



BREAKTHROUGH SCIENTIFIC RESEARCH AS AN ENGINE OF SCIENCE

**Collection of articles
based on the results of
International scientific and practical conference
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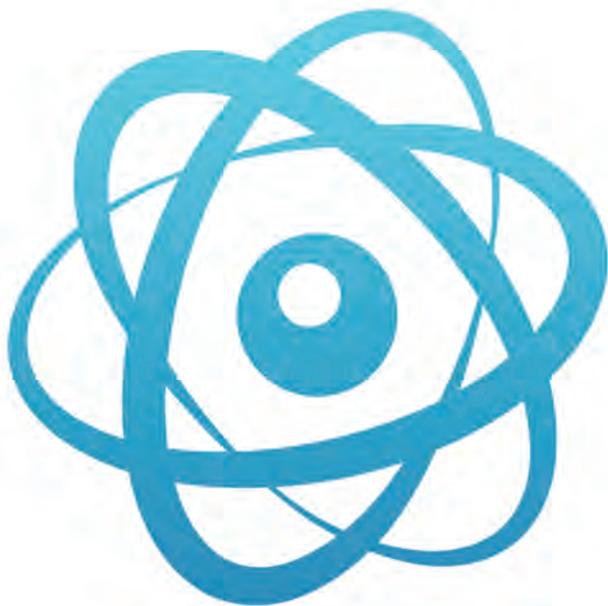
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**ФИЗИКО-МАТЕМАТИЧЕСКИЕ
НАУКИ**



**PHYSICAL AND MATHEMATICAL
SCIENCES**

TO THE QUESTION OF GRAVITATION

***Annotation:** The unite of the laws of nature implies a single of origin and structure of the world around. As the atomic - molecular structure is unified for matter, both the gravitational and electromagnetic fields must have a single structure, which differs in quantitative characteristics. The electromagnetic field differs from the gravitational field only by frequency indicators.*

***Key words:** Substance, field, gravitation, charge - particle, resonance, pressure.*

The material world is based on the common set of phenomena, processes, initial material particles that comply with the same laws of nature.

The world is material: the space is filled with initial particles, the size of which is greatly, many trillions of times, less than the size of elementary particles. These basic particles make up fields and elementary particles, and, therefore, matters, bodies. Structured, complex - organized basic particles form elementary particles, both stable (proton, electron, photon, neutrino) and unstable, created under specific conditions and decaying upon conditions changes, having different lifetime.

The unite of the laws of nature implies a single nature of origin and structure of the world around. As the atomic - molecular structure is unified for matter, both the gravitational and electromagnetic fields must have a single structure, which differs in quantitative characteristics. The electromagnetic field differs from the gravitational field only by frequency indicators.

Free, not joined into elementary particles, initial particles make up fundamental forces. From the genesis point of view, elementary particles are composed of the original particles. Therefore, it is necessary to consider strong, weak and electromagnetic interactions as a kind of gravitational. Changing the quantitative characteristic – frequency - causes a change in the quality of the field, its properties. All the fundamental forces: strong, electromagnetic, weak, gravitational - are the kinds of the same force, acting in different conditions. Two forces, gravitational and electromagnetic, interact at a large, unlimited distance. In particular, an electrostatic force has a feature that is similar to the gravitational force: the total work is equal to zero when the path is a closed loop / 1, p.213 /. The other two forces, strong and weak, are acting at a close distance, revealing only on nuclear level or during elementary particles transformations. The force acts as a transmitter of interaction between bodies.

The force conducts electric, magnetic and electromagnetic waves. Moving electric charges form magnetic field. A changing magnetic field generates an electric field. The existence of interconnected electric and magnetic fields reveals itself as an electromagnetic field / 2, p.256 /. The field is a cluster of charged initial particles: the smallest initial particles have electric charges and conduct themselves like waves. In particular, saturation of bodies, objects, with the initial charges - particles, or the impact of a force on bodies objects, charges them, (i.e. the Earth), and the rotation of the charged Earth forms its magnetic field.

The smallest initial particles are in thermodiffusion motion, so they interact by elastic collisions of a large number of particles and create a specific pressure on the bodies. From a practical point of view, the gravitational field can be considered as a kind of electromagnetic field with a frequency

of about 10 to a power of 40 1 / s. Moving charges - particles oscillate at an average frequency of 10 to 40 1 / s. The effect on them with the same frequency will increase the intensity of their movement (amplitude, acceleration) and, therefore, pressure. In bodies and near them, the intensity of chaotic movement of oscillating charges - particles decreases and pressure decreases. Between bodies, the pressure of randomly moving charges - particles is lower than behind the external, opposite sides of the bodies, because of it the bodies are pushed towards each other, or, "attracts". By impacting locally on areas of space between bodies - object and the Earth, you can change the force of attraction of objects to the Earth.

When impacting on oscillating particle - charge with alternating external force of coinciding frequency - harmonic oscillations are occurring, establishing at frequency of external swinging force. The dependence of the amplitude of the steady oscillations from the frequency of external impact is resonant, because, it increases sharply when the external frequency approaches the own frequency of the oscillating particles / 2, p.266 / . Therefore, the pressure exerted by the particles increases. The effect of electromagnetic radiation of the coincident frequency on the initial particles - charges will cause an increase in the amplitude and acceleration of the initial particles - charges between bodies and will reduce or even exceed the pressure of the set of the initial particles on the external opposite sides of the bodies. Due to this, the attraction of bodies will be reduced or even their repulsion will occur.

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ПЕДАГОГИЧЕСКИЕ НАУКИ



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ONTOGENETIC APPROACH IN THE PREVENTION OF GRAPHOMOTOR DISORDERS IN CHILDREN WITH DYSARTHRIA

Annotation

The development of mechanisms for mastering the technique of writing is an important area of special correctional and developmental work, especially for children with dysarthria.

The relevance of the problem is based on the fact that the key to successful mastering of written speech is the full - fledged speech and motor development of the child. Written speech is a secondary and the most late form of language manifestation which forms on the basis of spoken language. The article offers methodological recommendations which are based on the stages of ontogenetic development of graphomotor skills starting from the 1st year of the child's development.

Keywords

Ontogenetic approach, graphomotor skill, graphomotorics, writing skills, written speech, graphic skills, prevention of writing disorders, dysarthria.

Children with such a speech pathology as dysarthria have a low to medium level of fine motor skills, insufficient movement coordination, self - control and spatio - temporal orientation. M. M. Bezrukikh, A. D. Botvinnikova, V. A. Ilyukhina, E.V. Guryanova and others have devoted their work to the problem of the development of graphomotor activity [1, p.6]. T.P. Butsikina, I.N. Vikhrova, O.B. Inshakova, O.I. Krupenchuk, S.N. Lysyuk, and others have directly developed the graphomotor skills of children with speech disorders [2, p.2].

Handwriting skill is an automatized component of practical activity requiring fine differentiated hand movements. The successful mastering of writing requires a high level of voluntary attention, visual and spatial perception, functional maturity of the large hemispheric cortex of a preschool child in addition to well - coordinated work of the hand muscles. L.V. Fomina, G.A. Volkova, M.M. Koltsova point out that the hand, as the organ of speech, is another functional centre of the cerebral cortex. Both quantitative and qualitative defects in fine motor skills will certainly affect speech development of a child even though gross motor skills may be normal.

The ontogenetic development of motor skills goes hand in hand with the simultaneous development of the child's visual activity. A fundamental function in this process is hand - eye coordination. The motor analyser is the basis for the regulation of visual movements.

From the age of 1 year onwards, the child is only able to hold or squeeze a pencil. At the same time, he / she is experiencing a lot of positive emotions of the graphic process itself. It is at this time that it should be introduced to a writing instrument.

From the age of 2, the child doesn't just clench the drawing instrument, but holds it up, which makes the lines spontaneous and indefinite. This behaviour can be observed up to the age of 3. Move the child's brush to the bottom of the pencil to make the lines appear clearer. From the age of 3, jagged ovals can be added to drawings.

At the age of 4 to 4.5 years, the child starts to hold a pencil correctly and manipulate it freely. The child successfully copes with the copying type of task, as movement coordination and visual - spatial perception are significantly improved. The transfer of proportions of figures, the relative parallelism of lines, and the variety of subjects depicted are noted. The adult should be most actively involved in the "repeat after me" type of drawing.

From the age of 5 years, children are able to limit the length of even, clear horizontal and vertical strokes. At the age of 6, regular drawing sessions provide the basis for successful learning to write. They have accurate and clear strokes, smooth lines, complete ovals. When copying geometric figures, the proportions are observed. The sensitive period for the development of graphomotor skills is 6 - 7 years.

Thus, graphomotor skill is a series of complex operations which include both intellectual and motor components. The correctness of a skill is characterised by its rapidity and high quality of execution. The development of differentiated finger movements has a direct impact on the development of active speech because next to the speech motor area is the hand projection, which occupies one - third of the entire motor projection area in the cerebral cortex of the large hemispheres.

The motor sphere of children with dysarthric disorders is characterized by awkward, stiff, undifferentiated movements, limb movement limitation, synkinesis, awkwardness and unproductive movements of a child with general mobility. The ontogenetic approach in the prevention of graphomotor disorders in children with dysarthria reduces the percentage of the above characteristics at an older age.

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READING TEACHING TO NON - LANGUAGE STUDENTS

Abstract

In this paper, within the framework of the methodology for teaching professionally oriented language communication, approaches to the classification of types of reading are considered. The author substantiates the essence and peculiarity of each type of reading, the skills underlying each type of reading.

Key words

Viewing reading, introductory reading, learning reading, exploratory reading, skills.

One of the main tasks at non - linguistic faculties of universities is to prepare students to use knowledge of a foreign language in their future professional activities, namely: to teach a future specialist to read and understand (without a dictionary) the content of texts in their specialty [1, 2]. It should be noted that while teaching language to students of non - linguistic faculties of universities, a special place is occupied by teaching information retrieval and reading scientific and technical texts in a particular field of knowledge.

Reading is included in the sphere of human communicative and social activity and provides one of the forms of verbal communication in it [1, 2]. Reading is extremely important because it gives the future specialist access to leading sources of information. It is also one of the main means of meeting the cognitive needs of students. Cognitive interest in mastering reading skills among students of non - linguistic faculties of universities is associated with future professional activities. Therefore, when selecting text material, it is considered advisable to take into account its profile orientation, the ability to arouse professional interest and provide a cognitive effect.

Analysis of scientific and scientific - methodological sources showed that there are different approaches to the classification of types of reading. For example, in the foreign methodology, more than 30 types of reading are proposed, but upon closer examination it turns out that types of reading are sometimes understood as different stages of the same type or different ways of fixing what has been read. The existing classifications can be represented as follows:

- in the form of reading: reading to oneself; reading aloud;
- on the use of logical operations: analytical and synthetic reading;
- by the depth of penetration into the content of the text: intensive and extensive reading;

- by target setting: study, introductory, viewing, search reading;
- by levels of understanding: complete / detailed understanding; general / global understanding.

The greatest attention, in our opinion, deserves a classification, which is based on the practical needs of the readers: viewing a story, article or book, getting to know the content, searching for information of interest, a detailed study of the language and content [3, 4]. Thus, depending on the purpose of training, the author distinguishes between viewing, introductory, exploratory and search reading. Each type of reading is based on the following skills:

1) understanding the general content: get a general idea of what you read; determine if the text contains information of interest to the reader;

2) understanding the main content: identify and highlight the main information of the text; separate information of primary importance from secondary; to establish a connection (logical, chronological) of events, facts; anticipate the possible development (completion) of actions, events; summarize the facts stated in the text; to draw conclusions from what has been read, etc.;

3) extracting complete information from the text: fully and accurately understand the facts, details, highlight information that confirms, clarifies something; establish the relationship of events; reveal the cause - and - effect relationship between them, determine the main idea, compare, contrast information, etc.;

4) understanding of the necessary (interesting) information: to define in general terms the topic of the text; determine the genre of the text, identify information related to any issue, determine the importance (value) of information, etc.

Summarizing the above, it should be noted that reading in a foreign language is a type of speech activity that allows not to imitate, but to reproduce one of the forms of real foreign language communication. As a result of reading, the process of obtaining information is carried out, and this, in turn, has practical significance for the future professional activity of a specialist. Analysis of scientific and scientific - methodical literature, study of the work experience of teachers of the Department of Foreign Languages, questioning of students of non - linguistic faculties led to the conclusion that the main factors stimulating cognitive interest in mastering reading skills are regional richness and professional orientation of educational material, emotional coloring of texts , a variety of topics and genres, the authenticity of the text material, communicative orientation of tasks [3,4]. And for this, the teacher needs to create positive motivation among students, help orientate themselves in the reading goal and choose an appropriate strategy, determine the levels of understanding available to students and form higher ones.

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INNOVATIVE TECHNOLOGIES IN TEACHING FOREIGN LANGUAGES

Annotation

The article discusses the need to use innovative forms and methods in the process of teaching a foreign language to students of non - linguistic universities. The use of interactive methods, project technology, digital educational resources contribute to the intensification of the educational process.

Keywords

Interactive methods, project technology, effectiveness, game methods, learning process

The transition of higher professional education to new state educational standards requires updating the content of the educational process, the development and application of new technologies, providing an intensification of learning. Intensification should be understood as the achievement of the learning goal with a minimum expenditure of the efforts of students and teachers, taking into account such indicators as the quality of training and saving time. Innovations involve the complex use of new technology and the restructuring of educational practice in order to increase its effectiveness [3].

Interactive methods - the learners, instead of being the object of the educational process, become the subject of interaction, and information becomes not a goal, but a means for mastering the actions of professional foreign language communication.

Interactive methods are classified according to the presence in the educational process: a) models of professional activity; b) roles [1].

According to the first criterion, interactive teaching methods are divided into non - simulation and simulation methods. Non - simulation methods, which, for example, include a seminar - discussion, a problem lecture, a scientific - practical conference, "brainstorming", defense of a term paper or thesis, do not imply the construction of models of the studied phenomenon, process or activity [2]. Activation here is achieved through the selection of the problematic content of training, the use of technical means, dialogical interaction between the teacher and students. The communication skills of trainees are formed in the process of building evidence, formulating their own opinion in understanding the problem, making decisions. Simulation methods are based on modeling, i.e. reproduction in educational conditions of the processes occurring in reality.

In accordance with the sign of the presence of roles, simulation methods are divided into play and non - play. Non - play methods include the case method or the method of analyzing specific situations. Students are invited to comprehend a real life situation, the description of which

simultaneously reflects not only any practical problem, but also actualizes a certain set of knowledge that must be learned when solving this problem [1]. The case method gives students the opportunity to show initiative, to feel independent in mastering theoretical positions and mastering practical skills. Situational analysis has a rather strong impact on the professionalization of students. Through educational situations, real professional ones are recreated.

The play methods include role - playing and business games. The game aspect of educational activity contributes to the formation of interpersonal interaction skills during the game, the development of cooperation skills and collective decision - making [3].

Project technology - one of the ways to enhance the activities of trainees. A project is a complex of search, research, graphic and other types of work performed by students independently (or under the guidance of a teacher) with the aim of a practical or theoretical solution to a significant problem [2]. This requires not only knowledge of the language, but also possession of a certain amount of subject knowledge, communicative and intellectual skills.

The project form of work is one of the technologies that allow you to apply the accumulated knowledge on the subject, expand it. Students gain experience in the practical use of the language. Working with reference books, dictionaries, computers, students get the opportunity to directly contact the authentic text. A linguistic environment is created that contributes to the emergence of a natural need to communicate in a foreign language.

The learning process using interactive teaching methods, project technology means: 1) an increase in the volume of assimilated material, the depth of its understanding; 2) an increase in cognitive activity and creative independence of students; 3) reducing the time spent on acquiring knowledge, developing skills and abilities; 4) the possibility of individualization of training; 5) implementation of the educational aspect. Unlike traditional methods, the student is assigned the main role on the path to the assimilation of knowledge, in which the teacher is an active assistant, organizes, directs and stimulates learning activities.

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**ФИЛОЛОГИЧЕСКИЕ
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**PHILOLOGICAL
SCIENCES**

FRAME AS A NON - LINGUISTIC MEANS OF EXPRESSING THE CATEGORY OF CREDIBILITY IN THE NEWS

Abstract

The article deals with cases of using a frame as a means of expressing the category of credibility in news publications. The category of credibility in the news discourse and the means of its expression are not sufficiently described and need to be studied. As a result of the research, the author concludes that the category of credibility can be expressed not only by linguistic means (the traditional approach), but also by non - linguistic means, in particular by HTML - frames.

Keywords

Credibility, frame, media text, news, non - linguistic means of expressing.

The need for a theoretical understanding of credibility is based on the specifics of the modern media discourse: informational and informational - analytical media texts play a key role in shaping public opinion, and their authors have access to a variety of tools to influence the addressees. Consideration of ways of expressing the category may be one way to gain a deeper understanding of the problem.

Actual media formats change the traditional structure of the news text and require linguists to broaden their view of its components. Nowadays, the credibility of a news message can be created not only by linguistic means, but also by units outside the linguistic system. One such tool is the insert frame (HTML).

Frame is «a self - contained section that functions independently from other parts» [1]; it is an independent complete HTML document that can be displayed in a browser window along with other HTML documents. Frames are inherently similar to table cells, but remarkably more versatile.

The elements shown in a frame may be loaded from a different website as the other elements of content on display. In a news publication frames most often contain social media posts (Facebook, Twitter, Instagram, etc.), posts from instant messaging software (mostly Telegram) and video hosting services publications (YouTube, RuTube, Vimeo, etc.). An example of a frame embedded in a news publication is shown in Picture 1.



Picture 1 – A tweet in a news publication

If the source of information is an informational message posted on one of such platforms, the author of the news can embed it in the publication. It should be noted that not only posts serving as sources of information can be included in the publication as plug - in materials, but also auxiliary posts that supplement the message with information that is important for disclosing the topic. However, such frames should be considered as an auxiliary enhancer and not as independent markers. Once in the news text, the frame becomes a full - fledged part of its structure and can also be considered as a way of expressing the category of credibility. The frame should be considered only within the framework of neutral credibility, since formally it is an analogue of the neutral evidentiality indicator — a reduced and increased degree of confidence in the reliability of something may be present in the content of the frame, however, the consideration of its content seems to the authors of the article incorrect due to the fact that this takes us out of the frame field itself. In other words, regardless of the content, it is correct to consider the insert element only as an indicator of neutral credibility, since it does not affect the news author's confidence curve in the reliability of the information presented; the content of the frame itself should be viewed as a separate message, and not as an integral part of another message.

Frames are used to implement multiple functions. Since the entire content of the frame is displayed directly on the news page, this allows the addressee to show the reader the original source without editorial editing (which is enhanced by the fundamental lack of the ability to edit the source text, which can be done, for example, when quoting) — on the one hand, in the eyes of the reader, the frame acts as a confirmation of the existence of a source of information, on the other hand, it signals the addresser's openness and his intention to save the reader's time, giving him the opportunity to independently and quickly verify the accuracy of the information. Such a tool not only helps to strengthen the accuracy by reference to already published messages, but also to avoid the multiple duplication of the same information, which is typical, for example, for citation.

In conclusion, the category of credibility can be expressed not only by linguistic, but also by non - linguistic means, in particular by frames. Frames express neutral credibility and implement the functions of indicating (demonstrating) the source of information, as well as a complex of communicatively significant functions aimed at maintaining and improving contact with the reader.

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ИСТОРИЧЕСКИЕ НАУКИ



HISTORICAL SCIENCES

NATURE AND SPECIFICITY OF US POLICY IN RESPECT OF THE ISLAMIC REPUBLIC OF IRAN IN 1979 – 1989

Annotation

The article analyzes the American - Iranian relations in the conditions of the revolutionary process in Iran in the first years of the Islamic Republic, defines the nature and specificity of the policy of the administrations of J. Carter and R. Reagan in relation to «mullah». It is shown that initially the United States pursued two parallel political lines: rejection of the «hostile» theocratic regime of Iran, while retaining opportunities, given a convenient conjuncture, to interact to solve common foreign policy problems.

Keywords

USA, Iran, "mullocracy", theocratic regime, Islamic revolution, the concept of the "third way".

Introduction

Currently, the administration of President J. Biden is involved in multilateral negotiations to revive the 2015 Joint Comprehensive Plan of Action (JCPOA) on the Iranian nuclear program, from which the United States unilaterally withdrew under President D. Trump in 2018. process largely depends on the position of Washington and its willingness to compromise with Tehran. In this regard, it seems relevant to analyze the nature and specifics of the US policy towards the Islamic Republic of Iran (IRI) during its formation and development in order to understand the fundamental foundations of the modern US foreign policy in the Iranian direction and assess the prospects for the return of Americans to the implementation of the «nuclear deal».

The Approach of the Carter Administration to Iran in the Transition Period from the Monarchy to the Islamic Republic.

The US approach to Iran during the active phase of the revolutionary process in this country was based on the desire of the American ruling circles to maintain control over this state, which was important at that time to ensure Washington's interests in the Middle East. The pro - American course of Shah M. Reza Pahlavi under the conditions of a bipolar system of international relations provided the United States with support in the regional confrontation with the Soviet Union, and also solved the problem of combating the national liberation movement, reinforcing Washington's political influence in the region.

An important role in US - Iranian relations was played by the financial and economic aspect, primarily from the standpoint of the government's support for the US military - industrial complex, since the Shah purchased weapons exclusively from American production in large volumes. In addition, the displacement of M. Mossadegh from the Prime Minister of Iran in 1953 with the direct participation of the CIA allowed Washington subsequently to steadily control the process of oil production and the export of petroleum products, because of «... the absence of power sharing which had begun with the coup of 1953 was continued with the process of royal autocracy»[2, 54 –

55]. The internal political positions of Shah M. Reza Pahlavi as the main conductor of US interests in Iran have noticeably strengthened.

The merging of the interests of the military - industrial complex and the US oil industry created a powerful lobbying institution represented by representatives of the financial and business circles, which put pressure on the political leadership of their country in order to provide all - round support for the Iranian monarch.

The internal political crisis in Iran became the subject of special attention of the J. Carter administration in mid - 1978. Despite the severity of the socio - political situation in this country, the strategic course initially chosen by the White House to support the Iranian monarch was retained, being corrected exclusively on tactical aspects. In the US political establishment, there were two groups that differ in views on the methods that M. Reza Pahlavi should have used to stabilize the situation in the country and fight the revolutionary movement. In fact, it was about the availability of a soft and hard approach to solving the problem, conservative - forceful or liberal management of the situation. When it became obvious that the Shah would inevitably lose power, Washington considered options, on the one hand, to support exclusively supporters of the right - wing military coup, and, on the other, to supporters of a coalition of representatives of the liberal bourgeoisie and the clergy (but also with the defining role of the military). At the same time, in the bowels of the State Department, at the initiative of the American Ambassador W. Sullivan, the question of the possibility of establishing contacts with the leader of the Islamic revolution, Ayatollah Khomeini, was discussed. «Confident that there would be a split among the military if no agreement was reached with the opposition, the American ambassador telegraphed to Washington and proposed to urgently send a high - ranking representative to Paris to meet with Khomeini»[7, 144–145]. Thus, the administration of J. Carter, at least in the line of the foreign policy department, admitted the possibility of the victory of the Islamic revolution in Iran. This subsequently made it easier to understand the need to establish contacts with the new theocratic regime in order not to finally «lose» Iran. The United States had opportunities to improve bilateral relations. In particular, Washington agreed to resume supplies of spare parts for American military equipment to Iran. «Such position of the United States, – S.L. Agaev wrote, – met, apparently, a favorable response in official Tehran, and relations between the two countries began to slowly but steadily return to normal»[1, 49].

However, the seizure of hostages in the building of the American embassy in Tehran in November 1979, an unsuccessful attempt to release them and the subsequent breakdown of diplomatic relations and the imposition of an economic embargo by the American side finally put the US leadership on the path of confrontation with Iran. The American researcher R. Takei writes that the hostage crisis was unprofitable for the «mullah», and this was understood by the supreme leader Ayatollah Khomeini: «The hostage trauma galvanized the populace behind the cause of anti - Americanism and subverted the provisional government. In Khomeini's view, the path of amassing power and ushering in a radical foreign policy necessitated a crisis that could even endanger Iran's practical and long - term interests»[6, 42]. Therefore, the course chosen by President J. Carter, uncompromising at first glance, could be adjusted when the foreign policy situation changed. Opportunities for this remained, although the former US Secretary of State H. Clinton in her memoirs very clearly formulated the American side's assessment of the events in Iran, noting that «the Iranian revolution led to decades of state - supported terror» [5, 514].

The evolution of the US approach to Iran under the Republican administration of R. Reagan

At the beginning of the work, the Ronald Reagan administration adhered to a neutral position in relation to the theocratic regime of Iran. The fact of the release of the hostages could be used as a political basis for intensifying the two - way dialogue. Compared with the tense period of 1979 - 1980, in 1981, a tendency towards stabilization of American - Iranian relations was manifested. Anti - communism appeared to be a natural ideological basis for this, which was confirmed by the common position of the two countries, condemning the introduction of a military contingent by the Soviet Union into Afghanistan and the subsequent joint preparation of subversive operations against Soviet troops. Thus, the factor that was ignored in the White House under John Carter, largely due to the strong influence of the US national security adviser Z. Brzezinski, was more actively used by the Reagan administration.

At the same time, the US leadership had alternative policy plans in relation to the Iranian «mullocracy» regime. R. Reagan's administration, at the official level, interacting with the Iranian authorities, one of the main tasks identified preventing the strengthening of clerics, using for this the factor of the Iranian - Iraqi war, «... which broke out as a result of the clash of Iranian Islamism and Arab nationalism, during which the Ayatollah tried to solve the rapidly maturing problems and contradictions within the country»[8, 432]. Initially, the Americans sought an early end to the conflict, which, from their point of view, would demonstrate the inability of the «mullocracy» to effectively «export» the Islamic revolution and would inevitably discredit the theocratic regime. This line failed, defining a radical turn in the White House's policy: the United States began to strive to maximize the protraction of the conflict through support for Iraq, in order to establish diplomatic relations with which and support Saddam Hussein, Washington made efforts during 1983 - 1984.

By 1985, the Reagan administration was beginning to deviate from the course outlined above. This was due to changes in its staff after the re - election of R. Reagan for a second term. The «hawks» in the power block of the government were replaced by pragmatists. The White House decided, based on reports of Ayatollah Khomeini's grave illness and an assessment of the prospects for intensifying the internal political struggle in Iran between various political groups, to use the situation to strengthen the position of the United States in Iran through the support of forces more loyal to the West, in particular, representatives of the moderate wing clergy. The supply of arms to various states, mainly to the American allies, began to be viewed by the Reagan administration as one of the important instruments for implementing foreign policy. In particular, US Deputy Secretary of Defense J. Buckley noted that «the supply of weapons should be viewed as an increasingly important component of our global security and the main instrument of foreign policy»[3, 71].

Israel provided a convenient opportunity to implement a new approach by initiating an operation with the supply of American weapons to Iran to strengthen the forces pragmatically towards the United States in the leadership and armed forces of the country. In addition, there was a very convenient cover for the operation – the desire to free the American hostages taken in Lebanon.

Conclusion

The results of the Islamic Revolution in Iran, the coming to power of the clergy led by Ayatollah Khomeini and the creation of the Islamic Republic of Iran did not come as a surprise to the United States. However, due to the anti - American position of the «mullocracy», the place and role of Iran

in the US regional policy has changed qualitatively. Realizing the concept of the «third way», the theocratic regime sought to establish the Islamic Republic as a regional center of power on a new ideological basis. This course assumed the independence of Tehran in foreign policy, orientation in its implementation towards its own national interests. The seizure of hostages at the American embassy in November 1979 contributed to the assertion in the political and ideological rhetoric of the US leadership of the thesis of the «mullah» regime as «enemy».

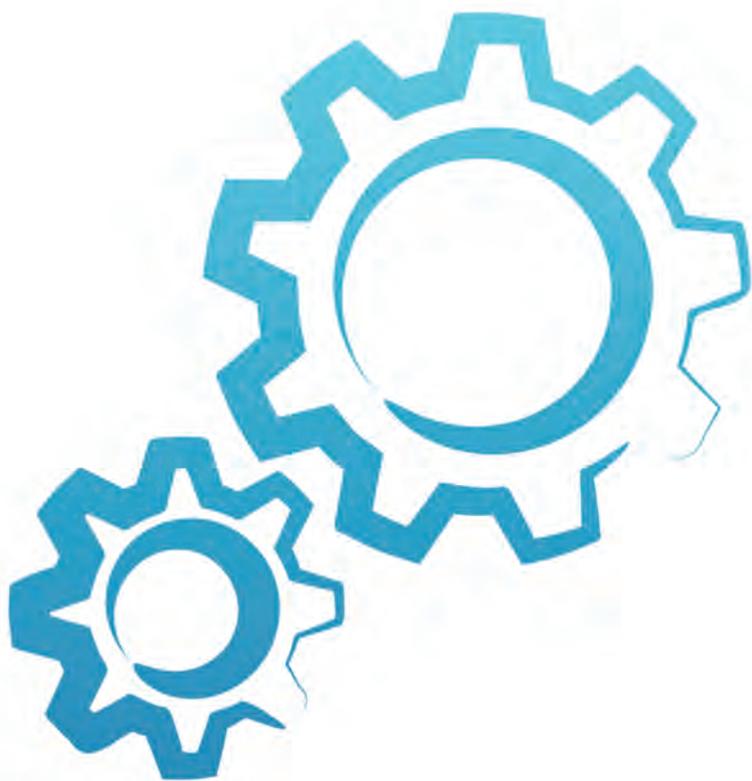
At the same time, the potential of Iran as a regional state – a center of power with the change of regime has been preserved. This kept Washington from taking radical steps to completely break off bilateral relations and forced the Americans, along with the political and ideological line (strategic aspect), to pursue a pragmatic policy based on the search for coinciding interests (tactical aspect). Thus, the theocratic regime of Iran for the United States initially appeared to be de facto legitimate. «Despite the aggressive stance of Iran - it threatened its neighbors and opposed the international order, – Washington did not plan any steps towards meeting and no military action» [4, 160] – wrote the American researcher V. Nasr.

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ТЕХНИЧЕСКИЕ НАУКИ



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EVALUATING THE EFFECT OF CAPACITANCE HEATING ON POWER LOSSES IN AN ELECTRIC CIRCUIT

Annotation

Thermal modes of operation play a crucial role from the point of view of energy efficiency of electric circuits. It is of interest to consider the behavior of elements of electric circuits in terms of power losses under conditions of temperature modes of operation [1].

The article is devoted to evaluating the effect of capacitance heating on power losses in electric circuits.

Keywords

capacitance, power loss, ceramic capacitor, MathCad.

Ceramic capacitors are one of the most common types of electrical capacitors. Their main advantage is less sensitivity to voltage changes. To evaluate the effect of temperature mode of operation of the capacitor as an element of an electric circuit, we consider a ceramic capacitor X7R.

The capacitor is considered as an element of an electric circuit (analog of the usual resistance, where losses go through heat generation), and the capacitor's ohmic resistance:

$$X_c = \frac{1}{j \omega C} \quad (1)$$

where j – imaginary unit,

ω – circular frequency,

C – capacity.

The evaluation of the effect of temperature mode is based on the consideration of the relative power losses transmitted through the electrical circuit:

$$KT = \frac{\Delta P}{P} \quad (2)$$

where ΔP – the difference between the basic power and changed power,

P – basic power – heat generation under normal operating conditions (20°C).

We consider power as a function of voltage and resistance:

$$P = UI = \frac{U^2}{X_c} \quad (3)$$

where U – voltage,

I – current.

After transformations we get the dependence for power loss coefficient:

$$KT = \frac{\Delta P}{P} = 1 - \frac{X_{C_{20}}}{X_C} = 1 - \frac{C(t)}{C_{20}} \quad (4)$$

The temperature range from 20° C to 80° C is taken into account.

The experimental dependence of the capacitance of the ceramic capacitor on temperature is shown in figure 1.

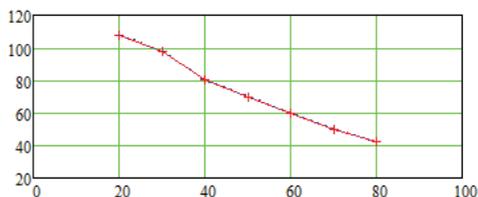


Figure 1 - Experimental dependence of capacitance of capacitor as a function of the temperature

The spline approximation of the experimental results was made for the calculations (MathCad mathematical package) and the graph of the obtained function is presented in figure 2.

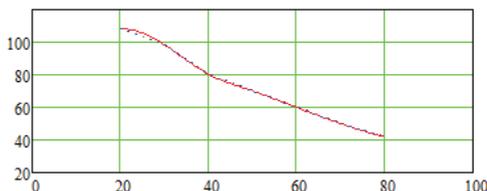


Figure 2 - Spline approximation of the capacitor capacity dependence on the temperature

The dependence of the power loss factor on the temperature, taking into account the approximation of the experimental results is shown in figure 3.

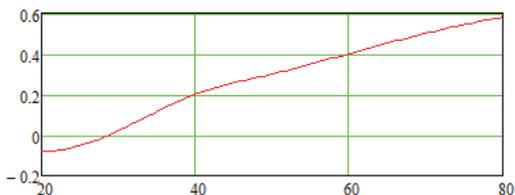


Figure 3 - Dependence of the power loss coefficient of the capacitor on the temperature

Calculations show that the operation of ceramic capacitors when heated in the range of 60 - 80 is characterized by low energy efficiency.

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USE OF RUBBER AND POLYURETHANE AS COATING FOR CORE - BOXES IN FOUNDRY LIQUID - GLASS CORE - MAKING PROCESS

Annotation

The use of the rubber and polyurethane inner surface coatings of the core - boxes in the contact with a liquid - glass core mixture in the foundry sand liquid - glass core - making process are considered. Results of using the coatings, applied to the inner surfaces of the steel, wood, and plastic core - boxes, are presented. Experimental results are discussed.

Keywords

Foundry; casting; core - box; core mixture; binder; liquid - glass; inner surface coating; rubber; polyurethane; polyethylene; adhesion; comparative analysis.

In the modern foundry, the sand core making occupies a special place due to the increasing requirements for the quality and complexity of the castings, as well as the productivity of the manufacturing process. In most cases, fulfillment of requirements is carried out due to the introduction of the sand core - making processes using synthetic resins as the binder. Despite the indisputable advantages of using such binders, they have the insufficient harmlessness and environmental friendliness of the core - making process. The less harmful and more eco - friendly sand core - making process using liquid glass as the binder does not fulfill the requirements for the productivity, as well as the quality and complexity of the cores [1].

Despite this, the sand core - making process can be improved to fulfill the requirements. Therefore, the search for the ways to increase the productivity of the core - making process and the quality of the liquid - glass cores is an urgent scientific and technical problem.

The analysis of the sand liquid - glass core defects, carried out by the authors, showed that in most cases, the manufacturing defects in the form of the cracks occur during the extraction of the sand liquid - glass cores from the core - boxes. In most cases, the manufacturing defects occur in

the resizing and bending regions of the cores because of a nonuniformly distributed load occurring during the extraction of the cores from the core - boxes. In addition, the nonuniform adhesion of the core mixture to the inner surface of the core - box can cause a stress concentration during the extraction of the cores from the core - boxes.

To reduce the manufacturing defects in the liquid - glass core - making process, it was decided to make the inner surface of the core - boxes more elastic (when the core - boxes cannot be made of elastic materials). Synthetic rubber or polyurethane can be used as the inner surface coating of the core - box in the contact with a liquid - glass core mixture. For the comparative analysis, the rubber - coated core - boxes made of steel, wood, and polyethylene were used. Figure 1 shows the core - boxes made of steel (a) and polyethylene (b), which coated with several layers of synthetic rubber.

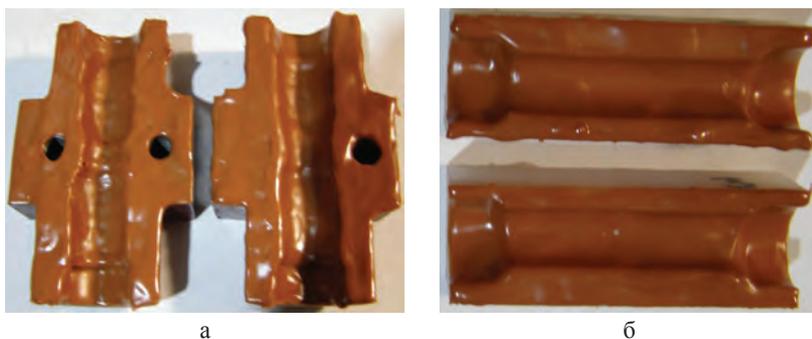


Figure 1. The rubber - coated core - boxes:

a — the core - box made of steel; b — the core - box made of polyethylene

White spirit was used as the solvent. After solidification of synthetic rubber or polyurethane, the core - boxes were filled with a core mixture of the following percentage composition: quartz sand — 80 % , liquid glass — 15 % , ferrochrome slag — 5 % . After curing in the gas chamber filled with carbon dioxide under overpressure of 2 atm for 60 minutes, and air drying for 6 hours, the liquid - glass cores were extracted from the core - boxes. The percentages of the qualitative and defective cores were analyzed. The uncoated core - boxes made of steel, wood, and polyethylene were used for comparative purposes.

Based on the results of the comparative analysis, it was found that the use of the rubber or polyurethane coatings is justified for the steel and wooden core - boxes, where the percentage of the defective liquid - glass cores decreased by 15–20 % . The use of the rubber and polyurethane coatings for the polyethylene molds is unjustified because of the percentage of the defective liquid - glass cores increased by 20–30 % . Rubber, which is less hard than polyurethane and polyethylene, was found to be less suitable as the inner surface coating for the core - boxes. The use of polyethylene as the material for the core - boxes was the best solution, despite the significant wearout of the inner surfaces during filling the core - box with a liquid - glass core mixture, unlike steel. The best results were obtained using the core - box made of polyethylene foam. During the extraction of the liquid - glass cores from the core - box, the percentage of the defective cores was 5–10 % due to the good elastic deformation of the core - box, as well as the lower adhesion of the core mixture with the polyethylene surface, unlike the rubber, and polyurethane surfaces.

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**ФИЛОСОФСКИЕ
НАУКИ**



**PHILOSOPHICAL
SCIENCES**

THE YOUTH'S SYSTEM OF SPIRITUAL VALUES IN MODERN SOCIETY

Ключевые слова: духовность, духовные ценности, молодежь, потребительская идеология, духовный кризис.

Keywords: spirituality, spiritual values, youth, consumer ideology, spiritual crisis.

This article is focused on the study of spirituality in the modern Russian youth system of values in the context of consumer ideology rapid spread. This problem seems to be a theoretically and practically important scientific direction for a number of reasons, among which, above all, the following should be highlighted.

First, the youth values analysis will allow revealing the specifics of the modern Russian reality perception by the youth, in which they shape their life plans and implement them, thereby affecting the speed and dynamics of social development.

Second, studying young people in terms of the spirituality importance in their hierarchy of values will reveal the nature of the consumer ideology influence on the youth spiritual world and the formation of their subjectivity.

Third, the young people values study will determine a vector and prospects for spiritual transformation of the Russian society represented by its young generation through the prism of identifying the place and role of spirituality in the hierarchy of values of young Russians.

In this regard the main aim of the work is to determine the place of spirituality in the value system of Russian youth, determined by the consumer ideology and, therefore, it has defined the setting of certain research goals. In particular, in this very article the following aims are set: to analyze the values of youth in the context of their specific perception of modern Russian reality, to designate the level and the character of determinacy of young people's spiritual world and the significance of spirituality in the consumer ideology, to carry out a correlating analysis of spiritual values of the youth and their behavioral practices, to elicit the degree of young people's spirituality in interrelationship with living activity; to determine the vector of spiritual transformation in the modern Russian society taking into account the tendencies in the spiritual development of the youth and their value priorities.

Thus, the statement of the problem and its study may provide a basis for determining the trajectory of social and cultural development for the Russian society, which is currently largely determined by the consumer ideology influence, taking on alternative forms in the Russian reality other than in the Western society, and the young people's role as a subject of public relations and spiritual reproduction of the society.

In this article, the Russian youth is considered as a socio - demographic group, whose system of values is determined by the processes associated with the emergence in Russia of a consumer society with an appropriate ideology focused on consumption as a lifestyle. In this regard, the theory of consumption serves as a basic methodological foundation for researching the problem set up in the work, within which comprehending the process of the Russian youth system of values transformation in terms of the place of spirituality in their hierarchy of values is performed based on the theory of youth subjectivity [Zubok and Chuprov, 2008], as well as the identity youth concept

[Martišauskienė, 2014] and a systems model of spirituality [Rousseau, 2014] enabling a more holistic understanding of the nature of spirituality, and suggests a new definition that disambiguates spirituality from related concepts, emphasizing the spiritual aspects of their lives, functions and the role of spiritual values which open up access to spirituality education and socialization as opposed to technocratic elements of the social space and social interaction organization gaining strength in the conditions of social informatization in the information age. The methodological approaches in the sphere of youth study and their values theory of subjectivity of the young, identity conception of youth, spirituality model stated above are the most actual and adequate from the point of developing social cultural processes and the problems of acquiring by the young their subjectivity in the circumstances which are characterized by the crisis of humanistic values and by the growth of social uncertainty in social environment in Russia.

A sociological concept of spirituality [Rutkevich, 2014] serves as a significant methodological basis for this paper, as well as the ‘consumer society’ concept, from whose standpoint consumption appears as a determinant factor in the socio - cultural dynamics and developing value priorities among various social strata and groups, including young people.

The point of reference defining the conceptual framework of the study and its hypothesis is an assumption that the spiritual development of the Russian youth is determined by the specificity of the Russian society where contradictory traditional and modern values and attitudes blend as a result of dramatic changes of the post - reformation era, which has become a source of controversy in the formation of value system of young Russians and their spiritual self - identification. The spiritual traditions of Russia, retaining their importance at the mindset level, do not find an application in the actual everyday practices; through the example of the youth, a discrepancy between the ideal and the real can be observed most clearly, which defines the situation of uncertainty and riskogenics in the spiritual formation of the younger generations, being largely exposed to the consumer ideology influence.

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ХИМИЧЕСКИЕ НАУКИ



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A STUDY OF LIGNIN ACYLATION REACTION USING A PYRIDINE - ACETYL CHLORIDE MIXTURE

Annotation

The paper considers the methods of industrial lignin utilization. The study is devoted to the issue of rational nature management in the wood processing. The authors test acylating systems that are relevant to lignin chemistry. Analysis of the structure and characteristics of lignin are made. In the paper the results of the analysis of acylated sulfate lignin are analyzed.

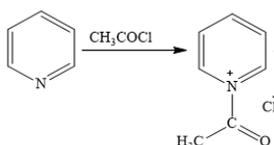
Keywords

Lignin, acylating systems, lignin waste accumulation, secondary raw materials

Currently, the sustainable development of pulp and paper production directly depends on the balance of environmental and economic factors. The problem of rational nature management in the wood processing is the lignin utilization [3]. In fact, this polymer is used as dispersants for pesticides, clays, colorants and soil fillers. The amount of industrial lignin waste accumulation is several times higher than the utilization capacity of the complex polymer. The common wastes are sulphate lignins, lignosulphonates and hydrolysis lignins. The use of lignin as a secondary raw material must be considered in the context of its chemical modification [2]. One of the promising methods of lignin modification is the acylation of both aliphatic and phenolic hydroxyl groups.

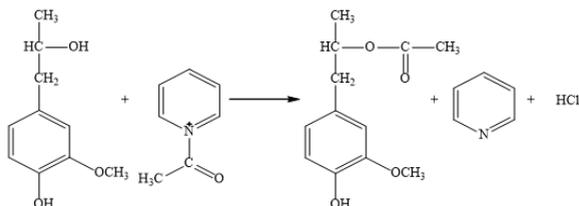
It is important to emphasize that the teaching staff of the Chemical Technology Department of Polzunov Altai State Technical University have been conducting research in the area of acylating systems that are relevant to lignin chemistry. They have found out that a promising agent in the acylation reaction of lignin is the acyl salt. It should be noted that the synthesis of this salt is possible due to the acetyl chloride - pyridine system [1].

According to the study the product of the interaction of pyridine and acetyl chloride is a strong acylating agent. The acyl salt obtained in the process of the nucleophilic addition reaction exceeds the anhydrides and acid chlorides of carboxylic acids. The positive point of this acylating system is the complete neutralization of the hydrogen chloride formed during the reaction (Pic. 1).



Picture 1. Reaction of acetic acid halide and pyridine to form acyl salt

The calculation results, under standard conditions, confirms the spontaneous occurrence of the lignin acylation reaction ($\Delta G = -1601.8 \text{ kJ/mol}$). The resulting acylated product was examined for the number of reacted hydroxyl groups. It was observed that the acylation reaction proceeds with equal probability in all positions of the OH - groups of the structural units of lignin (Pic. 2).



Picture 2. Reaction of the syringylpropane (β - OH) structural unit of lignin with an acyl salt

The method of chemical analysis revealed the amount of bound acetic acid and reacted OH - groups contained in the acylated sulfate lignin (Table 1). It should be noted that at $T = 25^\circ \text{C}$ and a synthesis time of 2 hours, 35.5 % of carboxylic acid is bound, which corresponds to 13.4 % reacted hydroxyl groups. However, an increase in the synthesis temperature will lead to the active evaporation of acetyl chloride, which, subsequently, will reduce the yield of the acyl salt.

Table 1 – Results of the analysis of acylated sulfate lignin
(synthesis time - 1 - 24 h, temperature 25°C)

Duration of synthesis (hours)	Amount of bound carboxylic acid, %	Number of reacted OH groups, %
1	$31,2 \pm 0,5$	$11,3 \pm 0,3$
2	$35,5 \pm 0,5$	$13,4 \pm 0,3$
3	$36,2 \pm 0,5$	$13,7 \pm 0,3$
4	$36,7 \pm 0,5$	$14,0 \pm 0,3$
5	$37,2 \pm 0,5$	$14,3 \pm 0,3$
24	$37,4 \pm 0,5$	$14,4 \pm 0,3$

It was necessary to compare the effectiveness of the studied acylating system with the previous methods. The conditions and results of each synthesis are represent in the table (Table 2). Analyzing the data obtained, it is necessary to make a conclusion that the studied acylating system is more efficient. Acylating systems previously studied obtain the degree of transformation close to the test mixture only by increasing in temperature or the adding of a catalyst. The factor increasing the energy and material consumption of the process is critical in the problem of using lignin in the form of secondary raw materials.

Table 2 – Results of a comparative analysis of the acylating systems effectiveness
(synthesis time - 4 h, temperature 25°C)

Acylation system	The amount of bound carboxylic acid, %	Number of reacted OH - groups, %
Acetyl chloride - pyridine	$36,7 \pm 0,5$	$14,0 \pm 0,3$
Acetic acid - TC - trifluoroacetic acid	$24,2 \pm 0,5$	$7,8 \pm 0,3$

Acetic acid - TC - touene - sulfuric acid	11,5 ± 0,5	3,5 ± 0,1
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Thus, according to quantum - chemical calculations, it was found that the acylation reaction with acetyl chloride in pyridine medium proceeds spontaneously. This reaction is possible in all positions of OH - groups of lignin structural units.

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THE POSITIVE INFLUENCE OF ZARA BRAND MARKET STRATEGY MANAGEMENT USAGE IN THE CHINESE MARKET

Аннотация

In recent years, China has become a market with huge potential in the fast fashion apparel industry. Since 2002, many foreign fast fashion brands have entered the Chinese market. After experiencing the new crown pneumonia epidemic, the Chinese market has returned to life. The ZARA brand also took this opportunity to adjust its marketing strategy. The main research result of this article is the positive impact on ZARA's development in China after the use of a new marketing strategy in the Chinese market.

Ключевые слова

Marketing strategy, ZARA brand, brand management, positive impact, strategy management.

Introduction

As a representative of a fashion brand, ZARA leads the avant - garde and innovative trends of apparel companies and is a rising star under the Spanish Inditex Group.

Although the 2020 epidemic has had a huge impact on the sales of Inditex Group's physical business, it has also accelerated the group's digital transformation process. Earlier, the group announced that it intends to close 1,000 to 1,200 stores from 2020 to 2021, accounting for approximately 13 % to 16 % of the number of existing stores in the world

Starting from 2020, Inditex will focus on online transformation. At present, the group is focusing on integrating online and offline store resources, equipped with updated technology, and improving consumers' shopping experience. The group expects to complete the digital transformation plan of its store network this year.

Results and discussion

ZARA's product strategy can be summarized as: a combination of a small number of multiple styles, high fashion, trendy styles and basic styles.

ZARA's product structure is complete. It is reported that ZARA's product line includes men's wear, women's wear and children's wear, but mainly women's wear. Women's clothing is divided into three series, namely ZARA WOMEN, ZARA BASIC and ZARA TRF. The multi - product line strategy enables ZARA to launch as many as 20,000 new models on the market every year. ZARA has a sense of product scarcity, even in popular styles. There are only two to three pieces of each size, and there is no mass production. A small product strategy can speed up consumer purchases and avoid overstocking inventory.

The uniqueness of ZARA lies in the high fashion of the products, but this is not an original design, but its highly professional buyers and copyists draw design inspirations from the latest trends and big - name fashions, imitate and remove some unnecessary luxury Details, reduce production costs, and form your own product design through transformation. This not only ensures that the product styles are in line with fashion trends, but also meets the target customers' demand for buying fashionable brands at affordable prices. Side by side with fashion, seize the most popular fashion elements nowadays. Accurate market positioning and seize target customers.

ZARA adopts a chain of operations, and the direct sales method is uniformly deployed by the headquarters, implementing a channel strategy that combines online and offline sales platforms. ZARA's physical stores cover 77 countries around the world, allowing consumers to experience real products and services in the store. At the same time, 22 network platforms have also been developed to meet the consumer needs of different regions. In the Chinese market with a complete logistics system, online sales channels can cover all regions of China.

On this basis, you can use China's major social media platforms, such as Weibo, WeChat, and Douyin short video platforms for sales.

ZARA's price strategy is a low price strategy, because its target customers pursue fashion, but they are unable to buy high - end luxury brands. One of the reasons for ZARA's success is to identify suitable consumer groups. According to the characteristics of the consumer group, the people - friendly price is set. Although imitating the big - name design, it does not exaggerate the high fashion price. They adhere to: "No matter how fashionable things are, if no one consumes them, they will only be overstocked" and the purpose of "consumers can afford". They set affordable prices to meet the needs of more consumers, so the profit is as high as 10 % compared with similar products. 20 % .

ZARA brand abandons the traditional model, implements positioning according to its unique marketing strategy, uses geographic location and store display to promote its own brand image, and exerts an influence beyond the advertising effect. Location selection of ZARA storefronts: ZARA stores are generally opened in high - end commercial districts and bustling transportation hubs. In such a bustling commercial area, a striking ZARA store is another form of advertising, and the publicity effect is self - evident. Reduce advertising expenditures and focus on the image of the brand itself. ZARA's window display: ZARA Milan's window design is made of white steel, PVC, aluminum, wood, LED and other materials to form window display props. The 4 - meter - high window display totem is integrated into 3 human models to complete the artwork from All entrances of the store can be seen. The window display is concise and refined, creating a concise and tailored "Made in Europe" feeling, and is even more similar to the brand intentions of high - end fashion luxury brands such as LV and GUCCI. Highly fashionable products and high - end window designs have brought consumers a powerful fashion experience. The store display is the most direct channel, which stimulates the consumer desire of the target customer group. This smart advertising method is both It saves costs and shapes the brand image, and it does not converge to the mainstream, which reflects the personality and confident attitude of the ZARA brand. Its publicity effect is not inferior to traditional advertising.

Conclusion

Through the above analysis, the positive impact of ZARA's new marketing strategy management on its development in China can be summarized as follows:

1. A small number of diverse product strategies can reduce inventory backlog, create a sense of product scarcity, and accelerate the pace of consumer purchases.

2. The combination of online and offline channel strategies can expand market share, sell products to various regions in China, expand brand influence, and expand the number of potential consumers.

3. The low price strategy determines the appropriate consumer groups and increases sales.

4. Relying on word of mouth and the image of the brand itself for publicity, using less advertising can save advertising expenses, but achieve the same publicity effect.

I hope that ZARA can continue to develop and innovate, and combine the actual situation of the Chinese market to create a more high - quality marketing strategy to help it continue to develop in the Chinese market.

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THE ROLE OF DIGITALIZATION TOOLS IN THE ECONOMY

Annotation. This article discusses digitalization, the digital economy, and the tools of the digital economy, namely blockchain, bigdata, information technology, and IoT. The purpose of this paper is to consider the tools of the digital economy.

Keywords: digitalization, digital economy, digital economy tools, blockchain, information technology, big data, Iot.

Currently, the transition to the digitalization of the economy is one of the current global trends, which is recognized as a priority in the development of all countries, including in Russia. Today, among them are the following - the transformation of human living conditions, the spread of new business models, the digitalization of industry, digital public administration and the digitalization of science. Thanks to digitalization, the development of many industries is changing, including the economy, which allows for economic activity with the use of digital computer technologies.

For industrial enterprises, digitalization can reduce production costs due to information technologies, significantly increase the flexibility of logistics, by eliminating excess assets, and reduce the impact (full or partial) of the human factor. Digitalization can be achieved through the use of a number of modern technologies and tools that act as intermediaries between banks and enterprises, which allows you to increase the speed of decision - making. Tools should be understood as means of influence, means of creating or transforming an object. The introduction of digital economy tools at enterprises reduces the time of product entry to the market, improves the quality of products and services and makes more effective use of new business models.

The main tools of the digital economy usually include such tools as "blockchain", "big data", "intelligent information technologies", "Internet of things", although many others are known - artificial intelligence, machine learning, neural networks, robotics, virtual reality, cloud computing, and others

Blockchain (English "block" – block, "chein" – chain) – a chain of blocks that are built according to the rules, are continuous and contain information. This technology is designed to work with cryptocurrency. The database of this technology allows you to control the reliability of transactions without the supervision of financial regulators. Miners - a participant in the system, confirming the commission of actions, and then forming blocks from transaction records. The register is kept by all participants and is constantly updated. The decision - making is not influenced by the human factor, this is the main feature of the blockchain. Blockchain is a tool that is a data warehouse, a digital inventory of transfers, transactions, contracts or agreements. The introduction of this technology will reduce the burden on banks, increase the reliability of operations, since special encrypted keys are used, it becomes possible to verify any transaction, and finally, this technology is universal and can be used in various fields.

Big Data Tool – approaches, tools, and methods for processing large volumes of rapidly arriving heterogeneous digital information that a person perceives. It is not possible to study and investigate this information by traditional methods. In a broad sense, we can say that "big data" is a socio - economic phenomenon associated with the emergence of technological capabilities that can be used to analyze a large array of data. This tool of the digital economy combines programs that help store and process all the information that is continuously received and increases every second.

Intelligent information technologies. This tool involves data processing, which takes place with the help of artificial intelligence. Many experts believe that situations that could only be solved by a person will soon be able to solve and regulate artificial intelligence. As everyone knows, many processes and systems are automated in the modern world.

Internet of Things (IoT) technology. This concept involves the development of the Internet in the direction of automation. It began to appear due to the production of a large number of devices that allow you to use the Internet for various purposes. IoT is a network of objects that communicate with each other or with the outside world without human intervention. Thanks to this technology, many processes are automated, while eliminating the need for human labor.

At this stage, many major players in the market are actively beginning to introduce the tools of the digital economy into production, which gives these companies a huge advantage over their competitors.

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