glucose. In general, overweight (overweight + obesity) is 2 times more common among people with fasting hyperglycemia and 1 hour after glucose exercise (57.69% and 57.23%, respectively) than with normal glycemia levels (27, 77%). The highest frequency of overweight (overweight + obesity) occurs with hyperglycemia 2 hours after glucose loading and with DM (82.09% and 80.49%). These data indicate that the violation of the sympathoadrenal phase of the glycemic curve is also important in terms of the frequency of overweight (overweight + obesity). Somewhat lower rates of overweight (overweight + obesity) in DM patients relative to a group of people with hyperglycemia 2 hours after exercise can be explained by the fact that diabetic patients are registered and take certain measures to control weight.

Currently, when assessing body weight, it is common to consider such an indicator as abdominal obesity (AO). According to the data obtained, AO is least likely to occur with normal glucose tolerance (32.74%). With hyperglycemia on an empty stomach, the frequency of AO is 1.8 times higher (42.31%), and in violation of glycemia, 1 hour after glucose loading is 2.2 times higher (50.94%) than with normal glycemia levels. The highest incidence rates of AO occur in patients with DM (80.49%) and in the group of individuals with impaired glycemia 2 hours after glucose loading (74.63%). It should be noted that the differences in all indicators of the frequency of AO in groups with different categories of hyperglycemia had statistically significant differences from the indicator of the frequency of AO in the group of individuals with normal glucose tolerance.

Thus, the obtained results allow us to conclude that AO is closely related to all categories of hyperglycemia. At the same time, for the first time, a pronounced connection was established between the AO and the violation of the sympathoadrenaline phase of the glycemic curve.

Further, the frequency of HC and HTG among individuals with different categories of hyperglycemia was analyzed. According to the data obtained, the lowest rates of HC occurrence are observed among individuals with normal glycemic levels and with hyperglycemia 1 hour after glucose load (10.88% and 9.09%, respectively). The incidence of HC among people with fasting hyperglycemia and 2 hours after glucose loading is 3.3 and 2.2 times higher than with normal levels of glycemia (33.33% and 24.0%). As expected, the highest incidence of HC occurred in DM patients (47.06%).

A slightly different picture is noted in relation to the frequency of occurrence of THG (Fig. 2).

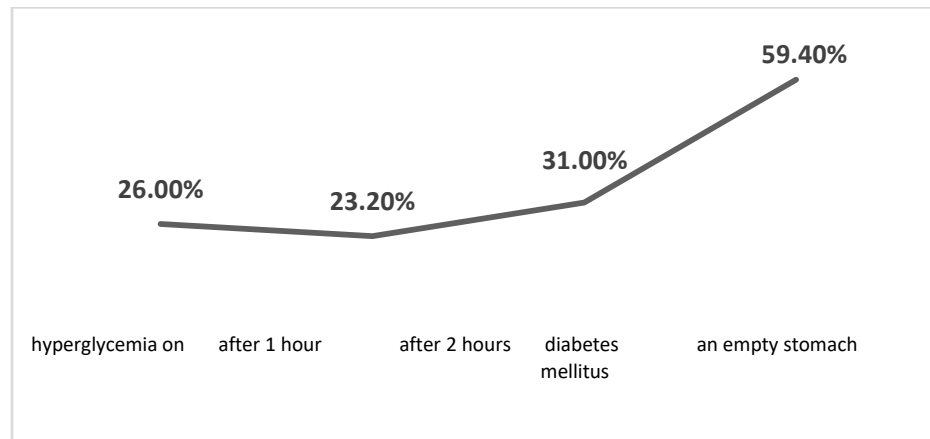


Figure 2. Frequency of THG in different categories of hyperglycemia

There is a slightly higher incidence of HTG in people with fasting hyperglycemia (26.0%) and 1 hour after glucose loading (23.21%) than in people with normal glycemia levels (20.21%). However, the identified differences were not significant. Statistically significantly ($p < 0.05$), higher rates of HTG frequency were observed in the group of people with hyperglycaemia 2 hours after glucose loading (31.0%) and in DM patients (59.41%) from the group of people with normal blood glucose levels.

Thus, an analysis of the frequency of occurrence of HC and HTG showed that various categories of hyperglycemia in one degree or another are associated with impaired lipid metabolism. To a greater extent, this concerns DM and the disruption of the vagoinular phase of the glycemic curve. However, for the first time it has been shown that a violation of the sympathoadrenal phase of the glycemic curve is also associated with dyslipidemia. Disruption of the sympathoadrenal phase of the glycemic curve is more related to the incidence of HTG than to the frequency of HC.

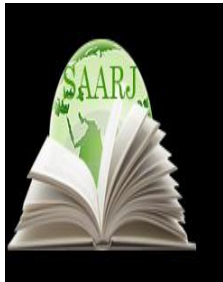
5. CONCLUSION

1. Diabetes, fasting hyperglycemia and hyperglycemia 1 and 2 hours after glucose loading are widespread among the population.
2. The study of hyperglycemia 1 hour after the glucose load is important, on the one hand, is widespread in the population (21.8%), and on the other, it can transform into hyperglycemia 2 hours after the load and sugar diabetes.

3. In violation of the different phases of the glycemic curve, the higher frequency of the main components of MS: AH, overweight, obesity, abdo-minal obesity and hyperlipidemia. These components are more associated with postloading hyperglycemia, including the violation of the sympathoadrenal phase of the glycemic curve.

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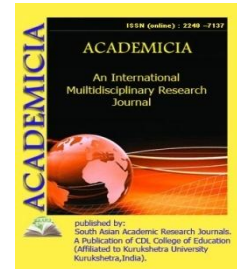
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ORGANIZATIONAL AND ECONOMIC MODEL OF THE FORMATION OF A REGIONAL TOURIST CLUSTER IN THE MANAGEMENT OF A COMPETITIVE ADVANTAGE

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ABSTRACT

The rise in competition and commercialization in tourism has led to the need to introduce marketing elements and principles into the activities of tourist organizations. In the early stages, marketing was used by the marketer as a way of influencing the market; its main task was to promote the product, and today, the main principle of marketing is "production of the sold product, not the product". Marketing in the service sector has its own characteristics. In essence, as a means of earning a maximum, it changes its way of working and direction. At the same time, marketing in the tourism industry has a new characteristic, because the tourist services have a characteristic of their sales form. Developing competitive bids on entertainment tourism can be considered in Spain, where the country has a high economic multiplier effect on the development of entertainment tourism. Thus, qualification and business tourism can be defined as one of the most promising directions of tourism development in Uzbekistan. As a result of the analysis, it is necessary to formulate model designs and recommendations for cluster development. The implementation of a cluster approach requires government support at different levels, and this is determined by the position of each individual project.

KEYWORDS: Marketing, Tourism, Cluster, Regional, Life, Education.

1. INTRODUCTION

The correct application of the marketing system is based on different aspects and factors of the firm's activities, allowing tourist organizations to effectively and effectively operate on the market. Tourist organizations manage complex marketing communications, such as organizations dealing with their agents, buyers, and representatives of different communities.

As the development of the market mechanism developed, the problem of competitiveness of the tourism industry was sharply raised and its solution forced the market entities to actively seek ways and ways of increasing the competitiveness of tourism services. In this regard, increasing competitiveness is also required to strengthen its position in the market in order to maximize profitability.

Experience of many countries in the field of tourism indicates that clusters allow for high efficiency of the economy, thus ensuring the competitiveness and the welfare of the population. Formation of clusters will allow for a fuller use of tourist resources and advantages available in the country.

As described by M. Porter, "... cluster is a compilation of companies, suppliers, affiliated networks and organizations that are economically interconnected to achieve competitive advantages in a particular district or country." Research into the process of formation of technological (innovative) clusters, based on modern development trends of the world economy, has become one of the most important issues of the economy. In scientific works related to the process of clustering tourism development in our country and abroad, some authors have studied this field only within the scope of the tourist business system. In these cases, the globalization process and its multifaceted impact on the regional clustering can not be reflected.

The application of cluster concepts in the field of tourism allows solving problems of modern tourism industry, such as low level of touristic potential of the region, low level of access to tourism, underdevelopment of infrastructure, low interest of investors, development of tourism strategies and mechanisms imperfection. Developing competitive bids on entertainment tourism can be considered in Spain, where the country has a high economic multiplier effect on the development of entertainment tourism. As a strong tourist destination in Spain, it is a country with a strong infrastructure for the development of diverse forms of tourism, which is the dominant competitiveness because the production of new entertainment products is focused on the production of recreational resources, which is interesting for potential tourists. The second competitive edge of this destination is not a large amount of entertainment, but its diversity:

- various carnivals, trips and theatrical tours, such as Terramitico, Port aventura;
- in the corridor;
- flamenco;
- castle tournaments in the castles can attract viewers to the medieval environment.

The advantage of third competitiveness is that the cluster is constantly used, which is a profitable resource for organizers of entertainment tourism. In some countries, recreational activities are carried out once a year and within a few days with the maximum use of the infrastructure, including in Uzbekistan. In Spain, celebrations throughout the year are almost always celebrated in different regions of the country. This does not happen in any European country. The creation

of the tourist cluster will result in the formation of tourist competitiveness and high-efficiency modern complexes that provide a wide range of tourist services to meet the needs of foreign nationals and the local population,

contributing to the development of the economy, the development of tax revenues, foreign exchange flow, increase in the number of jobs, cultural and natural heritage preservation and rational use of the budget. To solve these problems, you need to do the following:

- formation of the list of potential for natural, cultural and historical objects for tourism;
- Formation of proposals on the market of tourism services on the basis of competitiveness development;
- Formation and implementation of regional and government programs for tourism industry development;
- Improving government management of tourist safety and tourism industry;
- development of measures for the formation and promotion of promising tourist goods;
- Formation of tourist and recreational centers;
- Formation of international cooperation in tourist business;
- attraction of foreign and domestic investors to form new tourist destinations;
- Formation of a modern system of retraining and advanced training of the personnel working in the field of tourism.

In order to describe modern tourist clusters as an elemental element, it is necessary to build a cluster organizational-economic model that takes into account the general features of tourist activity and the peculiarity of the cluster approach.

The proposed model can be used not only for Samarkand region, but also for other regions of the country. Tourist resources were taken as the basis of the model, as they are crucial in the development of tourism and are an important factor that attracts people to participate in tourist trips.

In tourism literature, scientists today classify and classify a variety of tourist resources, as we have been thinking about this subject in a comprehensive and scientific manner in the "Tourism: Theory and Practice" manual.

TYPE OF TOURISM RESOURCES

№	Classified characters	Types of designated characters
1	Natural and climatic conditions	Mountains, landscapes, steppes, seas, lakes, rivers, oases, forests, gardens and alleys.
		1. <i>According to types:</i> <ul style="list-style-type: none"> • Natural (geological, climatic, hydrological, thermal waters); • Biodiversity - natural resources (soil resources, flora and fauna); • Energy-based, nature-specific area and landscape,

		<p>which serve as a basis for the development of tourism, such as cultural, tourism.</p> <p>2. <i>According to the type of use:</i></p> <ul style="list-style-type: none"> • <i>Mineral waters, swamps, salts, forests; river banks; springs; squeeze areas in nature.</i> <p>3. <i>Depending on the extent of resource availability:</i></p> <ul style="list-style-type: none"> • <i>Completed natural resources, which are subdivided into renewable (fresh water, flora and fauna) and non-renewable (minerals) species.</i> • <i>Incomplete natural resources include solar energy, wind, sea waves, and water.</i> <p>4. <i>As for the possibility of its restoration and growth:</i></p> <ul style="list-style-type: none"> • <i>Renewable resources, which are examples of forests, can be restored in average 20-30 years.</i> <p>5. <i>non-renewable resources</i></p>
2	Cultural - historical objects	<ul style="list-style-type: none"> • Monuments: architectural buildings, sites of archeological importance, scientific, cultural and historical caves, records; • ensembles: a group of interconnected buildings of a scientific, cultural or historical significance. For example, the Registan ensemble; • hospitality areas: Aesthetic, ethnographic, historical, and attractive places created by human or nature; • national holidays, festivals and symposiums; • sacred places; • charming places.
3	Social-economic factors	<p>1. Resources</p> <p>2. Fundamental resources</p> <p>3. Branches of economy</p> <p>4. Infrastructure</p>
4	Tourist Information Resources	<p>1. Internet network</p> <p>2. Additional and illustrative publications</p> <p>3. Information carriers</p> <p>4. Full sources of information</p>
5	UNESCO by protected objects	<p>1. World-renowned monuments</p> <p>2. Natural objects</p> <p>3. Preservation and Use of Cultural Heritage</p> <p>4. National folklore, festivals</p>

6	Miracles of the World	1.Egyptian pyramids 2. Chimney gardens in Babylon 3. Artemida Church 4.Golekarnas mausoleum 5.The monument of sun god Gelios 6.Alexander Mayoglu 7.Zeus statue of Olympic god	The New Miracles of the World: 1. Great Wall of China 2. Statue of Jesus Christ in Rio de Janeiro. 3. Stone city of Al-Batri (Petra) 4. Stone city of Machu Picchu ink 5. Church of the Mayans in Chichen-Ittsa. 6. Roman colosseum. 7. The crown
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Source: Tourism: theory and practice. -T.: Science and Technology, 2018, 400 pages.

When determining the formation and introduction of the tourist cluster, it is necessary to carry out the analysis of their composition and quality characteristics.

The analysis of tourist resources provides a complete picture of the potential of the region in terms of the development of tourist clusters. The availability of various natural resources and climatic conditions on the territory of Uzbekistan provides an opportunity to form tourist clusters, which make up different types of tourism, which must be considered as the basis for providing tourist services.

Rich and diverse tourist resources of Uzbekistan can be presented in diverse variety of incoming tourism and domestic tourism. All this creates opportunities for the formation of tourist clusters that combine popular tourism in demand. This is the basis for the specialization, allocation and justification of the cluster, as a condition for model development. This will help you to choose the specific areas of tourism resources, local traditions and recreation, touristic clusters, and develop key areas.

The analysis of incoming, outgoing and domestic touristic information, which is the main segment of tourism services market, is based on the distribution of the number of people arriving to Uzbekistan in 2016 (those who have already passed the formal declaration). Among the CIS countries, for the total number of tourists (175705 people), Kazakhstan ranks first among the countries with 23.8%, Russia is second with 17.0% and Turkmenistan with 3.4%. Particular attention is paid to tourism in particular, paying particular attention to tourists coming from far abroad and their requirements. Thanks to the desire and desire of foreign tourists to come to our country, Uzbekistan will become a place in the global tourism market. The most visited foreign tourists in 2016 are Turkey: 20981 (in person), 16317 from India, 14095 from Korea, 5668 from China, 4509 from Germany, 4419 from France and 3198 from the United Arab Emirates.

In the flow of incoming citizens the second and third places are directly aimed at tourist destination and business trip. This is due to the fact that one of the forms of national food is the development of qualitative and business tourism as its popularity is explained by the fact that it is connected with the rest and relaxation of services, which are attractive for foreign guests. The great advantage of business tourism is that it is possible to organize it in the vacant position. At the same time, tour operators can provide services such as transport, accommodation, catering

and excursion services, as well as providing information about regional information, gathering information about potential sources of work, presenting the necessary socio-economic materials, and organizing business meetings. An important feature of this type of tourism services market is that participants in the employment arrangements spend more money than ordinary tourists during their visit.

Thus, qualification and business tourism can be defined as one of the most promising directions of tourism development in Uzbekistan. For this reason, growth in this segment of the service will be ensured through restoration of existing system of contacts with CIS and foreign countries and establishment of new contacts.

The basics of forming any cluster include: availability of touristic potential based on common tourist and recreational diversity, availability of accommodation for different segments of tourists, appropriate level of development of transport infrastructure, effective investment-innovative regional policy.

As a result of the research, a method of forming a tourist cluster is proposed, which can be used by government agencies and businesses. In the formation of such a cluster, at the level of conceptual development it is necessary to involve the scientific community involved in the study of the tourism industry. This method should be used to investigate the level and potential of the region in which tourism is attractive. Step-by-step forming of the tourist cluster is given in the table.

The scheme of forming a tourist cluster

№	Stage Name	Stage implementation process
1.	Setting the Touristic Cluster Area	1. Determine the centers of attraction of tourists and determine the limits of the cluster 2. Setting the objectives and tasks of the meeting
2.	Build the first perfect model of the tourist cluster	1. Identification of coordination and monitoring authorities 2. Determine the general cluster strategy 3. Determine the support for the cluster resource
3.	Study the potential of cluster formation	1. Comparison and comparison of historical resources 2. Determining the future tourism types 3. Determining the specialization of the cluster
4.	Description of cluster tourist product	1. Multidisciplinary analysis of cluster tourist services 2. Determine the content of service providers

5.	Cluster Infrastructure Analysis	<ol style="list-style-type: none"> 1. Tourist companies 2. Transport 3. Vacation 4. Positioning 5. Nutrition 6. Opportunities for development of clusters and their cluster
6.	Study of external conditions of cluster formation	<ol style="list-style-type: none"> 1. Natural conditions 2. Economic conditions 3. Socio-cultural conditions 4. Institutional-legal conditions
7.	Identifying Potential Opportunities and Barriers to Cluster Development (SWOT Analysis)	<ol style="list-style-type: none"> 1. Identify strengths and weaknesses for cluster development 2. Identify the risks and opportunities of the Cluster
8.	An overview of the results of the analysis and the selection of the design model of the type stick cluster	<ol style="list-style-type: none"> 1. To define the main directions of cluster development 2. The forecast of demand for cluster services 3. Identify the risks of cluster development 4. Selection of Project Model Development and Recommendations

Source: author construction

In the first step, based on the set of tourist clusters, it is necessary to identify and justify the cluster geographical boundaries, as well as identify tourist attraction centers. At the same time, it is necessary to take into account the fact that cluster boundaries may vary, and that there may be a number of centers for attracting tourists, different services, non-compete, and vice versa, which may complement each other (from urban to regional or near-site).

The second phase of the cluster formation can be implemented in three scenarios:

- "Top-down", that is resource support, and the general cluster strategy, primarily through the coordination of consultation and monitoring coordination bodies;
- Building up individual projects and programs that combine "from bottom to top", ie cluster potential participants;
- mixed variant, in parallel, both directions are applied simultaneously.

Naturally, cluster funding mechanisms are also important. Cluster financing is usually funded by budget resources or by one major sponsor (which can, for example, be one of the cluster's core businesses).

At the third stage, the tourist resources proposed as a cluster should be identified and their analysis should be carried out and future tourism types should be defined for the cluster. At the end of the stages, the potential and perspective directions of specialization in the tourist cluster will be determined based on the capabilities of the region.

At the fourth stage, it is necessary to cover all needs of consumers, and to analyze tourist services based on their diversity. After that, the list of tourist service providers will be determined, which will include tourist agencies, hotels, restaurants, sanatoriums and others. These service providers should contribute to the cluster's contribution. Then there are processes of interaction of the participants.

During the fifth phase the infrastructure will be identified and the net tourist service will be provided. Tourist services are provided with transportation related to the delivery of tourists. The service places include rest, accommodation, tourist nutrition, medical care, shops supply.

At the sixth stage, natural conditions are explored to determine the demand period for a particular type of tourist services. At the same time, economic conditions are also provided, which is related to the control of pricing policy and the identification of cluster support instruments. At the same time, socio - cultural and institutional - legal conditions are also studied.

SWOT analysis is required in the seventh stage in determining the strengths and weaknesses of the cluster activities, both in terms of their strengths and weaknesses, as well as for internal and external factors.

From the point of view of SWOT analysis, it can not be determined as a weakness of a competitive tourist company, but competitiveness can be included in the strength of the rating by a certain degree of profitability. Also, the strongest part is the competitiveness of the tourist company. Thus, having complete and accurate information about the state of the competitive environment is a necessary condition for the formation of strong competitiveness in the tourism management targeting.

2. CONCLUSION

At the closing stage, the main directions of cluster development will be determined based on tourism type, service season, solution of operational problems, innovation. At the same time, the risk and risk aspects of the cluster development should also be considered. Cluster service demand forecasting, SWOT-analysis data and cluster development are determined on the basis of established directions. As a result of the analysis, it is necessary to formulate model designs and recommendations for cluster development. The implementation of a cluster approach requires government support at different levels, and this is determined by the position of each individual project. Taking into account the model of governance in Uzbekistan, it is clear that executive authorities should become key initiators of cluster projects.

Innovative cluster projects should be provided by the government through organizational and financial support through the integration of activities within existing government-targeted programs.

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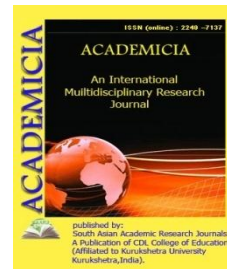
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ETIOPATHOGENESIS AND PREVENTION OF HYPOVITAMINOSIS OF CHICKEN

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ABSTRACT

In this article are described etiopathogenesis of hypo vitaminosis of laying chicken and disease prevention which is devoted to the group prophylactic tools of clinic and hematological indicators in chickens and effects to the egg production Used vitamin-mineral premixes normalize processes of metabolism in the organism of chickens and provide the increase of egg production 13,3-14,0% (percent). Moreover, in order to investigate the effects of vitamin and mineral nutritional compounds to the productivity and organism of chickens 4 groups of 50 hens were consisted. Conservation conditions of the chickens in the groups and the compound of ration are a feed on the same granular feeds. In the endogenous causes of hypovitaminosis "A" influenza and parasitic diseases and digestive tract infections slow down the absorption of vitamins A and carotene in the intestines. Although the patient the experimental part of scientific researches is completed during the 2017-2018 years in the condition of poultry farms of Samarkand region. In order to this, timely delivery of veterinary-sanitary measures in poultry farms is one of the most important components of technological processes.

KEYWORDS: Hypovitaminosis, Anemia, Hemoglobin, Glucose, Total Protein, Total Calcium, Inorganic Phosphorus, Tocopherol, Retinol, Carotene, Monovit, Vitamin.

1. INTRODUCTION

Nowadays the non-infectious diseases as infectious and parasitic diseases of chicken are an obstacle to the progress of chickens. In order to this, timely delivery of veterinary-sanitary measures in poultry farms is one of the most important components of technological processes.

90-95% of all the poultry diseases continue in a massive, due to the failure of technological processes, increasing production costs and body weight, declining in productivity harms greatly to the farms. The non-infectious diseases of poultry often end with death.

Individual and group methods of verification of chickens in poultry farms, the degree of mastering the methods of preventive measures and the planned arrangement of these measures will ensure the effectiveness of the measures. Along with daily veterinary measures, once a quarter in a year, dispensing activities and required in the plants and poultry farms.

The growth of poultry and intensity of metabolism differentiate from other animals; they are highly sensitive to protein deficiency, carbohydrates, vitamins and minerals in the ration. (Siegel P.B, 2001).

The main causes of the deficiency of vitamin A in chickens are divided into 2 groups. They are endogenous and exogenous causes. In the endogenous causes of hypovitaminosis "A" influenza and parasitic diseases and digestive tract infections slow down the absorption of vitamins A and carotene in the intestines. The exogenous causes of the disease are the deficiency of vitamins and carotene in the nutrition and the reduction of the stock in the body (V.A.Bakulin, 2006).

The clinical symptoms of the deficiency of vitamins in chickens develop slowly, and firstly whitening, of later freshening of crown and crows, the symptoms of general desolation, decreasing of appetite, slaying away from growth, depression, skin loss, conjunctivitis signs of injury in the respiratory and digestive systems (catarrhal fistulas in the nostrils, laryngo tracheitis, whiskers, stomachs volvulus, paralysis) and sharp falling of the sweat are observed. Tongue and throat with yellowish flow mass, symptoms of nervous activity disorders (volvulus of the neck paralysis), egg-laying of mother hens, a sharp reduction of retinol and carotenoids within the egg are typical. (I.P.Kondrakin and others, 2005, V.S. Prushkina, 2002).

2.OBJECT AND METHOD OF RESEARCH

One study on high-resolution ultrasound examination performed in 20 trigger fingers (no thumb recruited) and 20 normal contra lateral digits (Chuang XL, et al., 2017). It found that, during full finger flexion, the greater thickening of the FDS tendon bifurcation will move proximally beyond the proximal end of the A1 pulley, which in this region that leads to the sticking or triggering problem. However, the thumb does not consist of flexor digitorum superficialis (FDS) tendon but the thumb is among the commonest digit which is triggering. Although the patient the experimental part of scientific researches is completed during the 2017-2018 years in the condition of poultry farms of Samarkand region.

As the object of research is 45-45 weekly Lowman Brawn classic chickens were chosen and keeping them by with dispensary examinations, feeding conditions, nutritional rations content, exchange energy in the ration, the content of row protein, calcium, phosphorus, some enzymes are clarified and analyzed.

With clinical researches in general chicken condition, appetite, mucous membranes, the color of crown and combs, skin, feather and wings, the status of motion members, the color of beak and legs, the percentage of egg production, the peculiarity of egg pinch, heartbeat and breathing in 1 minute are observed. Experimental tests were conducted once in 30 days.

Moreover, in order to investigate the effects of vitamin and mineral nutritional compounds to the productivity and organism of chickens 4 groups of 50 hens were consisted. Conservation conditions of the chickens in the groups and the compound of ration are a feed on the same granular feeds. Additional Monovit-R in amount 1 ml/kg added to the farm ration of the hens in the first group, for the second group VitaPrem (complex vitamin) 1g/kg, for the 3rd group VitaPrem (complex vitamin) and VitaPrem (complex mineral) added 1g/kg. Chickens in the experimental groups were feed in farm ration. Experiments were continued 60 days.

Before experiments and during them the amount of hemoglobin in the blood taken from poultry (hemoglobin-cyanide method), glucose (colored reaction with orthotoid), general protein (refract metric method), and the amount of vitamin A and carotene in the egg content clarified. The productivity of the experiments was marked according to the hematologic indicators of hens and the level of egg production.

3. DISCUSSION OF THE RESULTS

The analysis of the rate of egg-shaped chickens shows that, 28,5% of ration content corn, 21,4% wheat 14,2% sunflower seed, 3,58% soybean seed, 10,7% vegetable oil, 7,14% vs 14,2% monocalcephosphate includes. The total nutritional value of the diet was characterized by the presence of 242,0925 MD exchange energy, 14,544g row protein, 0,2374g methionine, 0,6331g lysine, 3,3275g calcium, 0,3592g phosphorus. Relative to nutritional standards in diet, lack of 37,9 MD of exchange energy to 4,156gr of row protein, 0,1626gr of methionine, 0,2169gr of lysine, 0,7725gr of calcium and 0,2408gr of phosphorus was identified.

The feeds rich in protein in the ration of hens included soybean seeds (45%) corn (12,5%) and, wheat (11,7%). The demand for mineral substances is being satisfied by monocalcephosphate (17,5% calcium, 23% phosphorus) limestone and salt.

General weakness in 40-50% of hens, whitening of crown and combs, hypo dynamy decreased appetite, fatigue and dryness of the skin stopping by growth, retardation, decreased productivity, flare upbringing in 40-50% of them, catarrhal fistulas in the nostrils, falling streaks, becoming thickened areas in the subcutaneous skin of legs, eyes and ears in 20% of hens such as retinol deficiency, and clinical manifestations of conjunctivitis and keratitis were observed in the all experimental groups and control group chickens according to the results of clinical studies in chickens. It was characteristic for the hypo vitaminosis to be a distinctive feather of the legs, 20 percent of the chickens being thin, sometimes non-hazards.

It was marked that, at the end of the study the whitening of crowns increased 20%-40% in the control group, but it decreased in the first experimental group about from 42% till 20%, in the second group from 40%-20%, in the 3rd group from 40% till 10%.

At the beginning of the study, number of breathes in a minute was $24 \pm 1,4$ times in the 1st group, as this in the 2nd group $22 \pm 1,5$ times, in the 3rd group on average $24 \pm 1,5$ times, in the control group $26 \pm 1,4$ times were included and at the end, in the 1st group on average $22 \pm 1,5$ times, in the

2nd group $21 \pm 1,5$ times, in the 3rd group $20 \pm 1,6$ times declining of breath number, in the control group on average $33 \pm 1,6$ times increasing of breath number was noted.

At the end of the study, the heartbeat of experimental chickens in the 1st group approximately $124 \pm 5,0$ times, 2nd group $142 \pm 5,1$ times, in the 3rd group $142 \pm 5,1$ times declining, in the control group on average $164 \pm 5,0$ times increasing was characterized.

It has been observed that clinical manifestations of chickens of group 3, which were added to granulose seed 1g/kg of VitaPrem(complex vitamin+mineral) changed better.

Clinical indicators of experimental Table 1 Chickens (n=50)

Note A - at the beginning of the experiment.

Experimental groups	Time of experiments	Number of breath in 1 minute	Number of heartbeat	Whitening of crowns %	Frostbite %	Finegrained eggs
Control	A	$26 \pm 1,4$	$146 \pm 5,0$	40	50	20
	B	$33 \pm 1,6$	$164 \pm 5,0$	60	60	40
1 experimental	A	$24 \pm 1,4$	$142 \pm 6,2$	42	20	20
	B	$22 \pm 1,5$	$124 \pm 5,0$	20	-	10
2 experimental	A	$22 \pm 1,5$	$148 \pm 5,1$	40	10	20
	B	$21 \pm 1,4$	$142 \pm 5,1$	20	-	-
3 experimental	A	$24 \pm 1,5$	$145 \pm 6,1$	40	10	20
	B	$20 \pm 1,6$	$142 \pm 5,1$	10	-	-

B – at the end of the experiment.

Analysis of the results taken during the study shows that the amount of hemoglobin was different and at the end of the studies. If, at the beginning of the study the amount of hemoglobin was on average $104,0 \pm 1,249$ /l, in the 1st experimental group, $10,6,0 \pm 1,22$ g/l in the 2nd and $105,0 \pm 1,26$ g/l in the 3rd experimental group, end the study, it was noted that, the amount increased till $124,0 \pm 1,20$ in the first group, $125,0 \pm 1,20$ g/l in the second group, $128,0 \pm 1,20$ g/l in the third group.

According to the analysis, it was observed that, in the control group, the amount of hemoglobin in blood decreased on average 3,3g/l at the end of study than first notes.

The total protein content in the serum of experimental chickens increased by an average from $44,0 \pm 0,24$ g/l, till $49,2 \pm 0,42$ g/l, in the 1st group, in the 2nd group an average from $45,6 \pm 0,20$ g/l till $51,2 \pm 0,38$ g/l in the 3rd group from $44,8 \pm 0,24$ g/l till $56,5 \pm 0,32$; but it was characteristic that in the control group chickens it decreased by $44,6 \pm 0,30$ g/l at the end of experiments.

The blood glucose levels in the three experimental group increased by 10,2 mmol/l in the first, in the 2nd group 0:92 mmol/l, in the 3rd group 1.08 mmol/l and it decreased in the control group on average 0.10mmol/l.

Biochemical indicators of egg yolks and chicken's blood n=50.

During the experiments the amounts of retinol and karotenoids of egg yolks was the same in the experimental chicken egg at the beginning of the experiment experimental and control chickens. But at the end of the experiment, the amount of retinol and karotenoids increased to on average

2,5 mg/g and 6,2 mg/g, as the 1st group in the 2nd group 2,3mg/g and 7.2mg/g, in the 3rd group on average 3,0mg/g and 9,8mg/g and it was observed that, the amount of retinol and karotenoids decreased on average 0,6mg/g and 2,2mg/g in the control group chickens.

Based on the results of the experiments, it was found that the mixture of vitamins (complex vitamin + mineral) had a positive effect on the process of metabolism in the chicken egg yolk. Acceleration of metabolism in the body has led to an increase in egg production 13,3-14,0%.

Experimental groups	Time of experiment	Hemoglobin in g/l	General protein g/l	Glucose mmol/l	In the egg-yolk	
					Retinol	Karotenoids
Experiment 1	Before experiment	104,0±1,24	44,6±0,24	4,78±0,42	5,4±0,12	12,4±0,22
	After 15 days	119,0±1,46	46,8±0,30	5,02±0,38	6,8±0,17	16,4±0,20
	After 30 days	124,0±1,20	49,2±0,42	5,80±0,38	7,9±0,21	18,6±0,18
Experiment 2	Before experiment	106,0±1,22	45,6±0,20	4,76±0,22	5,2±0,10	12,1±0,18
	After 15 days	118,1±1,38	48,4±0,34	5,08±0,18	6,4±0,12	15,4±0,20
	After 30 Days	125,0±1,20	51,2±0,38	5,68±0,40	7,5±0,20	19,3±0,16
Experiment 3	Before experiment	105,0±1,26	44,8±0,24	4,78±0,42	5,4±0,21	12,8±0,20
	After 15 days	119,0±1,46	46,8±0,30	5,02±0,38	7,2±0,17	18,0±0,20
	After 30 Days	128,0±1,20	56,5±0,32	5,86±0,42	8,4±0,02-0	22,6±0,22
Control 4	Before experiment	102,5±1,30	45,9±0,22	4,70±0,40	5,2±0,14	12,8±0,21
	After 15 days	100,0±1,31	44,8±0,24	4,65±0,36	5,0±0,12	12,6±0,20
	After 30 Days	99,2±1,22	44,6±0,30	4,60±0,42	4,6±0,14	10,6±0,16

4. CONCLUSION

1. The addition of VitaPrem (complex vitamin + mineral) premix (1g/kg) to the egg yolk diet improves metabolism and clinical – physiological parameters in poultry and supplies.
2. The hemoglobin and glucose levels in the bloodstream increased approximately 21,9% and 22,6% respectively relative to the control group, and increased serum protein levels by 18,8% in addition, the total average of the carotenoids increased by 9.8mg/g, retinol in egg yolks by 3,2 mg/g and chicken egg production by average of 13,3-14,0%.

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CLINICAL FEATURES AT MANDIBLE FRACTURES

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ABSTRACT

The quantity of damages of the person for last 30 years has increased more than twice, and along with steady growth of damages of an obverse skull their structure at the expense of increase combined and multiple fractures has essentially changed. On the basis of the analysis of case records of 527 persons (502 men and 25 women) at the age from 15 till 70 years which were on treatment to clinic of maxillofacial surgery the Bukhara regional versatile medical centre in 2013-2017, features of mandibles fractures during the various age periods are studied. Frequency and character of mandibles fractures, their combination to a crania-cerebral trauma, damages of soft fabrics of other areas of a head and also crises of bones of an obverse skeleton at adult people during the various age periods is revealed. In long-term forecasts the further increase in frequency of such damages and complication of their character in connection with growth of technical equipment of manufactures, increase of quantity of vehicles and speeds of their movement, and also with other displays of urbanization is marked.

KEYWORDS: *Damages, Trauma, Fracture, Immobilization, Tires, Area, Maxillofacial Area, Pathology, Submental and Fragment.*

1. INTRODUCTION

The traumatism of maxillofacial area continues to remain one of actual problems of surgical dentistry and maxillofacial surgery in connection with increase in number of patients with crises of bones of an obverse skull, weighting of this kind of pathology, growth plural and combined damages. Non-fire fractures of mandible more often "linear" pass in "weakness places": in the field of the central cutters, a canine and sub mental apertures, mandible angle and processes condylaris. About 75 % of fractures occur within the dentition and are, as a rule, open (infected). At displacement fragment intimately connected with periosteum the gum mucous membrane practically always is broken off in a crisis place and the damage zone is infected at the expense of oral cavity contents.

Among traumas of maxillofacial area fractures of mandible reason was the household trauma prevails. Fractures of bones of an obverse skeleton make 3, 2 -5, 8 % of total of traumas. The basic share of damages of obverse bones is necessary on crises of the bottom jaw with which in specialized medical institutions address from 77, 0 % to 90, 0 % of victims. Taking into account growth of cases of a maxillofacial trauma the problem of the high-grade and universal specialized help at mandibles fractures remain actual.

Research objective: To reveal features of a clinical picture of crises of the bottom jaw at adult people during the various age periods and principles of their treatment.

Materials and methods: 527 case records of victim by non-fire fractures of mandible were on hospitalization in the Bukhara regional versatile medical Centre in 2013-2017 are studied.

TABLE 1

year	males	females	adults	all
2013	84	5	9	98
2014	89	3	11	103
2015	83	3	13	99
2016	91	2	15	108
2017	98	4	17	119
all	445	17	65	527

The greatest quantity of mandible factures is necessary on the most active in the social relation age group of the population: from 20 till 40 years. Last years the tendency to increase in number of victims with a trauma of jaws at the age of 17-19 years was outlined. About 75 % of mandible factures arise within a tooth alignment and are opened (initially infected). Frequency of traumas of the bottom jaw at men considerably (in 8 times) exceeds that at women. It speaks mostly employment of men in industrial and agricultural production, transport, including dangerous professions, riskier behavior, and also more frequent alcohol abuse. At combined damages of the faces, jaws and other areas of a body a ratio between men and women 10:1.

2. Main part

Basic reasons of mandible fractures are life traumas, however, they are registered and at a production trauma, is rarer at transport and sports traumas.

The clinical current of mandible fractures, as a rule, is accompanied by numerous functional infringements: restriction or impossibility of opening of a mouth, impossibility of acceptance of usual food, origin of sites hyperesthesia, difficulty of speech and frequently - difficulty of breath.

After a trauma of the bottom jaw it is a lot of origins of complications. Among them the main things: later circulation of the patient behind medical assistance, a bad immobilization of fragments, insufficient reparative capability of a bone fabric, trophy violation, wound infection, decrease in resistance of an organism. As a rule, trophy frustrations in a bone fabric are connected with its infringement innervations. On the other hand, the big relative density of painful syndromes of the person neurogenic origins, their painful character, problems of diagnostics and treatment predetermine the importance of this pathology as in scientific, and on the practical level. Despite enhancement of methods of treatment of mandible fractures, in the posttraumatic period often it is necessary to meet the infectious-inflammatory complications which development depends on a number of factors, including from availability of teeth with pathological processes in parodont's fabric. Significant factors in development of complications are the condition of resistance of an organism, infringement of blood circulation and innervations in a crisis zone.

From methods of treatment of mandible fractures the immobilization of the bottom jaw with the help toothed tires and inter maxillary rubber draught is most widely applied. At imposing of double maxillary tires are carrying out professional and individual hygiene of an oral cavity difficult. At a long immobilization of the bottom jaw function of salivary glands suffers that also worsens a hygienic condition of an oral cavity. Microorganisms of a tooth touch are an immediate cause of inflammatory processes in parodont. In rate resistance mechanisms counteract microorganisms but as soon as they in any place overcome this protection, infectious process with damage of fabrics develops. Long presence bronze - aluminum ligature in the field of necks of teeth also leads to development of inflammatory process in parodont's fabric, genesis of periodontitis - for reception of one of experimental models periodontitis imposing on a tooth neck ligature is provided. At diseases of parodont imposing toothed tires leads to an aggravation periodontitis that makes heavier a disease current, in some cases imposing splinting designs it is impossible.

Treatment of the given category of patients is performed both conservative (orthopedic), and operative methods; quite often use also a combination of these two principal views of an expert care.

At patients with mandible fractures in a combination to inflammatory diseases of parodont the last influence a current of the posttraumatic period of crises and is one of factors of development of purulent-inflammatory complications. Direct strong correlation dependence between frequencies of development of purulent-inflammatory complications is proved at crises of the bottom jaw and a severity of sickness of parodont. In turn, changes in an organism, occurring at a trauma and is purulent-infectious complications influence a condition of parodont's fabric.

The current of the posttraumatic period of mandible fractures is influenced by various factors, including diseases of parodont. Direct strong correlation dependence between frequencies of development of purulent-inflammatory complications is proved at crises of the bottom jaw and a severity of sickness of parodont. Negative influence two-maxillary toothed tires on a parodont's fabric are studied.

3. RESULTS

Alternative to orthopedic treatment are surgical methods, however they lead to development more numbers of inflammatory complications. Therefore patients with fractures of mandible at periodontitis heavy degree demand the special approach at a choice of a method of an immobilization of fragments and studying of influence of various methods of an immobilization of fragments the bottom jaw on a parodont's fabric and on development of complications of crises at patients chronic periodontitis generalized heavy degree is an actual problem of dentistry.

Surgical sanitation of an oral cavity should be an obligatory stage of treatment of patients with mandible fractures.

At the moment of the statement from a hospital of good anatomic and functional result it was possible to reach only at 40 % of victims of an average and 50 % of advanced age that dictates necessity of search new, stable, methods of is conservative-orthopedic treatment, wider introduction of methods of a surgical treatment (an is functional-stable osteosynthesis) and the physiotherapeutic procedures possessing the minimum contra-indications.

The choice of a method of fastening fragments depends on a general condition of the victim, its age, associated diseases or damages; localizations and quantities of crises, arrangements of a crack of crisis, degree and a displacement direction of fragments, mutual relations of tooth and a crack of crisis, a condition of the tooth which is in a zone of damage, availability of teeth, suitable for toothed tires; equipment of medical institution toolkit and the materials necessary for orthopedic and surgical methods of treatment, availability anesthesiology services, skills and experience of the maxillofacial surgeon.

At the present stage of development of surgical dentistry and maxillofacial surgery conservative treatment of crises of jaws is conducted on dental by wire tires, various variants parietal-mental bandages, inter maxillary ligatures fastening, cortical fixing screws.

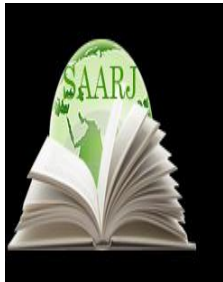
3. CONCLUSION

The frequent reasons of complications of mandible fractures are use of imperfect methods of diagnostics, application path genetically unfounded therapy and a narrow spectrum of traditional methods of the treatment, an accompanying pathology, for example unlimited consumption of alcohol. One of the most important reasons of inflammatory complications is decrease nonspecific immunological resistance of an organism. The factors contributing to development of infectious-inflammatory complications, the trauma, associated diseases, non-observance by patients of a medical mode, the premature statement from a hospital, treatment of patients with fractures of mandible in a hospital.

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ETHNOLOGICAL STUDIES OF TRADITIONS ECONOMY, REFLECTED IN THE FOLK DASTANS OF KASHKADARYA OASIS

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ABSTRACT

The article reveals ethnological research of traditions management, reflected in folk dastans of Kashkadarya oasis. It is shown that folk epics are also considered ethnographic sources. Breeding and caring for sheep compared with goats was a matter more time consuming. From historical and ethnological sources it is known that the main livestock belonged to the prosperous farms of the oasis. In some ethnic groups in every household there were up to a thousand or more heads of sheep. . In none of the other variants of the dastan, the ethnographic information related to agriculture is given in such detail and consistently [10; b.15]. The same tradition existed among the Tajiks ("mayda") and among the Kyrgyz ("op mayda"). The old men believe that the song "Mayday-Mayda" was devoted to Bobo-Dekhkan, so that he would bestow more strength and diligence on farmers. Studying the economic activity of the population and the importance of craft traditions in the lives of farmers and herders, the author paid particular attention to the magical nature of the patterns and bead jewelery, which, in addition to the aesthetic goal, served as a guardian.

KEYWORDS: Poem, Ethnicity, Folklore, Epic, Bakhshi, School Storytellers, Consolidation, Assimilation, Endogomy, Exogamy, Ethnic Component, Kungrat. Kalmyk

1. INTRODUCTION

In Uzbekistan, epic poems and short stories are transmitted through epic genres called Dastans. Dastan is a means of transmitting stories, tales, odes, adventures and includes both prose and poetry accompanied by music. Dastan performers are called bakhshi, dastanches, shairams or zhyrau, they have an important influence on the creation of dastans. In the history of the traditions of the dastanous art of the Uzbek people, the Kashkadarya oasis is one of the ethnocultural regions with a characteristic ethnopop music. Ethnographic materials allow us to reveal the Bachshee oasis epos related to the traditions of the Uzbek people's business.

On the territory of the oasis, in the locality where the traditions of the Chirakchi and Kamai school of narrators were formed there lived such ethnic groups of Uzbeks as sheds, kutches and kungrats. The sheds, along with other Uzbek tribes, lived in the western part of the Chirakchi district - in the villages of TakayKildi, Sarykamys, Lolabulak, Chuvullak, Shurkuduk, Sarsan, Umakai. At the beginning of the XX century. Khanykov wrote that the sheds roamed around Samarkand and along the Karshi steppe. O.N. Aristov, in his turn, noted that the sheds had settled in the territory from the western part of the kishlak to Hancharbag [1; p.423].

2. LITERATURE REVIEW

A. Grebenkin testified about the resettlement of the sheds to the Chirakchi district, and then I. Yavorsky, who noted that the sheds first settled in Balkh. Later they began to move north to the steppe zone near Husar and settled in the area between Karshi and Djam [2; p.89]. According to this information, it can be concluded that the sheds have settled in the territory of the Chirakchi district since time immemorial.

Representatives of the kutchi genus lived in the Chirakchi district along with the barns. In the western part of this territory, 310 kutchi families settled in Tokchi, Kazakh, Tokmar, Chuvullak, Ak Tunny, Semiz, Galakuduk and other villages. Thus, field ethnographic studies conducted in the region show that one of the representatives of the Chirakchi school of narrators Azim bakhshi was of the kutchi kind. In the economic life of the kutchi, living in the Chirakchi district, in contrast to the sheds, there are more elements of a semi-settled way of life.

On the territory of the Kamai School of narrators, the subethnos of kungrats plays a prominent role. Thus, KhidyrShair was a native of Kyzykul kishlak, and by ethnicity belonged to the subethnos of kungrats. For this reason, Kamai narrators, speaking of the dombra, utter a saying: "Dombra successfully crossed the Durmen and sat in the kungrate."

The Kungrats living in Kamašinsky district consider themselves "Kamais". At 15-20 versts to the west of Kamachinsky district there is a Kamaisky gathering of residents, which consists of twelve villages. Here lived a thousand families. The rural population mainly belonged to the clan of Kungratsubethnos. A small genus of bugazhili is a member of the larger genus of the Vakhtamgalisubethnos of kungrats. Vakhtamgali lived in the Sherabad oasis, on the banks of the Amu Darya near Termez, in the lower reaches of the Surkhandarya and on the banks of the Karatagdarya. In the late XVII - early XVIII centuries. Kamaykungrats moved from the territory of the current Sherabad district of Surkhandarya region. It turns out that the traditions of this school of narrators historically go back to the Sherabad school of bakhshi and were formed in the XVIII - XIX centuries. on the territory of the Kamai kishlak, where kungrats still live and continue to preserve their creative heritage.

3. Main part

The dastans, which were performed by the representatives of these two schools, reflected ethnographic motives about the lifestyle of the pastoral population and the types of their economic activities. One of these legends is the dastan "Yozi and Zebo" [13; Inv. No. 16, 1512, 1514, 1557. 1606, 1601.9351.].

Ты лучшая из коз, чирий-чирий,
Твоё дитя большое как гора, чирий-чирий,
Отталкиваешь от себя своё дитя, чирий-чирий,
Ранена ли твоя душа, чирий-чирий... [16]

The population of the oasis there were special songs dedicated to livestock. They were sung when caring for cows who did not give milk or refused to feed the calves, and sometimes when caring for sick sheep or goats. In the choruses of these songs "chiry-chiry", "turey-turey" there is an appeal to Chupan-ata with a request to save livestock. Goats were mostly bred by poor oasis farms for meat, milk, wool and leather. They were bred in Surkhan-Sherabad and partially in the Kashkadarya oases. Breeding and caring for sheep compared with goats was a matter more time consuming. From historical and ethnological sources it is known that the main livestock belonged to the prosperous farms of the oasis. In some ethnic groups in every household there were up to a thousand or more heads of sheep. In particular, bai among Uzbeks Karluk owned tens of thousands of sheep. A special place in the tale is related to cattle:

Если ты не пойдёшь, не родится вол такой, как ты,
Если я не пойду, не зажжётся большой факел,
Паши землю хорошо, бедняга скотинушка
Где же моя любимая, чувха-я,
За тем ручьём твоя любимая, чувха-я...

Cattle were raised by a semi-settled and sedentary population engaged in farming. A very important place in the life of the settled population of the foothill areas was taken by oxen. The reason for this was the benign natural conditions for raising cattle. So, in the late XIX - early XX centuries. In the rich farms of the Kashkadarya oasis, there were up to 2,000 heads, in average up to 10-15 heads, and in poor families no more than 2 heads of cattle. Breeding cattle, especially oxen as the main force in agriculture, among settled Uzbeks, as well as sheep breeding, was of a commercial nature. Wolves were grown not only for personal farming, but also for the market, they were sold to irrigated agriculture areas, where they were in great demand. The poor farmers of the Zarafshan and Fergana valleys sold their livestock after the field work and bought it again in the spring. In contrast to sheep and goats, cattle were used by the cattle-breeding population as an aid in agriculture-related work, namely, for laying aryks between beds.

4. Ethnological studies of traditions economy, reflected in the folk dastans of kashkadarya oasis

On the territory of Central Asia, even in the Neolithic era [4; with. 82-122.]. along with cattle breeding, an agricultural culture was born. However, this happened in different areas at different

times, i.e. based on their geographical location. The materials found during archaeological research during the excavations of Sapalli-tepe, Chusta, Zamanbaba and Tazabagyab confirm that settled agriculture originated in the southern regions of Uzbekistan in the 2nd millennium BC. [14; b.103.]. That is why agricultural traditions occupy a special place in the epic legends of bakhshi. A vivid example of this is the fragments of the dastan "Yozi and Zebo" by Kadyr-bakhshiRakhimov, which reflected the details of the process of economic activity of farmers. It is known that plowing the land with a cat (a pair of oxen), during the harvest and even when thrashed, the dekhkan sang songs from this tale [7; b.12.].

Паши, паши, да с хворостиною,

Не сей зерно да черпаком,

Младший сын старается,

Да сил не хватает с ом а ч ом. [8; б.21].

Here we see the details of the agricultural activity of the working people. It should also be noted that we are talking about irrigated agriculture, because the cattle were used not only for plowing, but also when laying irrigation ditches. In the I millennium BC With the advent of iron tools in Central Asia, there has been some development of an agricultural culture based on artificial irrigation. In one of the most ancient written sources - "Avesta" there are names of such historical areas as Margiana, Parthia, Khorezm, Bactria (the territory of southern Uzbekistan), where irrigated agriculture was developed. The main occupation of the population of the above-mentioned areas was agriculture. In the legend, people's attitude to working-class livestock, belief in the patronage of higher powers, as well as the animistic and totemistic views of our ancestors has been preserved.

Harvesting grain and threshing was very hard for the inhabitants of the oasis. In order to somehow facilitate the hard work, people accompanied their actions with songs. In the course of threshing, the farmers sang such traditional songs as "Hop Mayda", "Maydayo-Mayda", "Maydagul". Real life is reflected in the dastan in a very peculiar way:

Наточил твои рога, майдаё-майда,

Смазал твои копыта, майдаё-майда.

Молотить тебе хирман, майдаё-майда,

Повелел Бобо-Дехкан, майдаё-майда. [6; б.488].

The lyrics and intonation of the song depended on the mood of "Galagovchi". If he was very tired, the song was sad and mournful. The performance of the songs was called "Galagov", and the main desire of the farmer who began to sing was to quickly complete the difficult work. In the process of research by the author of the dissertation, it was revealed that the versions of the dastan "Yozi and Zebo" performed by Kadyrabakhshi and Razzaq-bakhshi are the most complete and artistic. In none of the other variants of the dastan, the ethnographic information related to agriculture is given in such detail and consistently [10; b.15]. The same tradition existed among the Tajiks ("mayda") and among the Kyrgyz ("op mayda"). The old men believe that the song "Mayday-Mayda" was devoted to Bobo-Dekhkan, so that he would bestow more strength and diligence on farmers.

In the legend, there are ethnographic information relating to handicraft. In this regard, we present a fragment in which the carpet manufacturing process is displayed:

Три колышка в три стороны,
Три колышка соединив,
Вколачивает Ёзиджан,
Завязывает Ёзиджан...[16; б.45].

Carpets were weaved by khashar. The processes were managed by older women with a lot of life experience, and the main work was done by young ones. The dastan describes in detail the process of working weavers. In the oasis, before starting work on a simple carpet on three sides of space, three pegs were hammered in each, which consisted of three triangles. Girls and women wore wool dyed in different colors on them. After winding, one of the pegs was taken out and installed like a handy weaver. Carpets made of cotton yarn were made among the agricultural population, and wool - among the population engaged in cattle breeding. Carpet weaving occupied an important place in the life of the population.

In the dastan there are many songs associated with embroidery and sewing clothes. Zebo you Shila for a narrowed handkerchief, a patterned belt scarf, a felt headdress, as well as a number of household items. The girl was an expert embroiderer, as evidenced by a detailed description of these objects in the legend:

Сошью платок с бахромой,
Бахрому украшу бусинами,
Пусты обхватит пояс любимого.
Его объятия широки как горы..[16; б.41]

Here we are talking about the custom of embroidery belt scarf, which is decorated with patterns, fringe and beads. Beads served as a talisman against evil forces and the evil eye [12; б.141]. Historical and ethnological literature often mentions tumors - amulets and black-and-white beads from the evil eye (kuzmunchok), which were widely used by the people of the oasis as a talisman for all sorts of disasters and hostile forces.

5. CONCLUSION

And so, in the oasis where the traditions of the school of narrators were formed, there lived ethnic groups of barns, kutches and kungrats. The legend contains the description of many customs and rites of pastoralists, dedicated to their patron - Chupan-ata. At the same time, there are many details in the text from the way of life of the population engaged in irrigated agriculture, including the attitude towards working cattle, in which the animistic and totemistic ideas of our ancestors clearly manifested themselves. Studying the economic activity of the population and the importance of craft traditions in the lives of farmers and herders, the author paid particular attention to the magical nature of the patterns and bead jewelery, which, in addition to the aesthetic goal, served as a guardian.

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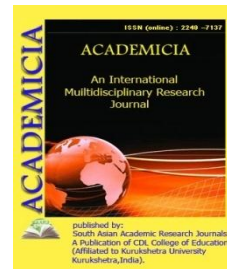
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TESTING OF ANOTHER FEATURES AND BINDING METHODS of “JECHAY KPAABHQA (BEAUTY OF FOREST)” PEAR FOR BIOMETRIC DRUGS IN NAVIGATED POWDERS

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ABSTRACT

In this article the study of influence to the biometrical dimensions of methods of giving a shape and schemes of various planting of quince by method of vegetative reproductive crossing with pears sort Wood beauty Forest Beuaty is given. The quality of the sowing material is directly related to the condition of clone welds used. Highly effective construction and technology of cultivation of clones of clones used in organic soluble substrates have been developed. The width of the horn was 0.80 m in the control version and 0.91 m was planted in a 3x1.5 m diagram. As for the diameter of the body, it was found that the diameter of the trees planted on a 3x1.5 m diameter was 2.5 cm, which was 25% higher than that of control. Therefore, we are now paying much attention to studying and choosing the methods of cultivating gardens and various forms of shaping in low-density cluster welds used for apple and pear.

KEYWORDS: *Beauty of Forest, Methods, Biometric Drugs, Planting Schemes, Shaping Methods*

1. INTRODUCTION

In all regions of the country, there is a rapid development of horticulture and viticulture, a sharp increase in productivity and quality, thereby enhancing the population's ability to produce high quality fruits. Therefore, we are now paying much attention to studying and choosing the methods of cultivating gardens and various forms of shaping in low-density cluster welds used for apple and pear.

The aim of this experiment is to establish low-grade accelerated pearl gardens by selecting planting schemes and shaping methods and recommending farmers working in this area.

N.P. Donskix [1] (KabardinaBalkor) at the experimental station has improved their fruits when forming low-density apple trees. On the official site of Michurin State Agrarian University professor V.A. According to Potapov [4], the experience of the world's horticultural development shows that intensive gardens with weak clone vesh are now the most effective gardens.

V.I. Budagovsky [2] created the bush shaped form. This is the simplest way. Seedlings cut into slices 40 cm and cut into 30 cm seedlings. When conveying a garden, a string is used. At the height of 1m, two powerful queens are tied up.

I.V. Muhanin [3] notes that the requirements for the quality of the planting material have increased dramatically, as the horticultural trees move to high-intensity and intense densities of high-intensity. The quality of the sowing material is directly related to the condition of clone welds used. Highly effective construction and technology of cultivation of clones of clones used in organic soluble substrates have been developed.

2. FIELD OF RESEARCH

Field experiments were carried out at the Young Puppet Research Institute at the ToshDAU's small experimental farm. The total area of the study area was 0.30 hectares, and the experiment was carried out 4 times. The pear point of the study, which was attached to cluster cluster VA-29, was made on the "Lesnayakrasavitsa" grade.

In the experimental field, phenological, biometric observations, measurements and calculations were performed and analyzed.

3. RESEARCH RESULTS.

An analysis of the results of 2013 shows that different types of planting and shaping methods of small species of "Noknayakrasavitsa" are widely used in tree planting schemes, ie the height of 4x4 m, with a height of 1.45 m, 4x3 , The height of the trees in the 5m planting scheme was 1.76 m. As shown by the information obtained, this option was 21% higher than control (Table 1).

When we studied the width of the horn, the 4x4 m controlled version was 0.78 m, whereas the 4x3.5 m diameter was larger than 21%. When examining the diameter of his body, the planted diameter of 4x3.5m was 20% higher than the controllable variant.

When the palm tree was shaped, it was observed that 3x2.5m on the planting scheme had the height of 1.42 m, the varnishes 3x1.5 m were 1.70 m and 20% higher than that of control. The width of the horn was 0.80 m in the control version and 0.91 m was planted in a 3x1.5 m diagram. As for the diameter of the body, it was found that the diameter of the trees planted on a 3x1.5 m diameter was 2.5 cm, which was 25% higher than that of control.

The spot "Lesnayakrasavitsa" is different from the weakest walnut biometric figures of planting schemes and shaping methods (2013)

1-жадвал

Sowing schemes	The tree height, м	Inspection relative to, %	The width of the Sabbath, м	Inspection relative to, %	body Your body diameter, cm	I Inspection relative to, %
Blurred tread pattern (round shape)						
4x4 м (control)	1,45	100	0,78	100	2,0	100
4x3,5 м	1,76	121	0,95	121	2,4	120
Palmetta method (simple simplex shape)						
3x2,5 м (control)	1,42	100	0,80	100	2,0	100
3x1,5 м	1,70	120	0,91	114	2,5	125

2-жадвал

Sowing schemes	М The tree height, м	Inspection relative to, %	The width of the horn, м	Insp Inspection in contrast, %	Yo Your body Dia meter, cm	In Inspection in contrast, %
Blurred tread pattern (round shape)						
4*4 м (назорат)	1,45	100	0,78	100	2,0	100
4*3,5 м	1,76	121	0,95	121	2,4	120
Palmetta method (simplex)						
3*2,5 м (назорат)	1,42	100	0,80	100	2,0	100
3*1,5 м	1,70	120	0,91	114	2,5	125

4. CONCLUSION

When studying biometric data of different planting schemes and shaping methods at the low tensile density of the "Noknayakrasavitsa", it became clear that the 4x3, 5m planting scheme compared to the 4x4 m control scheme was highly effective when forming a lump-like shape to the trees. When designing the palmette of this type, the scheme of planting 3x1.5 m relative to the control variants was good.

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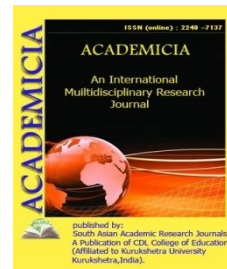
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PROSE TERMINOLOGY IN THE ENCYCLOPEDIA “MAFATIH AL-ULUM” BY ABU ABDALLAH AL - KHOREZMI (X-CENTURY)

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ABSTRACT

The encyclopedia "Mafatih al-ulum" ("Keys of Sciences") by Abu Abdullah al-Khorezmi was devoted to Abu-Hasan Uban-allah al-Utbi - the vizier of the Samanid emir Nuh II (365-387 / 975-977gg), where a concise explanation was given most common scientific terms for his time. This message is devoted to prosaic terminology, which are included in the eighth section of the fourth chapter, which is called "On the word usage of message secretaries". The outcome of writing letters was based on the knowledge of the epistolary style and mastery of them. The following material is related to poetry in prose, where we include the conclusions of medieval scholars, such as Ibn al-Mu'taz, Kudama ibn Jafar, as well as the 12th-century Khorezm scholar Yusuf Al-Sakkaki. In the eighth section, the fourth chapter of the encyclopedia "Mafatih al-ulum" al-Khorezmi leads 21 categories. Of these, we consider 10 categories: tasji ', tarsi', ishtikak, isti'ara, tabdil, muqabala, al-muqabalat facade, mubalaga, irdaf, tamsil. Thus, the encyclopedia of the 10th century Central Asian Scientist Abu Abdallah al-Khorezmi "Mafatih al-ulum" is one of the first works in which terms from the humanities and exact sciences of the Middle Ages are collected. Of great literary value is also the eighth section IV of the first chapter of the encyclopedia devoted to prosaic terminology, which was used by the secretaries of the messages, and the study of which has theoretical and practical significance. Comparison of terms with the relevant sections of the compilation of "Miftah al-ulum" by Yusuf al-Sakkaki, made it possible to more deeply reveal the meaning of each poetic term.

KEYWORDS: Encyclopedia, "Mafatih Al-Ulum", Prosaic Terminology, Production, Epistolary Style, Tasji ', Tarsi', Ishtikik, Isti'ara, Tabdil, Muqabala, Al-Muqabalat Facade, Mubalaga, Irdaf, Tamsil

1. INTRODUCTION

The merit of the compilation of the first scientific encyclopedia in the entire Muslim East belongs to Central Asia, represented by the Samanid government official Abu Abdallah Muhammad b. Ahmad b. Yusuf al - katib al - Khorezmi. As his nisba shows, he is a Chorazmian by birth, was born in the first half of the 10th century, lived mainly in Nishapur. He dedicated his encyclopedia of sciences, entitled "Mafatihallallum" ("Keys of Sciences"), to Abu-l Hasan Ubaid-allah al-Utbi - the Vezer of the Samanid Emir Nuh II (365-387 / 975-977gg). In it, the author gave a concise explanation of the most commonly used scientific terms for his time (Rahmatullaev, Ganieva, &Khabibullaev, 2017; Ritchie, 2004).

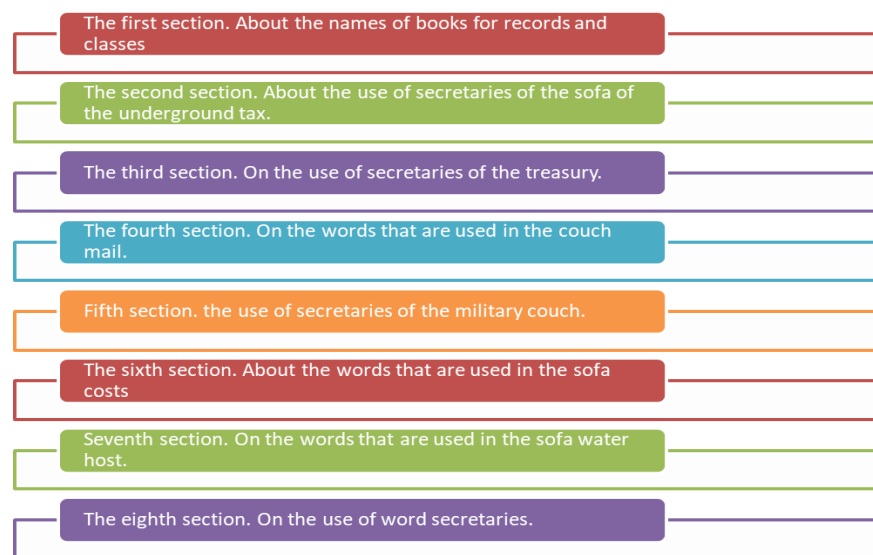
The encyclopedia "Mafatih al-ulum" was published in 1895 by the Dutch Arabist Van Fleton. The study was based on the oldest manuscript 556 / 1160-1161.

The book of Abu Abdallah al-Khwarizmi is divided into two large sections (makala). The first section includes six chapters on Muslim jurisprudence, blogology, Arabic philology, paperwork, poetics with metrics and history.

The second section treats non-Arab sciences (ajam), under which, of course, the Greeks, Syrians, Persians, and Indians. It contains nine chapters: philosophy, logic, medicine, arithmetic, geometry, astronomy, music, mechanics and chemistry.

2. METHODOLOGY

Our message is devoted to prosaic terminology, which are included in the eighth section of the fourth chapter. The fourth chapter of department I of the encyclopedia is devoted to the proceedings, which included eight sections.



Abu Abdallah al-Khwarizmi writes in the introduction to the eighth section: "As for the secretaries of the messages, all (expressions) mentioned in this chapter are among those used by them. And I mention in this section (terms) peculiar only to them. "

In the above, there are secretaries involved in the preparation of official papers and all sorts of letters. The art of writing letters was based on the knowledge of the epistolary style and mastery of them (Altbach & Levy, 2005; Crook, 1996; Studies & 2009, n.d.).

The epistolary style required the use of various expressive means of language, and some of the means used in poetics. Therefore, the following material is to a certain extent connected with poetry in prose. To the definition of prosaic terminology of al-Khorezmi, we include the findings of such medieval scientists as Ibn al-Mu'taz and Kudama ibn Ja'far, as well as the 12th century Khorezmian scholar Yusuf Al-Sakkaki.

3. Main part

In the eighth section, the fourth chapter of the encyclopedia "Mafatih al-ulum" al-Khorezmi leads 21 categories. Of these, we consider below 10 categories.

1. Tasdji (تسجي) ("Rhymed prose"): Al-Khorezmi's characteristic is [a concept] known, not needing to bring examples to it.

From the predecessors of al-Khorezmi, Kudama ibn Ja'far mentions this term in the book "Naqd ash-shir (Critique of Poetry)", where he gives an example from Imru-l-Qais poem. Moreover, he draws the reader's attention not to the rhyme of a byte, but to the first two words "sadr" and "khashv". Yusuf al-Sakkaki, in his opus "Miftah al-ulum", briefly and clearly describes this term: "As for Saj'a, this is in prose the same as rhyme in poetry".

The meaning of the term Tasji '(saj'a) is well known because of its widespread occurrence, especially in the middle-period. This term corresponds to the Russian term "rhymed prose".

2. "Tarsi" (ترصيع) ("Inlaying"). Al-Khorezmi's definition: - "at-Tarsi" is when speech is rhymed and proportionate in its structure and in parts that are not at the ends of sections [speech], meaning the requirement of adherence to internal rhyme and size. Words of Abu Ala al-Basirah

ح ت د عادت عري ضدك تصري حاوت مري ضدك تصديحا :

«So it turned out that you were in danger of being liberated [at liberty]” and your disease is recovering.”

3. Ishtikak (اشتقاق) - (etymological education from one root "). By definition, al-Khorezmi: Ishtikik is what is called in the poetry mujanasa. And these are the words of the speaker:

لات رد ال جاهلا لام فرطاوم فرطا

"The fool sees only exorbitant or squandering"

In this example, the words

مفرطمفرط (mufritun and mufarritun) are formed from the same root.

Yusuf al-Sakkaki writes about this term: "Ishtikak is when two words with a similarity go back to the same root." As an example, he cites the words:

Basil - روح - spirit ريحان

The term Ishtikak is translated into Russian by I.Yu. Krachkovsky: "Etymological formation (from one root)» .

Istiara (إِسْتِارَة "borrowing"). In the text "Mafatih al-ulum" by Abu Abdallah al-Khorazmi, this term is given twice in the fifth section of chapter V, which describes artistic and expressive means used in poetry, as well as in the eighth section of chapter IV, where secretaries used to write letters during writing terms used in prose. In describing the term "Isti'ar" al-Khorezmi does not provide a definition, limited to three examples. «Погасогоньятежа» - خمدت نارال فتنه

. "The war put its burden (i.e, over)" - وضع تال حرب لوزارها

« Truth has chested [to the ground] "(i.e. the truth is established)- ال قدال ح قجزانه

Details examines and systematizes Al-Sakkaki's "Isti'aru", who takes her out of the "ilm al-Badi" framework (poetics), into the "Al-Bayan" section (style). Yusuf al-Sakkaki identifies two main types of istiars:

1. Al-istiara at-tasrixiya
2. Al-istiara bil-kinaya

In addition, he divides the first genus into two categories.

1a Al-Istiar At-Tasrikhya At-Tahkikiya - Istiara clearly expressing and really characterizing (meaning). According to al-Sakkaki, the "istiar" of this species is an image that has these qualities in reality.

This image is used instead of the subject of comparison without mentioning the latter. So if Amr, in her strength and courage, is likened to a lion, then the expression of this species will be the expression of the phrase: "I saw this lion." If the girl's face is compared in beauty and roundness with a full moon (بدر) the story of this species will be: "I saw the moon smiling." In these examples, used as "istiar", the images of the lion and the moon - in reality, possess the necessary qualities (courage for the lion, roundness and beauty for the moon).

1b. Al-istiara at-tasrihiya at-tahyiliya - istiara clearly expressing and conveying the imaginary (meaning). Unlike the first type, here, the image, which is a metaphor, is endowed not with real, but with imaginary qualities. At the same time, its clearness is emphasized by connecting to the metaphor of an additional comparison. So, this type of story will be: "Fangs and claws of fate, like a beast of prey." Here, with imaginary qualities, are "Fangs and claws of fate", for fate does not really have "fangs" and "claws". A clearness (تصريح) It is expressed by an additional comparison (a fate similar to an animal).

Istiarabil-kinai - "Istiara with a hint" is very close to the istiar at-tasrihya at-tahyiliya. And here the image is endowed with not real, but imaginary qualities. In contrast to "Istiara At-Tasrihiya", a direct comparison is omitted here and instead of "Fangs and claws of fate like a predatory beast", "Istiaroybil-kinaia" will be: "the claws of fate arose in such and such".

Thus, an analysis of the information of al-Sakkaki shows that istiara covers our concepts of metaphor, metonymy and synecdoche. I. Y. Krachkovsky arrived at the same conclusion in his time on the material of the analysis of the Kitab al-Badi Ibn al-Mutazz. .

Tabdil (تبدیل - "Game of paired words") - as the words of some in their prayer.

لات فقرند بالا س تغناء عنك وال لهما غند بال فقرال يك

“Oh, Allah, enrich me with your need and do not be poor in me that I need you.”

Abu Abdallah al-Khorezmi does not define this term, it is limited to an example. A.F. Meren in his book “Arabic Rhetoric”, referring to Kazvini’s commentary “Tahlis al-Miftah” gives an example:

“Gentlemen’s habits

From the above examples we can conclude that a tadbil is a game of pair words-pair use of words of the same root in different meanings.

Mukabala- “Confrontation”. The characteristic of al-Khorezmi: “The correctness of muqabals is that antonyms and variants of meanings are observed and that each of them is compared with the corresponding one of them”.

Mukabala is of three types: from the point of view of meaning, it is a combination of “father” and “son” of opposition, as “white” and “black”, “blind” and “sighted”, and along the line of verbosity it is “denial” - confirmed as saying yours: “Zayed is sitting” - “Zayd is not sitting”.

Fasad al-Mukubalat (“Wrong opposition”) - like for example if you say:

لا سمرولا خيرولا سارق ولم يات ند مالا ناسا سود

“Nobody comes to me from anybody, neither black, nor dark, nor good, nor thieves”

It would be correct to say:

خيرولا شريرولا ولم يات ند اب يض

Neither white nor black, neither good nor evil come to me.

Of the preceding scientists, only Kudama Ibn Jaafar mentions the “mukobala”, the correctness and wrongness of its use (Hing, 1997; Kalpakjian&Schmid, 2014; Kuralbayev, Myrzaliev, &Sevim, 2016).

By definition of Yusuf al-Sakkaki: “Mukabala is when a connection is made between two or more things that are related to each other and between two opposing them (things).

I.Yu.Krachkovsky points out: “Mukabala is a juxtaposition of two thoughts that are opposed to one another in some sharp line” .

Mubalaga (Hyperbola). The characteristic of al-Khorezmi: “Mubalaga is when the meaning is expressed by some [other concept], which increases it with beauty and goodness”. As a certain (poet) described a tribe: “They have generosity of the most generous, whose position has become wide, the courage of lions, followed by lion cubs and the care of kings, whose hopes have become spacious and the pride of the paternal and maternal lines”. In each of these parts there is a mubalaga and a takid.

In the writings of Ibn al-Mu'tazza and Qudamah Ibn Jafar, this category is also mentioned. As I. Yu. Krachkovsky notes, the mubalag of Ibn al-Mu'tazza is called “ifrat fi-s-syph” - “excessiveness in the description”. This is one of the few cases where the term Kudama (Mubalog) was subsequently established. Kudama gives a detailed definition of this category. Mubalaga can be translated into Russian by the well-known term “hyperbole”.

Mubalaga, in turn, is divided into advantages. One of the advantages of (circle) mubalaga is irdaf. Idrif. Characteristic of Abu Abdallah al-Harezmi: "Yrdaf is when pointing to the meaning through readf, when it follows the meaning of something that does not concern him directly." As they say: "In such and such a fire the fire will not go out." he treats a lot. And more eloquently than this: "At such and such a lot of heat." Kudama Ibn Jafar categorizes the category of rdaf among the advantages of the combination of sound and meaning..

Tamsil. The next advantage of the Mubalaga circle is the tamsil. Abu Abdullah al-Khorezmi does not give a description for this category, but gives an example: "It's like they say:" He turned the outer side of the shield to him, "when he turned away (from friendship)."

Kudama attributes the category of tamsil to the merits of a combination of sound and meaning.

As for Yusuf al-Sakkaki, the fact that the tamsil category does not lead separately, but as a dependent part from the tashbih category.

A.F. Meren writes, based on the essay "Talkhis al-Miftah": "As an example, Tamsil can be an expression from the Koran: ق ضد الأمر - "The matter has been resolved. " This indicates in general terms that the life and death of each person is defined. "

I.Yu. Krachkovsky mentions tamsil without definition and example, as one of the categories of poetics. He translates tamsil into Russian - "comparison". Thus, the encyclopedia of the 10th century Central Asian Scientist Abu Abdallah al-Khorezmi "Mafatih al-ulum" is one of the first works in which terms from the humanities and exact sciences of the Middle Ages are collected.

4. CONCLUSION

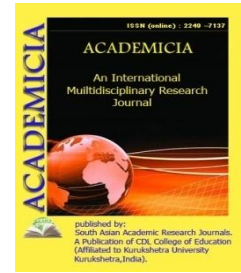
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SOCIAL-PHILOSOFICAL PHILOSOPHY DEVELOPMENT IN THE CENTRAL ASIA IN THE PERIOD OF AMIR TEMUR AND TEMURIDS

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ABSTRACT

It is scientifically justified that this paper has been able to create a great centralized and secure state, due to the fact that Amir Temur is a master of talent, diplomacy and great statesman. The role of Amir Temur and the Temurids as a sponsor of science and culture and their role in ensuring the development of society is emphasized. In fact, philosophy cannot be dropped into a complete book. Philosophy, which is a book, is just a systematic system of philosophical knowledge. The Timur and the Temurids' epoch can be described correctly by writing the history of philosophy and philosophy. In the middle of the XIV century, Turkestan, which had been very active in the development of the Chingus Empire, suffered from the political instability. It is clear that the first decrees issued by Amir Temur on his throne will have the intention to correct this situation. In the theory of knowledge, Taftazoni's view is different from Ibn Sinonik. For example, when Ibn Sina knew something about the event, Taftazoni understood them as an intermediate step between individual feelings and knowledge. Because of the presence of events and phenomena, they come to the knowledge of the emotions and forms they awaken. This is no accident. The culture and civilization of the Temurids era, which lasted about five hundred years, has been highly developed during the rule of many Temurids. The Timurid era, which has established political stability, peace and justice, has created its own power and unity.

KEYWORDS: Amharic, Archeology, Mudarris, Science, Culture, Philosophy, Mathematics

1. INTRODUCTION

In the history of humanity, there are periods in which the nations that are ready for great deeds, led by their leaders, have achieved attainable results in the thousands of years in certain short stages of history. It is these periods that end up in the history of mankind in the name of the great people of this nation, enriches the world culture, and contributes greatly to the universal progress.

Amir Temur and the Temurids' epoch are the time when the national genius of our people, liberated from the Mongol invaders, has risen to the highest peak. This philosophy of philosophy is a reflection of the great work of our people, led by Amir Temur, the leader of our nation, to preserve and strengthen our independence. It is the age of the nation, the revival and stability of the national statehood, the dreams of independent living. This is evident in his philosophy and this inheritance takes a special place among the philosophical foundations of today's national consciousness and ideology of independence.

Some have written philosophical works of Timur and think that he has a connection to philosophy. Is Timur's life and activity not really philosophy? Is not life more meaningful to philosophical conclusions than to the lives and works of others? Is it possible to study philosophy solely from books? In fact, philosophy can not be dropped into a complete book. Philosophy, which is a book, is just a systematic system of philosophical knowledge. The Timur and the Temurids' epoch can be described correctly by writing the history of philosophy and philosophy. The life of Amir Temur, his work, the cultural processes in the Temurids era, and the development of science are a few philosophical books and dozens of researches, including the science, culture, art, philosophy and literature, such as Temur and Darius , it is difficult to find the political dynasties themselves, which have achieved remarkable success in these areas in the history of the world [1.76].

Level of knowledge of the problem. The conceptual issues of the historical and cultural heritage of the Uzbek people and the ideas of raising the upbringing of youth in the works of the President of the Republic of Uzbekistan ShavkatMirziyoev serve as the methodological basis of this research.

2. LITERATURE REVIEW

About Amir Temur's life, spiritual heritage and religious-philosophical views in Uzbekistan I.Muminov, B. Ahmedov, N. Ahmedov, E.Rtveladze, A.Saidov, Z.Mukimov, J.Yakhshilikov, S.Karimov, A.Ziyo, X Dadaboev and others have brought many valuable information in their works, such as Ibn Arabshah, M. Shaykh, A.Ismoil, L. Keren, H.Hukham, H.Lemb and other scholars of foreign scholars, Amir Temur in world politics, socio-economic and cultural processes acknowledged. In the CIS States, V. Barartold, I.Yu.Krachkovsky, L. Zimin, A.Yakubovsky, AMGurevich, LVStroeva investigated the political activity of Amir Temur. He is interested not only in the East but also in the Western Orientals.

The purpose of the research is to analyze and analyze the legitimate information on the legacy of Amir Temur and the Temurid heritage in various sources, and to justify the spiritual-enlightenment and socio-ethical position in the upbringing of modern youth.

Object of research is scientific, historical and political sources of social, political and ethical activity of Amir Temur.

The subject of the study is to reveal the spiritual essence of Amir Temur's humanitarian activity.

Research Methods. The researchers used scientific methods such as retrospective and systematic analysis, hermeneutic approach, inheritance, analysis and synthesis, comparative study, objectivity, historicity and logic, observation.

3. THEORETICAL BACKGROUND

History indicates that a country that is interested in science and culture and struggles to elevate its spirituality will be a true advancement in these areas. Political support can not be denied together with other areas as the most important factor in cultural development. The cultural-patriotic, nationalist Amir Temur and the Timurids were full-fledged political and economic foundations for the spiritual development of that time. That is why one of the reasons for our people's appreciation for their souls throughout the ages.

Amir Temur ibn TaraqayBakhodir (1336-1405) was born in Khoja Ilgar village near Cesh city. His main historical work is that he fought against Mongol invasions and destructions and liberated them from Central Asia. In May, he established a strongly centralized state, ending the conflict between the feudal and the proprietors. Provided discipline and rule of law in the country.

The sign of Timur's signage is "authenticity", which means "you will be saved if you are honest." Often at his session there were no shameful words, bloodshed, captivity, reprimand and haram. Temur was obedient, courageous, courageous, and courageous people, with courage and courage. [2.65]

Amir Temur is known as a masterful commander. He spent his life on the prosperity of the people of Movarounnahr, for the prosperity of the land. In his time, luxury buildings, buildings, beautiful gardens were built, schools and madrassas, mosques were built and our country became a beautiful part of the East. The well-known philosopher Ibrahim Muminov wrote: "In the 14th and 15th centuries, Temur's activities are ideologically exposed. These are the temptations of Temur and the desire not to feel welcome. Nevertheless, in these sources, there are rich historical facts about Temur. "[3.16]

Another great service of Temur was that he became known as a sponsor of culture and science, gathered scholars and fiqhalo in his palace. Khoja Afzal, JalolKhokiy, MevlanaKhorazmiy, MevlanaMunsy and many others engaged in science and art in his palace. Shohruh, Ulugbek, HusaynÖzgür, Babur Mirzaslar consistently pursued his traditions in governance, adherence to the rules of religion and Sufism, in the development of science and culture. The philosophical idea of this era was to appeal to secular and religious sciences, to seek nature, to raise the minds and abilities, to appreciate the moral qualities of the human being, to promote humanity, national and universal values [4,130].

He has a great potential in a number of sciences (history, poetry, medicine, mathematics, astronomy, architecture), and, again, the king, the supreme ruler of the great kingdom, naturally looks at science and culture with great respect for the scientist and the creator, will activate it. Amir Temur is well aware of the fact that the development and future of any society and state can not be imagined without science and culture. He also understood the need for talented individuals to be in need of special and constant attention, to protect their unique talent, to create their own creatures, and to ensure their living.

He remembered that scholars and pagans would be more concerned with the social and state development of their state and their outlook on the current state of affairs than the other social strata and that they would have relevant experiences and knowledge. For this reason, he did not go into the world and the city to collect the scholars and the clergy, to talk long conversations with them, to listen to them, to argue with them [5.197-198].

This attitude to science has preserved the culture until the end of the life of the Sahibkiran. His descendants also walked on this path. As a result, many madrasahs, libraries, schools were built during the Temurids' era. The scholars from all over the world were invited to study and teach. In our opinion, the policy of Amir Temur in science and culture should be assessed through these factors. In this regard, the following explanation of Ibn Arabshah is remarkable: "Temur was kind to scholars and kept the sayyids and the Sharifas close to them. He enjoyed the privileges of the scholars and the clergy, and he enjoyed them before anyone else. He placed each of them in his own order and expressed his respect for him. He was full of kindness to them, and he was mixed up with his fervor. He would also have had a meaningful discussion with them, and in that respect he would have been a good man. "[2.69]

4. Main part

In the middle of the XIV century, Turkestan, which had been very active in the development of the Chingus Empire, suffered from the political instability. It is clear that the first decrees issued by Amir Temur on his throne will have the intention to correct this situation. It is envisaged that the scholarships will be provided to the madrasahs and their pupils, which are the higher educational institutions. In this regard, MuiniddinNatanzhi writes: "The imams have made the degree of respect for the Islamic scholars, judges and great Sheikhs so that science is thriving, and the pupils are paid more than the amount required. As a result of that, the magnificent noblemen, who occupy a few thousand different sciences, have appeared on the face of the earth in the light of the glorious generosity of their glorious dynasty of gifted talents. Every scientist wearing the perfection of maternity and every pupil who has been the mark of maturity has earned a reputation, career, and reputation. The Amir ruler ruled such an enormous state because of the delight of the people who lived in the vast rug of the land until now, and that the property of the Muslims and the interests of Muslims, according to the principle of "Put something clean and dishonorable" from the postmortal sultans' "[6,111] It has been narrated on the authority of Abu Hurayra that the Messenger of Allah (saw)

Turkestan, which suffered persecution in the Chinghiz era as a result of its political and emotional turmoil, was able to revive in the time of Amir Temur. At the same time, he was primarily relying on local science and culture, which created conditions for the development of culture and political stability. As a result, there is no doubt that the Turks from different countries had their ancestors gone to North India, the Arab countries, and other generations. On the other hand, the cities of Samarkand, Bukhara, Shakhrisabz, and Herat became the center of culture and science, and the well-being of creativity rather than other places caused many foreign scholars, poets and artists to come here. The proof of this is the fact that there are Iranian, Greek scholars working at the Ulughbek Academy. For example, Ulugbek's Observatory, a well-known Iranian scientist, GiyosiddinKoshi, who worked in his scientific school, was one of those scientists. He said that in Iran, the attention to the science of the stars weakened, and on the contrary, Samarkand was faced with Movarounnahr because of all the conditions. It is

appropriate to quote the words of Amir Temur, the elder of Amir: "Sayyids, scholars, scholars, judges, judges, doctors, astrologers, narratives, messengers, and narrators, according to their status, to set aside water, duties and salaries [7.100].

In the 14th-15th centuries great attention was paid to logic, natural-scientific sciences, especially astronomy, philosophy and ethics. Sa'duddin Taftazani (1332-1392) was the great representative of the Islamic philosophy. The fame of Taftazani comes to Amir Temur, who is gathering the most famous scholars, craftsmen and craftsmen in his capital Samarkand. He invites Taftazani to Samarkand, and the scientist lives in the palace until the end of his life. He actively participated in scientific discussions held regularly at Temur. He was famous for his knowledge of words, logic, geometry, poetry and Arabic grammar.

Theoretical heritage of Taftazani included all aspects of medieval science. He has written more than forty works, and has come to our attention from his works: "Takzib al-mantiq al-kalam", "Maqasid fi il al-kalam" "Maqasid at-tolibin" (The Purpose of the Tolerance Scientists), "Risalefiyyah al-musallas" (The Risale Regarding Angles of the Triangle). In addition, Taftazani wrote many comments on the works of his predecessors.

One of the most prominent issues in Taftazani's world view is freedom and will. It is well-known that many philosophers have expressed different opinions on the issue of free will and have sought to answer the question of whether a person is free to behave in his or her own will. In the theory of knowledge, Taftazani's view is different from Ibn Sina. For example, when Ibn Sina knew something about the event, Taftazani understood them as an intermediate step between individual feelings and knowledge. Because of the presence of events and phenomena, they come to the knowledge of the emotions and forms they awaken. Because the emotional substance only accepts the external appearance of its essential attributes and relationships. For this reason, the thinker believes that the substance must be in order to have emotional comprehension. But intelligent and logical knowledge is far beyond the material base, and it emerges at higher stages than emotional knowledge.

Another famous scientist and philosopher, Mir Sayid Sharif Jurjani (1339-1413), came to Samarkand in 1387 in connection with the conquest of Sheraz by Amir Temur. Jurjani was engaged in all kinds of subjects in the East in his youth. In addition to Islamic philosophy and word, logic, and language, he carefully studied all aspects of natural sciences and wrote great scientific works about them.

Jurjani has taught Samarkand's famous madrasahs with great philosophy, logic, astronomy, fiqh, language and literature, discussion and other subjects. Among his students were Kazizoda Rumi, Ulugbek and others.

5. Amir Temur and Temurids Heritage

The total number of Jurjani's works is more than 50. Jurjani's philosophical works, known as "The Essence of All Necessity" and "Reflection of the World," are in the form of manuscript. Jurjani has been the author of the Arabic "Adabul-munozara" ("Treaty on the Rules of Discussion") devoted to the theory of science and logic, "At-ta'rifat" ("Definitions"), "Usul in logic" and also the author of his works. Jurjani did not doubt the existence of an objective existence like the great philosophers of the Muslim East, but it was in the mentality of the theory of emotion as he interpreted it in a mental way. Jurjani writes in his book, "The Book of

Inheritance," that the existence of the existence exists in its essence and can not be eliminated. What is inherent in the Jurjaniaqeedah is to gradually explain the scene of existence. The first chapter of the five chapters of his book, "The Miraculous Reflection", is devoted to the necessity of the existence of the Wâjib-ul-wujûd and the potential existence of the Almighty. Jurjani states: "There is nothing that can not be done and what is needed is called wâjib al-wujûd. For example, a concept like the essence of the Creator. There is something that neither is necessary nor is not called "ul-wujûd" [8.1].

The image of Amir Temur, which has been decorated with bright pages of our past, should pay special attention to the study of his work. This extremely necessary and noble work is primarily based on a thorough investigation of the written sources created during Timur and the Timurids' era [9.4].

The attitude of Amir Temur to the scholars was not merely to protect or adhere to his advice. Sakhibkiron constantly strives to participate in conversations and debates of scholars, sometimes observing debates and discussions among scholars, and sometimes with scientific scholars and conversations with scholars. This tradition of Amir Temur is often used by historians of that time: "Many times, when Amir Temur was free from work in the country, that is, discussing important issues with the rulers and ministers, taking decisions or giving orders to them, participation in honorable conferences, they would bring together the sophisticated scholars and the wise scholars around them in order to enjoy their blessings. "[10.59]

Thus, the cultural rise of Movarounnahr and Khurasan in the XIV-XV centuries. Scientists call it the Renaissance period. Some scholars say that this title does not fit in the East. In any case, the rise of the XV-XVI centuries in Europe, the important features of the Renaissance The cultural upheavals in Central Asia are very similar to each other.

6. CONCLUSION

An important feature of the material and spiritual rise of the XIV-XV centuries was that the growth of production, domestic and foreign trade, craftsmanship and farming developed during that period. Diplomatic and cultural relations with foreign countries have been established, attention to human intelligence and its best qualities has been enhanced, science and art have been developed. A great deal of attention is paid to studying the cultural rise of the Temur and Timurids at a number of scientific centers in many countries around the world. This is no accident. The culture and civilization of the Timurids era, which lasted about five hundred years, has been highly developed during the rule of many Timurids. The Timurid era, which has established political stability, peace and justice, has created its own power and unity. The Timurids' state had a significant impact on the world history and culture. Therefore, scientific research on the complexity of the great figure of Amir Temur and the founder of this great authority, one of the urgent tasks of modern scholars.

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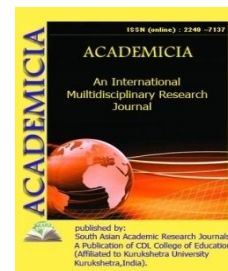
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MICRO TEXT AND ITS COGNITIVE MODEL

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ABSTRACT

The article examines the problem of cognitive model of the micro text. Here the complex sentence is learned as a micro text in the basis of hierarchical relations of its components. In the process of the analysis of language material local and global structure of the components of the microtext is taken into account, which is important for the definition of its cognitive model. In general, the micro text is defined as a global structure, while its separate components are studied as local structures. It is known, that each syntactic structure has a definite situation beyond the microtext, and its components also have a situation. This is also a basic definition of general and private cognitive model of the microtext. Macro proposition appeared in the result of interrelation of propositions we can only imagine. As it is hard to give verbal expression to macro proposition. In other words, relations between propositions of two sentences and macro proposition appearing in this basis is only imagined in the mind of the speaker. One of the first who paid attention to it was M.N.Peterson, who considered such notions as «complex or compound sentence» as scientifically not based notions. He wrote about it in the 20-ies of the last century [2,33]. Unfortunately, his ideas didn't find understanding among the wide cycle of linguists, and as a result in modern linguistic science there is a term «complex sentence» still used.

KEYWORDS: *Microtext, Discurs, Global, Cognitive, Model.*

1. INTRODUCTION

Syntactical constructions, which we traditionally call complex sentences, in fact are larger both on components and syntactical structure units than a sentence. This puts under doubt sensitivity of the usage of the term «complex sentence» referring them [1]

One of the first who paid attention to it was M.N.Peterson, who considered such notions as «complex or compound sentence» as scientifically not based notions. He wrote about it in the 20-ies of the last century [2,33]. Unfortunately, his ideas didn't find understanding among the wide cycle of linguists, and as a result in modern linguistic science there is a term «complex sentence» still used. But in accordance with the laws of hierarchical relations of speech units any language unit may get activity only within a larger unit than itself. Can a sentence activate within a sentence? In accordance with it A.M.Peshkovsry offered to use the term «complex whole» instead of the term «complex sentence» [3,414].

In the Uzbek linguistics the given problem was brought forward for scientific researches by B.Turniyazov, who put into scientific usage the term «complex syntactical structure» which coincides with the notion of microtext [4,63].

The given article tells about the hypotaxical constructions having the status of microtext and meaning larger units than a sentence.

While analyzing such macrostructures T.vanDeyk used the term «discurs» (local and global). In his opinion, if speaking about the relations between propositions of discurs components it is possible to talk about local joining if speaking about the joint of fragments of discurs of a large scale, then there is a global joint [5,413].

In the given article the global joining means the connection between hypotaxical constructions within a text, or between the transforms of the definite hypotaxis, and local joining is a connection between the components of hypotaxical construction: “ After the children went into the school building noisily, both aunt Risolat and Kamolova remained there “ (H.Gulyam. Koradarya).

The given example hypotaxical construction has the status of a micro text and consists of two components. At the same time each of the components is based on separate propositions: The children + into the school building + went; Ant Risolat, Kamolova + to remain.

2. LITERATURE REVIEW

Semantic connection between the given propositions has a local status. It is possible to speak about the global connection when hypotaxical construction with other hypotaxes within the larger discurs.

As it was mentioned by T.vanDeyk, macrostructure means the unity on the level and content [5, 41].

It is peculiar, that the global structure is based on the macro proposition which is formed from interrelation of two propositions. As N.Suleymanova mentioned, proposition which occurs within definite sentence has a real expression. But macro proposition formed within macrostructure is characterized by abstractness [6,203].

It can be seen in the complex syntactical constructions and indentation (occurrence of polypredicateness and above predicateness), as the predicateness, expressed in separate sentences forms above – predicateness, connected with the general structure of the text [7,20].

In the complex syntactic constructions it is rather hard to imagine macro proposition. As hypotaxical construction in most cases has two components, one of which is leading (main), the second has a subordinate status. The first of these components is a semantic center of the hypotaxis. This kind of situation, certainly a bit weakens proposition of the subordinate sentence. But it cannot be a reason for rejecting of the notion of macro proposition in general. Macro proposition remains one of the characteristic features of hypotaxical construction: “Granny Mehribon read the poem in such tender and warm tone that the listeners could imagine the history of a beautiful love and real devotion” (H.Gulyam. The Tashkenters).

3. METHODS

The fact that the given hypotaxical structure has a status of a text (micro text) does not require explanations. We can say it is a complex syntactic construction. It is very important. As any hypotaxical construction exists within the notion of a discours.

In the case given in the main (leading) sentence the propositional structure can be identified in the following way: (Granny Mehribon) the poem + tender tone + warm + read. In the subordinate sentence there is the following proposition: (the listeners) image + beautiful love + real devotion + history + imagine. In both cases propositional structure is formed within both syntactic and semantic relations between the predicate and its arguments. Macro proposition appeared in the result of interrelation of propositions we can only imagine. As it is hard to give verbal expression to macro proposition. In other words, relations between propositions of two sentences and macro proposition appearing in this basis is only imagined in the mind of the speaker.

It is not hard to notice, that given hypotaxical construction appears in the basis of result concept (situative content), at the same time each sentence has micro concepts. For example, in the first sentence the compositions “tender voice and warm tone ” and in the second sentence “ beautiful love and real devotion ” simultaneously carry out the function of both concepts and frames.

It must be said, that the cognitive model of the micro text is based on the notion of a frame. In each sentences of the micro text the peculiar frame is identified. It has a significant role in the identification of separate models of the given sentences. With the help of the main sentence frame the general model appears.

T. van Deyk also spoke about the existence of general and separate (private) models, their difference from each other. Separate model gives a unique information of the situation, standing beyond the sentence, whereas the general model gives the imagination of the situation, expressed in several sentences.[5,165].

4. Main part

In separate models we get new (or relatively new) information. In general model the information gets rather abstract character. Here the frame also obtains some “general view”: Though granny Mehribon lives in the suburbs of the city, on the coast of the Kichkirik, in the field, her fame was

familiar to the women in Beshyogoch village and especially, in Aripoya.(H.Gulyam, The Tashkenters).

In the given example, the two componenthypotaxical construction is formed, its cognitive model occurs within the given components. Beyond each sentence composing the separate component, there is a definite situation.

Owing to the interrelation of private models, the general model is formed. In the first sentence expression the coast of Kichkirik, in the second sentence the words Beshyogoch and Aripoya have the function of frame. But as the second sentence is the main one, its frame serves as a basis for the formation of a general model.

As it is mentioned by T. van Deyk, private model expresses a definite situation, general model unites all the information. Private models appear on the basis of a concrete frame, scene, in the general model these frames are unites and as a result a general frame appears [5,165].

Frames of private models get the status of subframes. T. van Deyk also mentions that in this process also transformations and changes can be observed. That is, in the process of formation of a micro text some components may be omitted, sometimes they may be exchanged with the others. The scientist called this kind of situation by three separate terms: 1. Omission. 2. Selection. 3. Generalization [8,17].

He brings forward the following examples, demonstrating above mentioned.

1. Omission: A girl in yellow dress passed us. – A girl passed us. – She was in yellow dress. – the dress was yellow.
2. Selection: Peter got on the car. – He got into the car. – He left for Frankfurt. – He left for Frankfurt by car.
3. Generalization: The doll was lying on the floor. – The wooden train was lying on the floor. – Bricks were lying on the floor. – The toys were lying on the floor.[9,4].

The phenomenon of omission is also observed in the translation of language units into the speech, particularly, in the formation of (derivation) of hypotaxical construction. For example:

1. The girls, each of them is the Beauty. (Oybek. Great road)
2. The day is cold but the market is crowded. (Oybek. Great road)
3. I ensure that this situation is not a trouble. (S.Abdulla. MavlonMukimi)

In the first sentence we can see that some components of hypotaxical construction are omitted: they are the girls....

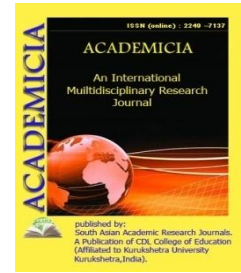
In the second example also some elements are omitted: Though the day was cold, the market was crowded. Separate words of subordinate part of the second sentence are also omitted: I ensure you, that....

As we can see in all sentences separate elements are omitted, but these omissions must not be reflected in the meaning, semantic “weight” of general cognitive models of hypotaxical construction. Only in this case both private and general models have force.

We think, that the phenomena omission, selection and generalization are directly connected by synergetic force of language units. Synergetic influence exists in the derivation of both micro structures and macro structures.

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THE CONCEPT OF MORAL PERSONALITY DEVELOPMENT IN CREATIVITY OF THINKERS OF CENTRAL ASIA

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ABSTRACT

In modern conditions of globalization research of methodological problems of studying and value of moral values of East, in particular Islamic philosophy becomes actual. Scientists and thinkers of Central Asia, who lived in the middle ages, made a great contribution to its development. There are many scientific works devoted to the study of their philosophical and ethical views. There, however, is not enough reflection on the relationship between their concept of moral perfection of the individual and the basic values of Islamic philosophy. In this regard, in this article the concept of moral perfection of the person created by outstanding Central Asian scientists as Abu Nasr Farabi, Abu Ali Ibn-Sina, Abu Rayhan Biruni, Alisher Navoi are considered by our side as interrelation with basic values of Islamic philosophy. I think that on the basis of these values in Islamic philosophy in the middle ages was developed the doctrine of the ideal, morally perfect man "al-Insan al-Kamil". According to their teaching, the formation of such a person was the cornerstone of achieving an ideal, perfect society.

KEYWORDS: *Moral Values of Islamic Philosophy, Thinkers Of Central Asia, The Concept Of Moral Perfection Of The Individual, "Al-Insan*

1. INTRODUCTION

The XXI century-the beginning of the third Millennium, was difficult for all mankind it brought many progressive changes connected with rapid development of science, technology, emergence of new highly developed technologies. But, at the same time, it is this stage of human society faced with rather intractable global problems caused primarily by "isolation of culture from its moral foundations", "excessive material concern", utilitarian and pragmatic understanding of the meaning of human life. As a result, questions about the correctness of the choice, the adequacy of ideological orientations and ideals sounded with renewed vigor.

Humanity was faced with the problem of choosing new survival strategies and began to look for them in the ideas developed in the traditional Eastern teachings. Since it is in Eastern philosophy, in particular in Islamic philosophy and in the most concentrated form in the teachings of Central Asian thinkers, the tradition of the priority of spiritual values has been especially vividly formed

Spirituality is always connected with a person's going beyond egoistic interests and primitive needs. It proceeds from the fact that the goals and vital interests of the individual are rooted in the system of supra-individual values. In true spirituality, in all its manifestations, morality always dominates. Central Asian thinkers have always focused their attention on this. The establishment of the "Center of Islamic civilization of Uzbekistan" in Tashkent is a manifestation of respect and recognition of the contribution of Central Asian representatives of Islamic culture, science and philosophy of the medieval period to the development of world civilization and universal humanistic values.

2. The core values of islamic philosophy

Islamic philosophy is an important element of Islamic civilization, a philosophy that was formed within the framework of Islamic culture.

The values of Islamic philosophy were formed primarily on the basis of Islamic religious doctrine, it had a certain influence spiritual values of Zoroastrianism, Buddhism, Manichaeism, ancient Greek and ancient Indian philosophical teachings, which were common in Central Asia. Islamic philosophy was based not on the denial of the spiritual values of its time, but on their critical rethinking and creative development;

Secondly, Islamic philosophy was formed and developed on the basis of a harmonious combination of religious and secular Sciences; true knowledge was considered as an important factor in the formation of faith and, therefore, special attention was paid to the development of not only religious (Kalam, hadith, etc.), but also secular and knowledge (geography, geodesy, mathematics, astronomy, physics, medicine, music, etc.).

Third, an important feature of Islamic philosophy is rationalism and the development of logic. Correct thinking was perceived as a criterion of the truth of knowledge and the main condition for strengthening faith, as well as spiritual education of the individual;

Fourth, the humanistic and educational essence of Islamic philosophy, which was focused on tolerance, peaceful coexistence, the good of man and society.

Fifth, the manifestation of the values of Islamic philosophy in literary works, calligraphy, in the color scheme of images, architectural art, aesthetic values.

The most important feature of Islamic philosophy, in our opinion, is its moral values, which are manifested as a result of deep true knowledge and firm faith. In this regard, the doctrine of the ideal, morally perfect man is formed in Islamic philosophy. The formation of such a person is the cornerstone of achieving an ideal, perfect society.

When discussing the concept of moral improvement of the individual, it is important to highlight an extremely important aspect in the teachings of Central Asian thinkers, which echoes the modern search for new values and strategies of human life. It is about the relationship between morality and truth. Thus Ibn Sina wrote: "what is good for the mind is according to one opinion – the truth, and according to another - a good deed". Beruni believed that science "gave rise to the needs of man, necessary for his life." In his famous work "India" he wrote: "There are a lot of areas of knowledge, and they become even more when they are constantly turning to the minds of people of the era of upward development; a sign of the latter is the desire of people to the sciences, their respect for them and their representatives." However, in order for the truth to be revealed to man, he needs moral self-education. Human activity aimed at understanding the external world, and its activity aimed at improving their own inner world, should be consistent and assume each other.

The achievements of Islamic philosophy became an important factor in the preparation for the European Renaissance, and then influenced the development of world civilization.

3. The concept of moral perfection of the individual in the doctrines of Farabi, Ibn Sina, Biruni

In the history of the development of social thought moral perception of the world most clearly manifested in the works of Central Asian thinkers Farabi, Ibn Sina, Biruni and other thinkers. The purpose of moral life they saw in the continuous struggle of virtue with Vice, good with evil. Moral ideals of humanity - "good", "dignity", "love", "justice", etc., reflecting the values of the highest order are reflected in their concept of moral perfection of the individual.

The word "Kamal" or "Kamala" in Arabic means "perfection", "full-fledged"; "al-Insan al – Kamil" means "morally perfect person", "virtuous person". Farabi, Ibn Sina carried out the idea of "Kamalyan" as the basic principle of building a virtuous city. According to Farabi's teaching, evil is the fruit of unreasonableness, and the only way to acquire sanity is enlightenment. Good is a value in the name of which the most noble deeds and deeds are committed.

What is the essence of good and its significance for man and society, was considered by our great predecessors in their teaching "al-Insan al-Kamil". Farabi problem "Kamal" connects with the acquisition of wisdom, knowledge. The highest wisdom for Farabi is to be virtuous, so a perfect man according to Farabi is a virtuous man. He understands good as a unity of knowledge and activity, so the knowledge of good cannot remain in the form of contemplation, it must be realized in a moral act. At the same time, perfection is an eternal process of development of a person who loves wisdom. The question of perfection begins with the acquisition of wisdom and ends with the understanding of moral perfection as the meaning of one's life. In his "Treatise on the views of the inhabitants of the virtuous city" wrote that a person who has achieved perfection must have a shrewd mind, as well as "to love the truth and its advocates, to hate lies and those who resort to it; to have a proud soul and cherish honor, his soul must be above the low deeds and naturally strive for the actions of the sublime; to despise dirhams, dinars and other attributes of worldly life, to love from nature justice and its advocates, to hate injustice and

tyranny and those from whom they proceed; to be fair, but also not stubborn, not to be willful and not to persist in the face of justice."

Being scientists-encyclopedists outstanding Central Asian scientists they put forward the idea of "integrity of the world", the harmony of man and society. Universal harmony, in their opinion, is achieved not only by wisdom, deep insight into the essence of things, awareness of the meaning of human existence, but also by his good deeds, deeds: "the happiness of the soul is to improve its substance, and the latter is achieved by knowledge and charity." Based on the idea of social determinism, the relationship and interdependence of people's lives in society, they have repeatedly expressed the idea that the good of the individual is associated with the good of others, and that in society a person cannot live only their own well-being, as the interests of people are interrelated.

Outstanding scientist Beruni believed that " ... the desire is achieved by the application of labor, and getting good – the cost of something expensive." Developing this idea, he wrote: "Kindness is the desire for good to all people in General, and relatives in particular, with impotence – a good wish, and if possible – a matter... as for the appearance of the soul in the (sense) of morality and lifestyle, the person in power over his passions, in the power to change it, turning the negative side in the laudable as he persuades to educate his soul, treat it with spiritual healing and gradually remove its ailments in the ways specified in the books about morality."

The conceptual ideas of humanism and morality found their expression in the writings of Ibn Sina. Thus, wisdom, according to Ibn Sina, is the basis and source not only of human knowledge, but also of moral relations between people. For man is endowed with such power by which he is able to separate good from evil, perfection from meanness, intellectual maturity from error and falsehood. Man as a sentient being occupies a special place in nature. Thanks to reason, he becomes a person, free from the oppressive influence of random and natural forces of nature and subordinating his activities to the requirements of the "scales of wisdom".

Relationships between people are built on the principles of virtue, nobility. Ibn Sina wrote: "if we want to benefit another person, we want to acquire a good name, or we hope for retribution, or we do what is right to show good will and fulfill our duty, because the fulfillment of our duty is a moral dignity, merit and virtue. If we do not do so, we will not acquire these commendable qualities, virtues or nobility."

He notes: the mind "sees from what kindness, order and happiness flow." When a person is completely freed from his moral vices and bad habits, humiliating him as a person, he "without unnecessary difficulties and hardships provides training, it becomes useful and enjoyable to others." The ideas of moral perfection of the personality were clearly reflected in Ibn Sina's philosophical work "Instructions and instructions". These ideas in a kind of allegorical form as set out in his literary works - "hay Ibn Yakzon", "Risalatultayr", "Salomon and Absol" and "Cissatu Yusuf". In them, the thinker talks about the world and man, about the meaning of life; through artistic images, symbols sets out his moral ideas about good and evil, about wisdom and the perniciousness of vicious desires. They reflect the rich life experience of a scientist, a thinker.

4. The concept of moral perfection of the personality of AlisherNavoi

AlisherNavoi developed a peculiar concept of moral perfection of man ("al-Insan al-Kamil"). At the heart of his concept is the idea of continuous struggle of the person with vicious inclinations,

in overcoming of passions of soul. These ideas were reflected in the teachings of "tasawwuf", which arose in Central Asia in the XI-XII centuries and have a large impact on the work of many outstanding thinkers and poets, such as SaadiSherazi, AlisherNavoi. So in his poem "Confusion of the righteous" Navoi wrote:

"You cannot call a merchant Sufi,
Though discord in them bodily you will not find.
Not talking about the soul of corporal,
For the degree of high spirit look.
There is a difference between heart and soul,
They are – by name-confused sometimes.
The soul of rose mysteries – a Nightingale,
Lamp in the house of sincere people....
The Shrine of the Kaaba leads heart;
The soul is the sanctity of the eternal Creator.
But the soul must pass a difficult path
To find the Treasury."

The concept of man, the problem of moral perfection of personality found its philosophical understanding in the work of Navoi "Mahbubul-Kulub" ("Beloved of hearts"), written by him shortly before his death in 1500. The work consists of three parts. In the first part given to the moral and psychological characteristics of people of various social classes and professions, talking about their advantages and disadvantages, of just and unjust rulers, courtiers dignitaries and their customs, etc. In the second part of the book, the author examines the moral virtues, their place and role in society. Here Navoi gives philosophical and ethical analysis, defines the criteria of moral life. In the concluding third section of the aphorisms, and sayings deep wise sayings.

In them, the poet and thinker promotes the idea that only a highly spiritual person combines moral and intellectual power, and this is the main tool that elevates him above all other living beings. As rightly noted by M. Aripov in his study on the work of AlisherNavoi, his " deep reflection on man and his spiritual world, reflections on the universe and the meaning of life – is viewed through the prism of the concepts of "love" and "beauty". Love is the spiritual moral power, cleansing man from the scale of the passions, and of the prophets, who raised him in the spirit of high moral principles that guides the path of nobility, valor and tests of loyalty requires the active manifestation of a person's abilities and spiritual powers. Such love demands from a person self-improvement and self-knowledge, dooms him to a lot of torments and sufferings".

The idea of interdependence the good of the individual with the good of others, because the interests of the people are interrelated. This is what AlisherNavoi had in mind when he wrote in his "Khamsa" : "If you have made your banner to benefit people, then this benefit will be yours."

5. CONCLUSION

Thus, this approach goes beyond the understanding of education and study as something merely academic, or intellectually “fashionable”, or as another object of consumerism. It sees it rather as an option connected to an intellectual and moral autonomy of the educator.

The analysis of the concept of moral perfection of the personality, thinkers of Central Asia, allows to reveal the following their fundamental principles:

- Love of fellow-men, i.e. the principle of humanism, which actively forms the ideal of man and answers the question of the meaning of life, based on the understanding of man not as a means but as a goal;
- Relative autonomy of the person and independence in relation to the world as a whole, manifested in the freedom of choice, life position;
- Wisdom, knowledge as a basis for achieving moral perfection;
- morality as the highest spiritual value, revealing the content of such concepts as "good", "love", "courage", "justice", "responsibility", "happiness", "honesty", "dignity", "duty", which make a person strong, direct him to positive things;
- Orientation of the person on creative, but not destructive actions; beneficial creative activity of the person as the main criterion of his moral perfection;
- the need for self-education, i.e. spiritual self-improvement of the individual, which is expressed in the process of continuous struggle of a person with vicious inclinations, in overcoming the "passions of the soul";
- Moral improvement of the individual, as the main condition for the formation of a virtuous society and the state, the achievement of universal harmony.

The ideas put forward by outstanding medieval thinkers and scientists of Central Asia in the framework of the concept of moral improvement of the individual are relevant in the modern world. Since the problems faced by modern civilization are primarily associated with the loss of the moral core of spiritual culture, the dominant position of material well-being in the scale of values of civilization.

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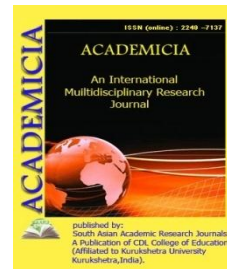
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SPATIAL TEMPORAL ANALYSIS OF COMMERCIAL PROPERTY VALUES ALONG PORT HARCOURT /ABA EXPRESS ROAD, PORT HARCOURT, NIGERIA

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ABSTRACT

Transportation provides access to property and usually influences its rental value. This study examined the pattern of rent of commercial properties along the Port Harcourt/ Aba transportation corridors between 2010 and 2015. Participant observation was carried out to ascertain the number and types of commercial properties in the study area. Frequency distribution was used to evaluate the types of commercial properties while parametric statistical tool such as ANOVA was used to test the hypothesis. It is revealed by the study that transportation corridor has a positive effect on commercial property values because it provides access to business operators and customers. The study also found that the office type of commercial property represents the highest (41%) of all the commercial property types while industrial properties attract the highest rental value (₦71.100) per square metre per annum and are the most impacted in the study area. However, the study showed that the F-calculated (40.95) is higher than the F-critical (2.39) which suggests that there is a statistically significant variation in the rental value of commercial properties along the Port Harcourt /Aba expressway. Hence the null hypothesis is rejected. Consequently, the study recommends that road network and accessibility development should be given a prime place by the municipal government to enhance property value.

KEYWORDS: Commercial, Rent, Property.

INTRODUCTION

In many countries around the globe, cities are emerging, and older cities are experiencing phenomenal growth in terms of size and population (UNDP, 2015). Currently in Nigeria, the

growth of cities is put at 8% per annum and it is projected that more than half of the nation's population will live in urban centres by 2020(UN-HABITAT, 2013). This will further increase city growth and the demand for transportation. The phenomenal increase in urban growth in Port Harcourt and the need to connect it to other cities have necessitated the development of transportation facilities to accommodate related increases in population and vehicle traffic. Transportation provides huge advantages to highway users, including reductions in travel time, increased access to outlying locations, and reductions in vehicle operating costs. Importantly, it gives access to housing developments thus making the area more attractive to developers, resulting in higher property values particularly commercial property developments (Babatunde, Adewale and Olawoyin, 2014).

Rapid and continued rise in commercial housing is expected in cities with transportation improvements and rapid economic and population growth. According to Bailey, Mokhtarian, and Little (2008), transportation route is part of distinct development pattern or road network and are mostly described by regular street patterns as an indispensable factor of human existence, development, and civilization. The demand for commercial properties itself is affected by changes in population, planning and development schemes, legislation, and the availability of good road networks. Rapid population growth in urban centres has also brought changes in rent values over time in large cities in the developing countries (Ward, 1989). There is a consensus by urban theorists and professionals that sites adjacent to main transport routes have relative advantages over those located some distance away, and other sites located at route intersections possess relative advantage with greater advantages belonging to sites located at focus of the transport system (Oyewole, 2013 and Trussell,2010). These advantages are determined in relation to accessibility, which has different characteristics in relation to individual sites thus differentiating between sites in terms of accessibility advantages. This study, therefore, attempts to examine the effects of transportation corridors on commercial housing values.

Statement of the Problem

During colonial rule, Port Harcourt was largely a monocentric city with most of its functions and activities centred in the central area and around few roads. Within this monocentric urban form, rental values were very much dependent upon location relative to the central business district. With an increase in population, urbanization and the construction of both trunks A and B roads, the city morphology has changed. Open spaces have been developed to house shops and offices, residential houses converted to shops and offices and green areas fast giving way to commercial activities. The consequence is the proliferation of commercial shops along both major and minor roads in Port Harcourt metropolis. The frequent demand for this type of housing can affect its rental value. However, it is not clear whether rent value of commercial property increases or decreases consistently in real terms over time along the Port Harcourt/Aba expressway which is one of the busiest and oldest federal roads in Port Harcourt.

Evidence from the literature suggests that studies on the pattern of rent of commercial housing along a major transportation corridor in Nigeria, particularly in Port Harcourt have not been properly documented (Bamgbose, 2012; Ayo, 2012 and Odogu, 2013). These studies reported the impact of road networks on property values. In these studies, emphasis was not given to commercial housing. The existing studies concentrated on residential accommodation development. Some of the researchers found that a positive relationship exists between transport

and property values while others reported a negative relationship. Besides, the authors conducted the study in different locations different from Port Harcourt. It is against this background that this study seeks to answer the following research questions: What are the types of commercial property along the Port Harcourt-Aba, Road? Which property has the highest rental value? What is the rental pattern between 2010 and 2015 of commercial property along Port Harcourt/Aba expressway? Is there variation in the pattern of rent over the period?

Study Area

Port Harcourt/Aba expressway is one of the oldest major roads in Port Harcourt metropolis. It was first constructed a few years after the town assumed the function of a seaport (Akpoghomeh, 1998). Due to the increased flow of vehicular traffic on the road it was reconstructed into dual carriageway in 1980. The road has continued to be the most important road in the metropolis linking other parts of the country. The Port Harcourt/Aba expressway starts from Mile 1 Park to Eleme junction. It has other junctions which link other roads and junctions such as UTC, Garrison, First bank, Total, Presidential, Waterlines, Air force, G.R.A., Market, Artillery, Rumukurushi, Elelenwo, and Eleme junction. The immediate major towns linked by this route are Aba, Umuahia, Okigwe (all in Abia State) and Enugu in Enugu State. The road also links the North-East and North Central parts of the country through Cross River State and Abia State respectively. This road handles the heaviest volume of vehicular traffic in the Port Harcourt metropolis (Akpogomeh, 1998). The Port Harcourt/Aba expressway represents the penetration line and stands out as the backbone of the arteries which ribs into various directions in the city, and every junction links to other important roads

Methodology

Essentially, the study relied on primary and secondary data. The secondary data were sourced from the periodic bulletins of the Estate Surveyors and Valuers. The researcher embarked on participants' observation of the commercial properties in the area to ascertain the types and numbers of commercial types of properties in the area. In all, 410 commercial properties in use were identified. Both descriptive and inferential statistics were utilized in analyzing the data. Quantitatively, frequency distribution and Analysis of Variance (ANOVA). It is expressed as:

$$K = (N - 1) \frac{\sum_{i=1}^g n_i (\bar{r}_i - \bar{r})^2}{\sum_{i=1}^g \sum_{j=1}^{n_i} (r_{ij} - \bar{r})^2},$$

where:

- n_i is the number of observations in group
- r_{ij} is the rank (among all observations) of observation from group
- N is the total number of observations across all group

The statistical tool used helped to show the variation in rent and the possible pattern of commercial rent in the study area. The results were arranged and presented in tabular form, to allow for a meaningful analysis and interpretation. It should be mentioned that for accurate and faster analysis the data were processed by coding using the Statistical Package for Social Sciences (SPSS) software 12.1. The hypothesis was tested at 95% confidence level.

Findings and Discussions

1) Types of commercial property

Commercial property is a building that is used for trade, business and any activity that generates income. It is heterogeneous, physically modifiable and a segmented asset that houses most locations where economic activities take place within an economy (Hendershott *et al.*, 2000). As an investment asset, it represents a means for the accumulation of wealth by investors. From the study, there are 410 commercial properties used for different types of business activities. (See table 1). The table indicates that out of the total 410 commercial properties along the Port Harcourt/ Aba expressway, office property constitutes the dominant commercial property type. It contributes to over one-third of the total commercial properties along the route. Precisely, it represents 41% of the total commercial properties in the area.

TABLE 1: TYPES OF COMMERCIAL ON PORT HARCOURT/ABA EXPRESS WAY

Types of Commercial Property	Frequency	Percentage
Retail	138	34
Industrial	30	7.3
Health care	12	2.9
Leisure	62	15.1
Office	168	41
Total	410	100

Source: Researcher's Field Work 2019

The table also shows that the second most common type of commercial property in the study area is the retail type of accommodation which includes retail stores, shopping malls, and shops. In a generic sense, there are five categories this type of commercial property and they leisure, retail, office, industrial which examples are ware houses, garages and distribution centres and health care. Examples of leisure commercial property are: hotels, public houses, restaurants, cafes and sport facilities. That of retail is retail stores, shopping malls and shops while examples of office commercial property include office buildings. Lastly, examples of health care commercial property include medical centres, hospitals and nursing homes.

Clearly, 34% of the total properties are in this category. Aba road is a major road that feeds other arteries hence the high presence of shops along the study area can be attributed to the locational advantage the area enjoys.

However, it is important to note that 15.1% of the commercial properties in the area are leisure type of accommodation. Its frequency is relatively low because properties that make up this category of commercial property are usually located in areas where there is large space that can accommodate many customers at a time. Hotels and sports facilities are special property that thrives in a serene environment free from noise and other urban outcomes. Apparently, from the table industrial property constitutes just 7.3% of the entire property in the study area. Industrial properties by their design are suited for large premises. This may account for the relatively low presence of this category of property in the study. However, healthcare properties which example includes make-up medical centres, hospitals, and nursing homes only 2.9% of all the property types along Aba Port Harcourt expressway and they are the least in terms of number in the study area.

2 Pattern of Rent

The study shows a consistent increase in the rental pattern of commercial property in the study area. Between 2010 and 2015, the period within which the study is concerned, the value of all the commercial properties captured in the study was between #10,000 and #27,000 per square metre per annum. In a specific sense, the study has also shown that among all the categories of commercial properties located at Port Harcourt/Aba expressway, the industrial property type commands the highest rent as demonstrated by table 2.

TABLE 2 RENTAL VALUE PER SQUARE METRE OF DIFFERENT TYPES OF COMMERCIAL PROPERTY

Years	Leisure	Industrial	Retail	Office	Health care
	Amount/Square Metre	Amount/Square Metre	Amount/Square Metre	Amount/Square Metre	Amount/Square Metre
2010	10,000	15,000	13,000	17,000	10,000
2011	10,000	15,500	13,000	17,000	12,000
2012	15,000	19,000	14,000	20,000	13,000
2013	20,000	23,000	15,000	20,000	15,500
2014	20,000	23,000	15,000	20,000	18,000
2015	25,000	27,000	19,000	25,000	20,000
6- year total	100,000	122,500	89,000	119,000	88,500
Annual Average per square metres	16,666.7	20,416.7	14,833	19,833	14,750

Source: Adapted and computed from NIESV Bulletin, Port Harcourt Branch (2019)

As shown by the table above, the annual average rent of the industrial property is #20,416.7 per square metre. It can be noticed from table 2, that in the year 2015, its annual rent was #27,000 per square metre. Among all the properties across the years, this type of property clearly attracted the highest rent. Industrial activities usually impact negatively on the building and the environment therefore landlords charge high rent on such properties so that they can recoup their investment capital and benefit from the investment. From the table above, healthcare buildings have the lowest rental value (₦14,750 per square metre per annum). In the course of the study, it was discovered that most of the massive healthcare facilities were owner-occupied. The few ones rented were not sophisticated health centres. This may have a direct bearing on the rent hence healthcare structures command the least rental value in the study area.

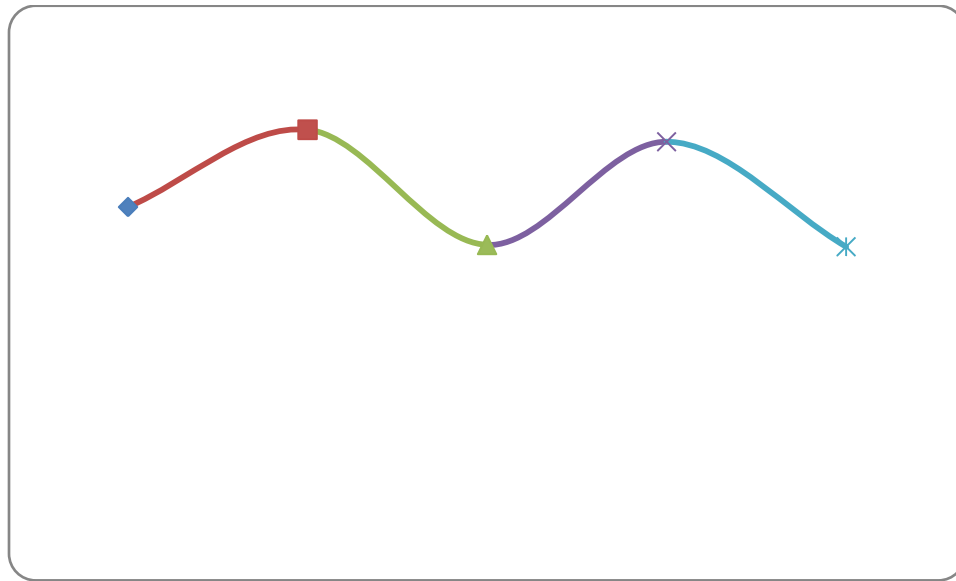


Figure 1: Graph showing the pattern of rent value of commercial properties

3) Finally, the empirical analysis pointedly confirms that there exists a statistically significant variation in the rental value of commercial property along Port Harcourt/Aba Road. (See table 3). The result of the analysis showed that the F-calculated (40.95) is higher than the F-critical (2.39). This result suggests that there is a significant variation in the rental value of commercial properties along Port Harcourt/Aba expressway. Hence the null hypothesis is rejected.

TABLE 3: SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE (ANOVA)

Source of variation	SS	df	MS	F	P-value	F crit
Between Groups	26.60274	4	6.650685	40.951	2.77E-28	2.39674
Within Groups	58.46575	360	0.162405			
Total	85.06849	364				

Source: Researcher's Field Work 2019

4) Conclusion and Recommendation

Commercial properties along major road corridors characteristically exhibit different rent structures. Their values are further enhanced by accessibility. Port Harcourt/Aba Road provides such an advantage to commercial properties. However, proximity to roads increases the levels of exposure to traffic intensity and noise pollution. These externalities are evaluated by property owners and businesspeople and are reflected in the price of commercial property. This study analyzed the value of rent of commercial property types along Port Harcourt/Aba Road. Data from the Estate Surveyors and Valuers were used to compute the value of commercial property per annum. The study has brought to the fore the types of commercial properties in the area and their rental structure. Importantly the study has found that there is variation in the rental pattern of commercial properties in the study area. It is therefore suggested that local and municipal governments should create access by constructing and maintaining roads as it can increase property values within the area.

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