



**MODERN CHALLENGES
IN SCIENCE AND EDUCATION**

**СОВРЕМЕННЫЕ ВЫЗОВЫ
В НАУКЕ И ОБРАЗОВАНИИ**

РЕПОЗИТОРИЙ ЦАБГУ



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[В начало](#)

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CONTENT

ECONOMICS, MANAGEMENT, LAW: PROBLEMS AND PROSPECTS OF DEVELOPMENT

Chelyapina V. D., Harkevich I. S. Features of selling goods on marketplaces	5
Goranin M. I., Ostrovskaya A. K. Digital marketing as the foundation of modern communication with the consumer.....	6
Klimenkov I. A. Relevance of international financial reporting standards in the Republic of Belarus.....	7
Klimuk E. V. Startup design as a tool of innovative entrepreneurship.....	8
Klimuk V. V. The impact of the development level of the market for R&D services on the economic security of the state.....	10
Kostukevich A. A. Possibilities of using artificial intelligence in marketing.....	11
Kuzmich U. G., Vanyuk Y. V., Harkevich I. S. Crowdfunding as an innovative form of financing.....	12
Prudnikova A. N. The role of management accounting in the management of business entities	14
Ryabova K. I. Intellectual capital as the main factor of economic development	15
Vakar A. S., Kostyukevich E. A. The influence of psychological factors on the characteristics of consumer behavior	16
Vasileuskaya A. E. The importance of profitability indicators in assessing the financial performance of an organization	17

INFORMATION SYSTEMS AND TECHNOLOGIES

Ananko A. V., Muharevskiy A. A. Features of developing simple client-server applications based on WCF and rest architecture.....	20
Bobko M. I. The air flow computer simulation inside the computer system unit.....	22
Borisik M. D., Mikolaychuk N. S., Gorbach J. E. Developing a business performance evaluation application	24
Khrolovich D. M., Shakh A. V. The development of a software module to simplify decisionmaking by the employees of the HR service of Patio CJSC.....	26
Lishik A. N. Comparative analysis of the wing and spoiler aerodynamic properties	28
Lysko A. V., Shapovich E. G. Internet anonymous.....	31
Mazura R. V. Using the capabilities of the C++ programming language to calculate human biorhythms	32

ECOLOGY/TRENDS IN THE DEVELOPMENT OF SOCIAL AND HUMANITARIAN KNOWLEDGE AND PEDAGOGICAL SCIENCES/PSYCHOLOGY

Davydchik A. A. Specific peculiarities of the process of teaching mathematics to schoolchildren	35
Lukashik A. A. School violence: psychological and pedagogical analysis.....	36
Novik A. N., Filon M. A. ADDIE model: organization of educational services for technical design.....	37
Savina A.V. The image of the family as an object of the formation of family self-determination.....	39
Sedov I. S. Internet addiction among teenagers	41
Shovgenya M. M. Business game as a method of forming foreign language communicative competence in future specialists of preschool education	42

PHILOLOGY AND METHODS OF TEACHING LANGUAGES AND LITERATURES

Batova N. V. Peculiarities of adjective usage in English-language commercials.....	44
Busko N. A. Visualization and the semiotic method.....	45
Gamezo Y. V. The functions of the foreign language teacher as a cultural mediator.....	46
Hveduk A. V., Piniuta I. V. The importance of foreign language learning in Belarus and the UK	47
Kirikova V. S. The language game techniques in the advertising text	49
Lesina L. V. Compulsion expression means in English phraseological units.....	50
Natalevich A. I. Storytelling in a foreign language class	51
Skopintseva V. K. Globalization and regionalization as major trends in higher education	52
Starovoitova D. S., Piniuta I. V. University students' preferences in studying the Humanities in Belarusian and American cultures.....	53
Yakubovich M. S., Mankevich Zh. B. British irony vs Russian and Belarusian ones.....	56
Zasim A. A., Mankevich Zh. B. The symbolism of color in people's lives.....	56

ECONOMICS, MANAGEMENT, LAW: PROBLEMS AND PROSPECTS OF DEVELOPMENT

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FEATURES OF SELLING GOODS ON MARKETPLACES

Introduction. Marketplaces as retail resellers on the Belarusian market have appeared relatively recently, but have already taken a significant place in online trading. The e-commerce market is one of the fastest growing, so various online stores have gained popularity very quickly [1]. Despite the popularity and widespread use of this e-commerce method, it has a number of its own specific features. This article will consider the main features of the sale of goods on marketplaces, which cause a different degree of success of implementation depending on the product, manufacturer or reseller.

Main part. Marketplace is an online trading platform that helps sellers and potential buyers to interact with each other [2]. Trading conditions on marketplaces, as well as a large number of potential buyers attract many sellers. However, not every online store has a large and stable number of visitors. At the same time, in the search results for the “buy” query, marketplaces are in the first place. Thus, going to these sites with the product, traders can attract the attention of their audience. In addition, marketplaces contribute to brand visibility in the online-space. [3]. Because of this, a high level of competition is formed: at a distance of one click from the products of one company are the goods of competitors. The very structure of the marketplace sites supports high competition. Competing products are in the internal search results, in the relevant sections of the site and even in the product card. This factor should be taken into account when the supplier company enters the marketplace: products should be competitive not only due to their quality, but also have a competitive price and, equally important, a product card.

Product card contains detailed information about the product, as well as photos and videos of the product, the number of purchases made, brief information about the seller, product rating, customer reviews and questions, similar products and products recommended by the seller. Each of these sections requires a responsible approach to create and form a successful, well-selling product. Product photos in card must be of high quality and informative. The product description contains the advertising text and product characteristics. It is advisable to fill these fields in as much details as possible to facilitate product search. The lack of product characteristics also creates inconvenience for a potential buyer. Buyer can ask the information by the “Questions” section, but if there are other suitable options, he will not waste time asking a question and waiting for an answer.

The “Questions” section allows visitors of marketplace to get information directly from a sales representative. In a highly competitive environment, operational support and accuracy are really important. Answers cannot be changed or deleted, and many users can see them. That is why it is necessary to check correctness of information posted in this section carefully. Next to the “Questions” section there are “Reviews” for the product. First of all, they reflect the product rating – the arithmetic mean of the product ratings by buyers. Also in this section reviews of the product can be found. Visitors of the marketplace who are thinking about buying a product and studying it often visit this section. That is why it is important to work with reviews. This is especially important for negative reviews containing messages about problems with product or criticism of its characteristics. There may be various reasons for such situations, and it is necessary to find an answer that would not undermine the confidence of buyers in the seller and would strengthen his positive image.

Conclusion. Based on the above features of marketplaces, it can be concluded that this is current and rapidly developing method of trading and it is suitable to different degrees for different sales agents. First of all, in conditions of high competition, seller must be prepared for continuous improvement of product. Product price, quality and informativeness of photos, work with reviews and questions affect the competitiveness of the product card. Nevertheless, the willingness to improve the product in accordance with the needs of consumers can be called the key factor of successful sales on the marketplace. As a result, manufacturers that have ability to directly influence the characteristics of product and its price have an advantage over suppliers whose ability to influence the above-mentioned factors is limited. Based on these features and trends in the development of marketplaces, it is possible to make a decision about the effectiveness and expediency of working with them.

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DIGITAL MARKETING AS THE FOUNDATION OF MODERN COMMUNICATION WITH THE CONSUMER

Introduction. In today's world, the ways of influencing the potential consumer are changing rapidly. One of the most popular in recent years has become Digital Marketing, which is able not only to collect accurate and objective information about the target audience, but also to track the results of brand or product promotion.

Main part. Digital Marketing uses digital technologies and the Internet to attract and retain consumers. Digital technologies can be: smartphone, personal computer, social media, other digital devices and platforms. At the moment, the majority of the world's population is connected to the Internet. According to the report Digital 2022 Global Overview Report, internet penetration now stands at 62.5 percent of the world's total population. Data shows that internet users have grown by 192 million (+4.0 %) and is about 4.95 billion. Global social media users have grown by more than 10 percent and is 4.62 billion — 58.4% of the total world population [1]. The modern internet is oversaturated with information. Therefore, in order to get the user's attention, it is important to properly understand his interests. For effective work on the market, it's necessary to provide the user a personalized solution to his problem at the moment, when he is most interested in considering the proposals that come to him.

To implement an advertising campaign in this way, a business needs a deep understanding of the needs of the target audience, the characteristics of its choice, as well as the creation and delivery of personalized messages. Digital Marketing brings new tools for segmentation, consumer behavior tracking, message delivery and feedback. Advantages include option targeting and creating personalized offers. As a result, advertising messages are not scattered, ads are addressed to the target audience.

Big Data is essential in marketing since it allows marketers to figure out their prospects' behavior and intentions. The global trend of predictive analytics has taken over many industries, and marketing is no exception. By 2022, the global market for predictive analytics is projected to reach \$10.95 billion. [2].

Digital marketing includes many channels. Therefore, it is important not to try to cover them all, but to proceed from the goals and opportunities of the business. To the channels of digital marketing, which are aimed at marketing communication with a potential customer include:

1. S S marketing. A way to promote goods and services using SMS messages. It's designed to communicate with customers using a popular, widely available and relatively inexpensive channel.

2. Email Marketing. Email marketing enables direct communication between the brand (or business, company) and potential or existing customers. The result of such communication can be expressed both in increasing customer loyalty to the company, and in increasing new and repeated sales, that is, in other words — retention and return of customers. Email marketing is still unparalleled when it comes to returning the investment it provides. In fact, 36 dollars for every dollar spent [3].

3. Mobile Application. For the company it is an opportunity not only confidently to communicate with users, but also to enrich the data, as well as to build new consumer experience. And the latter is even more important, as it's unlikely that the user will want to have an application on his phone just for the sake of receiving advertising messages. For him, another value of interaction is important, which he cannot get without an additional icon on his phone.

4. Marketing in social networks (SMM). SMM specialist is engaged in promoting the company's goods and services. And for this purpose uses all available tools of marketing communications, i.e. advertising, public relations, promotion of sales and direct marketing.

Internet communications are interactive and thus can be an active collaboration between the parties. There is a real opportunity for direct dialogue with audience representatives, which in turn can communicate with one another. Interactivity allows for feedback from users, adequate analysis of the situation and timely response when necessary. Since Internet users are predisposed to receive information, you can rely on its more positive perception and high PR-material absorption.

The main advantages of Internet communications when interacting with consumers are:

– Digital marketing allows you to reach both online and offline consumers who use tablets and mobile phones, play games, download apps. So the brand can reach out to a wider audience than just the Internet.

– Ability to collect clear and detailed data. Almost all user actions in the digital environment are captured by analytical systems. This makes it possible to draw accurate conclusions about the effectiveness of different channels of promotion, as well as to draw an accurate portrait of the buyer.

– Flexibility — digital marketing allows you to attract to the online market offline audience, and vice versa. For example, you can use the QR code on the flyer to direct the user to the site. And at the same time, thanks to email-mailing you can invite subscribers to a seminar or other offline event.

Conclusion. It can be concluded that digital marketing is an emerging trend in overall marketing. Digital marketing actively pushes traditional advertising to the background. The more channels you use to attract customers, the stronger the effect will be. An integrated approach allows for the most effective channels of advancement.

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RELEVANCE OF INTERNATIONAL FINANCIAL REPORTING STANDARDS IN THE REPUBLIC OF BELARUS

Introduction. The internationalization of economies necessitates the comparability of accounting data obtained in different countries, and accordingly, there is a need to introduce international standardization of national accounting and reporting systems. The task of unifying the reporting of different states is carried out by international financial reporting standards (hereinafter — IFRS). A very important issue is the globalization of accounting systems and the integration of the Republic of Belarus into the world economic community, as well as the relevance of introducing IFRS principles into the national economy [1]. The application of international financial reporting standards contributes to the attractiveness of the country for investors, getting access to foreign capital markets, transforming the accounting system towards accuracy, transparency and understandability, as well as effectively improving the management system of organizations [2; 3].

Main part. The development of IFRS problems began in the 1960s under the auspices of the United Nations Center for Transnational Corporations. A “universal language of businessmen” was required for the normal functioning of global economic relations, accounting and financial reporting was defined as a language, accessible and understandable to all interested parties. Currently, a global accounting system has developed on the basis of IFRS. Operating since 1973 in London, the Committee on International Financial Reporting Standards (hereinafter — CIFRS) is an independent entity whose purpose is to unify the accounting principles used by companies around the world to prepare financial statements. By the beginning of the XXI century, CIFRS had approved more than 40 standards; some of them have undergone two or three revisions during their existence, and some have been completely modernized. Currently, more than 40,000 transnational corporations with more than 200.000 subsidiaries and affiliates around the world voluntarily prepare financial statements in full compliance with IFRS. A number of states, including the Republic of Belarus and the Russian Federation, have decided to bring their national accounting and financial reporting rules into line with IFRS [4; 5; 6].

International Financial Reporting Standards (IFRS) are rules that establish requirements for the recognition, evaluation and disclosure of financial and business transactions for the preparation of financial statements of firms and companies around the world. Financial reporting standards ensure the comparability of accounting documentation between business entities on a global scale, and are also a condition for the availability of financial reporting information for external users.

In current economic conditions, there is a great need for timely, reliable and complete information to explore and assess the financial position of the organization and the results of its economic activities. One source of such information is financial statements. Financial statements prepared in according to national legislation provide users with such information quite fully, but there is an opportunity to improve it by using IFRS. The introduction of IFRS is one of the elements of the international attractiveness of both the enterprise and the country's economy as well. Their weak implementation hinders the attraction of investments into the country, because for investors it indicates a lack of transparency in financial reporting. If there is no transparency of financial reporting, there is no confidence in the organization. If there is no investor confidence, there is no investment in the organization. If there is no investment in the organization, there is no development.

Incentives for the implementation of IFRS are present both at the level of an individual organization and at the level of the country as well. *As microeconomic drives* for the application of IFRS, the following can be distinguished:

- an increase in market capitalization (this advantage, at first glance, seems to be irrelevant for Belarusian banks and organizations, since the stock market in Belarus is poorly developed, but, nevertheless, it can be considered as a factor in a more reliable assessment of an organization's value for investors);
- access to foreign capital markets and a decrease in the price of attracted capital;
- possibility of more efficient use of information for making management decisions.

Among the main macroeconomic drives are the following:

- inflow of foreign investments into the economy;
- greater transparency of domestic companies and, as a result, an improvement in the image of business abroad;

- deeper integration of the country's economy into the world economic system;
- improving the quality of statistical information and the possibility of its comparison [1—3; 6].

Currently, an increasing number of organizations are coming to understand the need to use IFRS. This is due to the necessity of the organization to provide accounting data to the investor in order to obtain foreign investments, the entry of companies into international financial markets, the development of business that imposes modern reporting requirements. In addition, the use of IFRS is necessary to provide financial statements for an IPO.

The increased interest in IFRS can also be explained by the following:

- as international practice shows, financial statements prepared in accordance with IFRS are more informative and useful for users. The standards are initially focused on specific users of information and proceed from the criterion of the usefulness of financial information for making informed management decisions;
- the use of IFRS can significantly reduce the time and resources for the development of fundamentally new national accounting and reporting rules. Inclusion of the Belarusian accounting system to IFRS will make it possible to most rationally solve the problem of creating an effective accounting and reporting system that meets the needs of a market economy [1—3; 6].

It should be noted that the implementation of IFRS is not necessary for all organizations. State-owned companies, if they do not need to raise capital, do not urgently need to apply IFRS, since control over their work is carried out by the authorities.

If organizations nevertheless intend to implement international financial reporting standards, switching to IFRS, they may face and take some risks: on the one hand, non-compliance of indicators with the requirements of regulatory authorities, as well as a change in asset quality due to recalculation, and on the other hand, risks associated with insufficient qualification of personnel and revision of information technology.

Conclusion. The introduction of international standards requires certain changes both in the regulatory framework and in the accounting system as well. Despite of the taking of certain risks, the transition of enterprises to IFRS not only has significant advantages (although it imposes higher requirements), but it is also a top-vital necessity for enterprises which interest in increasing their attractiveness to investors.

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STARTUP DESIGN AS A TOOL OF INNOVATIVE ENTREPRENEURSHIP

Introduction. At the present stage of society development, innovative entrepreneurship is the main lever of innovative economy based on the flow of innovations, on constant technological improvement, and the export of high-tech technologies.

A significant role in this direction is played by the creation and development of startups, the number of which is growing every year, and their areas of activity are also diversifying. Programs of state support of small businesses, programs of support and development of innovations are actively developing.

Main part. Currently, a startup is considered as an independent business object that has all the prerequisites to grow from a small business into a large highly profitable project. The advantages of creating startups are: creating new jobs, offering an innovative product or service, and as a result — creating a positive social and economic effect.

The distinctive features of a startup are the following:

1. The proposed product must be innovative.
2. The proposed business idea should be valuable and in demand.

3. Teamwork.
4. Ambitious and risk-taking initiators of the project [2].

Investments are the main component of the viability of the project being launched. The transition to each subsequent stage of startup development is accompanied by an increase in the amount of required investments. At the same time, the risks are reduced, as the project demonstrates efficiency and effectiveness, the probability of its success increases.

Sources for obtaining investments can be:

1. Funds from other successful projects.
2. Participation in competitions and grants.
3. Participation in research programs.
4. Crowdfunding.
5. Investments from individuals and legal entities (business angels).
6. Accelerator financing.
7. Investments from venture companies.

At the moment, a startup ecosystem map has been created in the Republic of Belarus, which provides information about 100 ecosystem players. Over time, it will grow and be updated. At the same time, it is planned that new participants will get there free of charge after the preliminary selection of the expert council, for which the value of the project for the development of Belarusian entrepreneurship is important, professional expertise for at least 3 years, as well as implemented and confirmed cases and projects. The experts will involve companies participating in the ecosystem, such as the Hi-Tech Park, the National Bank, ERIP (unified settlement information space — USIS) and others, industry leaders — people with specialized competencies, business angels and investors.

As for the map itself, it describes the four stages of the project:

1. The first is an idea and concept where you can learn how to register a startup and get trained.
2. The second is a proof of the concept/prototype, telling how to bring the project to market, find money for the development and which accelerators to apply to.
3. The third part is called a rollout. It contains information about possible investments, financing and incubation.
4. And finally the last part is responsible for the growth and scaling, where help in finding capital for the development takes place.

In the StartupBlink ecosystem ranking for 2019, Belarus ranked 55th (out of 100 countries), and Minsk, the capital city of Belarus, ranks 181 (out of 1 000 cities). Here startups are launched, developed, and they attract funding from both internal and external investors.

Six HTP resident companies: Bell Integrator, Ciklum, EPAM, IBA Group, Intetics and Itransition were included in the list of the best outsourcing service providers.

10 companies from the ranking of the largest software companies in the world Software 500 have development offices in Belarus: EPAM, Bell Integrator, IBA, Itransition, Coherent Solution, SoftClub, Artezio, Intetics, Oxagile, IHS [1].

The number of active startups in Belarus by the end of 2020 was 339, and 52 new companies were founded in 2020 alone (Figure 1).

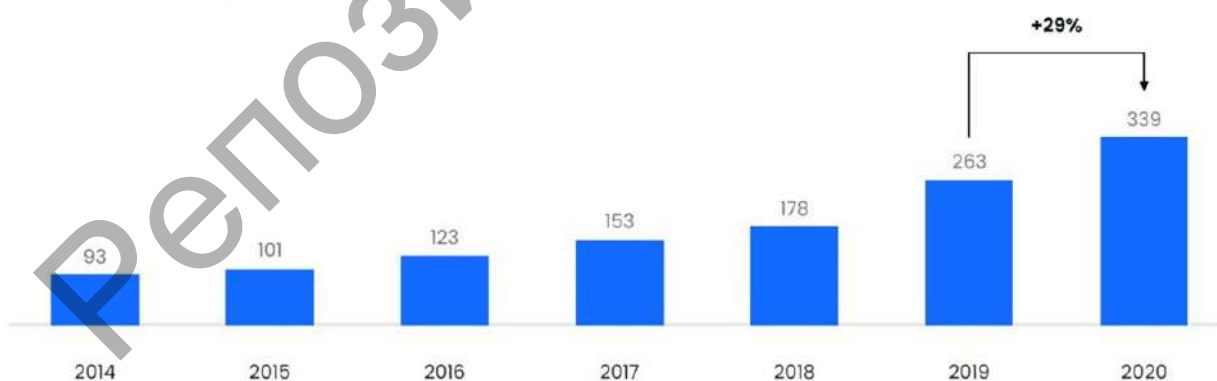


Figure 1 — Number of operating & visible Belarusian startups, 2014—2020, end of year [3]

The main field of activity for Belarusian startups consisted of such areas as: healthcare, corporate software development, marketing, e-commerce and entertainment. In 2020, most startups appeared in the educational as well as food and agricultural sectors.

The top most successful startups in the Republic of Belarus were: Kitchen Hub application, SegmentStream application, Vochi application, One Soil application, Flo application, and Rand App.

Conclusion. Thus, the startup ecosystem of Belarus is interesting from different points of view.

Firstly, from the point of view of the development of the IT sector in the country - how this factor affects the development of innovative entrepreneurship.

Secondly, from the point of view of products, a number of projects in Belarus were able not only to attract investment, but also to achieve fame. Thus, cool business ideas were translated into products, and those spread all over the world.

Thirdly, from the point of view of infrastructure development for startups. Five years ago, there was almost nothing in this regard in the country, but now dozens of business incubators are operating, the first venture funds have been launched.

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THE IMPACT OF THE DEVELOPMENT LEVEL OF THE MARKET FOR R&D SERVICES ON THE ECONOMIC SECURITY OF THE STATE

Introduction. The market for research and development (hereinafter — R&D) services provides the formation of a complex of conditions for the creation of science-intensive goods, innovative products for the growth of the country's competitiveness. First of all, it is possible through the effective use of intellectual resources as a whole and activation of research activities, the development of innovative potential of young people in particular. This process is complex and multi-stage, including science promotion, search for interested young people, and development of their competencies in the field of scientific research, innovative developments, generation of scientific ideas, their testing and introduction. The successful implementation of each of the stages should be ensured through a reliable material and technical infrastructure, a partner cross-sectoral network based on cooperation between scientific, educational and real sectors, business and systematic support from the state.

Main part. The effective development of the market for R&D services provides the economic security of the state based on the creation of new industries, new workplaces, growth of export potential, which is especially important in the light of the current economic and political situation in the world.

At the same time we observe the lack of research, both in theory and in practice, on issues, related to how exactly the development of scientific and technological progress, science and R&D impacts the economic security of the state. Also, the optimal parameters for measuring economic security under innovative development are still under discussion.

The above-stated has led to the goal of the given study: to conduct a comparative analysis (based on the examples of the Russian Federation and Republic of Belarus) of the nature of the impact of the development level of the market for R&D services on the economic security of the state as well as to develop an impact matrix of an individual component of the R&D market on the economic security of the state.

The object of the study is the system of threats to the economic security of the Russian Federation and the Republic of Belarus, arising under innovative development of the country as well as regions of the Republic of Belarus and the Russian Federation.

The subject of the study is the economic relations, arising from the impact of the development of R&D on the economic security of the country.

The study used official statistical data as well as methods of analysis and synthesis of information. As special research methods, a combination of a variance analysis was chosen that allows to consider the deviation of values of the studied indicators in the regional aspect, and correlation analysis that allows to evaluate the level of relationship between the selected indicators.

As a system of indicators, used to analyze the development level of the market for R&D services, the following were applied:

1. Internal costs for R&D.
2. The share of shipped innovative products in the total volume of shipped products.
3. Labour costs for employees, who implemented R&D, on average per 1 person per year.

Conclusion. Based on the correlation and dispersion analysis, it can be concluded that both in Belarus and in Russia, the direction for implementing the strategy for production of science-intensive products is being intensified as one of the main mechanisms for competitiveness and ensuring the economic and innovative security of the country. We cannot escape the conclusion about the high effectiveness of funding R&D services for the analyzed five-year period.

Meanwhile, the low effectiveness of the innovative infrastructure functioning should be mentioned. Since 2021 for the development of innovative infrastructure both countries have seen significant transformational processes, connected with the development of the start-up movement, innovative entrepreneurship (especially youth), rational investment of funds. The author has confirmed the hypothesis about the impact of the effectiveness level of the functioning of the market for R&D services on the dynamics of the state of economic security.

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POSSIBILITIES OF USING ARTIFICIAL INTELLIGENCE IN MARKETING

Introduction. The use of marketing tools in the activities of organizations creates a significant advantage over competitors. Artificial intelligence is a key driver of future competitiveness.

Artificial intelligence is not yet able to replace human copywriters, but thanks to the cooperation of artificial intelligence and humans, it is already possible to increase productivity by up to five times and thus reduce costs.

Main part. Of the 951 German companies surveyed in 2021, only 13% have used the technology, and just over a third have planned or considered using artificial intelligence, according to a study by TCS in 2021.

On the other hand, 54% of the surveyed companies believe that the use of artificial intelligence will be an important element in the future competitiveness of their company. This is a low level in international comparison. According to Exploding Topics, 83% of companies consider the use of artificial intelligence a priority in their strategy. [1].

This is also supported by spending on artificial intelligence software. AI software revenue is estimated to increase tenfold to \$997.77 billion by 2028 compared to 2020 [1].

Artificial intelligence is a set of technologies and systems capable of performing processes that are traditionally characteristic of people: generalization of knowledge, logical reasoning and conclusions, conditionally “creative” tasks (writing, drawing).

The tasks that artificial intelligence solves in marketing are as follows:

1. To reduce costs — for example, by reducing jobs when introducing a chat bot with artificial intelligence instead of a staff of operators.
2. To increase efficiency — for example, it studies large amounts of information and puts forward hypotheses for personalizing content faster and more accurately than a person.

Areas of using artificial intelligence in marketing are the following:

1. Communications. The main examples of them are smart voice assistants, call center robots, smart chat bots.
2. Predictive analytics. Artificial intelligence helps to make forecasts for business, marketing, economics and other areas of activity. For example, it can analyze the effectiveness of advertising campaigns over different periods, identify patterns and predict their future effectiveness and costs.
3. Personalization. Such systems analyze a large amount of data about the user, including the history of his past purchases, gender and age characteristics, behavior on sites and much more, and offer the user any solutions based on the analysis.
4. Content creation. For example, Accelerator from IBM has been shown to be effective in creating promotional videos individually for each category of target audience. Depending on the user’s parameters for watching ads, the title, background and other elements of the video are selected.

However, there are some problematic areas of using artificial intelligence:

1. Ethical issues. With the growing involvement of artificial intelligence in marketing, the question arises whether it is ethical to apply “smart” technologies to people who do not know about it. That is, is it not a direct deception, for example, the introduction of a chatbot that resembles a person, or showing users customized advertising that is highly likely to provoke a purchase. 65% of people worry about the ethics of artificial intelligence. It is actively condemned among specialists and causes a lot of controversy.
2. Unjustified expectations. Often, artificial intelligence is perceived as a magical robot that can replace any employee. Artificial intelligence can be entrusted with many tasks, but mostly typical and routine ones. It is currently not coping with creative tasks at the proper level.
3. The expectation of error and distrust that comes from managers who do not believe in the benefits of artificial intelligence and therefore hesitate to implement it. As a result, they miss out on their benefits. Mistakes made by artificial

intelligence systems at the initial stages of their work reinforce mistrust. For example, a poorly trained chatbot can answer questions incorrectly and annoy users.

4. The need for professionals who specialize in working with artificial intelligence systems, data-engineers, data-scientists and, of course, specialized developers are required. However, there is a shortage of specialists in this field in the labor market.

Conclusion. Thus, artificial intelligence can already improve the competitiveness and efficiency of organizations in various fields of activity. AI content creation is a powerful way for companies of all sizes to get high-quality content quickly and cheaply.

Artificial intelligence tools can be useful when creating compelling blog posts or other marketing materials. Experts predict that in the near future artificial intelligence will become an important part of any Internet business. Therefore, it is worth integrating this technology into the business at an early stage.

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CROWDFUNDING AS AN INNOVATIVE FORM OF FINANCING

Introduction. Currently, crowdfunding is an innovative form of financing that is becoming more and more prominent. The article presents the main definitions, participating persons and crowdfunding models.

Crowdfunding is one of the four main types of crowdsourcing. This form of financing has already received approval and recognition in different countries of the world. The term is used by both State and non-governmental organizations. The term “crowdfunding” in Russian is broader and understood as funding and financing. The use of the term in two languages may even be misleading, therefore in this study; the term “crowdfunding” will be treated interchangeably and equally.

The main part. Crowdfunding is a specific type of outsourcing, the aim of which is to find outside the company for its functioning. Crowdfunding doesn't belong to the classical forms of financing, therefore, depending on the form it takes; it may have features of both equity and foreign capital.

According to Chapter 5 of the State Program of Innovative Development of the Republic of Belarus for 2016-2020, approved by Decree of the President of the Republic of Belarus No. 31 of January 31, 2017 (hereinafter referred to as Decree No. 31) the development of crowdfunding as a tool for interaction between consumers and producers of goods and services, investors and investment seekers is envisaged [1].

Investments are made in the territory of the Republic of Belarus by any means other than those prohibited by legislative acts of the Republic of Belarus (paragraph 7 of Article 4 of the Law of the Republic of Belarus No. 53-Z of July 12, 2013 “On Investments”).

According to Decree No. 31, commercial crowdfunding involves the participation of at least three sides:

- 1) the operator of the Internet platform — a person engaged in the organization of raising funds;
- 2) producers of goods and services /investment applicants – persons (organizations, individuals) who attract funds, including investments, through an Internet platform;
- 3) consumers /investors — legal entities and individuals who finance through the Internet platform.

Crowdfunding includes an open invitation using a web platform to financial support a specific initiative proposed by the initiator. This support can take the form of a donation or guarantee the funder specific benefits. The result of using crowdfunding is the participation of a much larger number of participants in the project. Investors in exchange for entrusted funds can receive certain refundable benefits, which should not take the form of monetary payment. Moreover, at the first stage of crowdfunding development, it primarily concerned specific industries (computer games, music, etc.), where potential investors were personally interested in implementing a specific project.

The core of crowdfunding is the usage of the Internet. This feature distinguishes this method of raising capital from all others. Internet platforms are being created for communication between initiators and potential sources of capital. They mediate between the participants, show examples of investments, solutions, and inform about the work progress. Currently, there are three main types of crowdfunding platforms. They are:

1. Specialized platforms - intermediaries only for specific types of projects (for example, music projects, computer games).
2. Platforms for specific categories of business belong to various industries, but focused on specific types of projects (for example, new technologies, IT projects, funds).
3. General-purpose platforms have a wide range of industries and organizations they work with.

It can be concluded that crowdfunding is one of the most dynamically developing ways of private financing of business projects at the early stage of their development. Investors greatest interest is focused on small enterprises with innovative ideas. It is much more difficult to attract such capital to large enterprises or research institutes. Nevertheless, crowdfunding can become an attractive and affordable form of capital raising for large enterprises.

Experts point out that there are several types of financing, depending on how and what return benefits will be provided to investors. The most common division is shown in Figure 1.

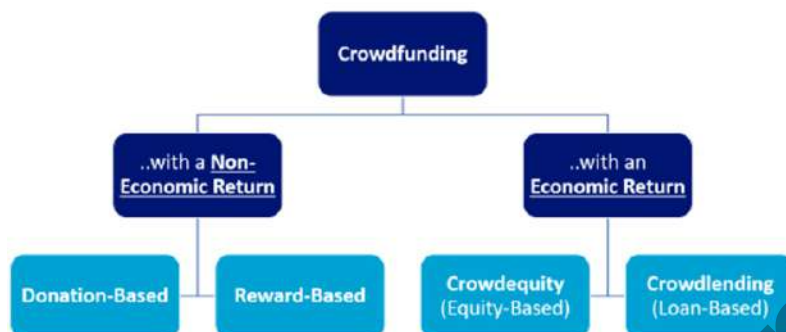


Figure 1 — Several types of financing

When funding is not accompanied by any financial return, it can take the form of a grant or remuneration. In the case of a donation, the co-financier does not receive any compensation. Such cases relate primarily to the promotion of various kinds of charitable actions, improving the living conditions of society, etc. Despite the absence of any benefits for the return, this funding is increasingly used around the world.

As a reward in crowdfunding an investor receives a gift or a bonus in exchange for the transferred funds, which has a purely symbolic or a material value (an autograph, a ticket, a game, as well as the opportunity to purchase finished products at a promotional price). This model is used primarily when the potential audience and customers are very interested in its implementation.

Participation in such events has image and advertising value for enterprises. Thanks to this, they become more recognizable, reaching large audiences, being associated with positive initiatives. An example is Dodge, which supported social loans to buy its cars, or Coca Cola Company, which participated in organizing and raising funds for the construction of wells in Mexico in areas with low water content.

For a long time the field of crowdfunding in Belarus wasn't regulated by law. However, on May 25, 2021, Decree No. 196 "On Online Borrowing and Lending Services" was signed [2]. This Decree has regulated the sphere and allows citizens and legal entities to attract funds using online borrowing services — that is, websites and programs designed to conclude loan agreements for consumer and business purposes. Only organizations included by the National Bank in a special register can act as operators of online borrowing services (as crowdfunding platforms). At the same time, crowdfunding services themselves don't have the right to be one of the sides to the loan agreement, their function is only to provide a platform for transactions between project creators and sponsors.

There are various Internet platforms for commercial and non-commercial crowdfunding in the Republic of Belarus: 1) talaka.org; 2) maesens.by.

At the beginning of 2020, there were three most popular crowdfunding platforms in the country: Ulej, Talaka and MaeSens, but not all of them reached 2022 [3].

Conclusion. Thus, crowdfunding is an effective way to raise funds using information technology for the implementation of commercial and non-commercial projects. For its development it is necessary to create regulatory regulation and mechanisms for protecting the rights of participants in the relevant relations.

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THE ROLE OF MANAGEMENT ACCOUNTING IN THE MANAGEMENT OF BUSINESS ENTITIES

Introduction. The development of economic activity of business entities must be accompanied by the development of an accounting and analytical system. The accounting information in general and especially the management accounting information acquire greater importance in the current economic conditions, characterized by risk and uncertainty. Management accounting helps management make management decisions by collecting information, processing it, and making it useful to them.

Main part. In modern conditions of economic development, the effectiveness of the management of the business entities activities depends on the level of information support. Operational information is generated in the management accounting system, which is an integral part of the management process in the business entities. Management accounting includes the process of collecting, measuring, accumulating, analyzing, preparing, interpreting and transmitting information. On the basis of management accounting data, the heads of the organization and its structural divisions make effective management decisions.

As noted by Mykola Matiukha and Alexander Rovnyagin a business entities information resource is an accounting system that provides managerial decision-making functions. Information resource elements are based on the modern division of accounting into financial and managerial, due to modern formation processes and information presentation for the enterprise management needs. In the system of internal management there is always the possibility of deepening analytical work through the use of managerial accounting data and reporting, that is, the possibility of conducting a comprehensive economic analysis and evaluation of the effectiveness of economic activity. This opportunity appears through the development of data processing technologies, the emergence of new organizational and methodological approaches towards the use of the enterprise information resource. In this connection, relevant issues of managerial accounting are: results orientation of information provision to the goals and interests of the enterprise management, use of all sources of information for decision-making, lack of regulation by government structures, information complexity, study of all enterprise aspects, accounting integration, analysis, planning and decision making; maximum confidentiality of information results in order to secure trade secrets [1, p. 3].

Accuracy and correctness of data are critical to the success of every business entity. Without meaningful and actionable information, it is impossible to assess the current state of affairs or plan future business steps. In such conditions, management accounting becomes the basis of modern business [2].

In the Republic of Belarus, active work is underway to reform the accounting system and is undergoing a transition to International Financial Reporting Standards, which inevitably expands the functions and powers of the accounting service. In the new economic conditions, the accountant can no longer follow only the instructions, he has to rely on professional judgment. However, the modern development of accounting, despite the measures aimed at reforming it, still does not correspond to modern information and analytical needs.

In modern conditions of economic development, there is a lack of available information for making managerial decisions, which indicates the need for the implementation of managerial accounting. The problems of setting and maintaining managerial accounting are now relevant for many business entities. Recently, the demand for this type of accounting has been growing at a significant pace, and owners of business entities are interested not only in the experience and approaches of other organizations that have introduced management accounting, but also in the possibilities of its automation.

Management accounting is not only the collection and accounting of information, but also its analysis and evaluation in order to make effective and reasonable management decisions.

Managerial accountants design information systems to provide executives with the data they need to run their businesses effectively and reach their goals. These reports are internal and are constructed to meet the specific needs of each company and their managers [3].

The rules for maintaining management accounting are established by business entities independently, taking into account the specifics of their activities, the features of solving certain management tasks. Since management accounting is not regulated by law, the responsibility for the correctness of reference also not provided. But it should be noted that management accounting data is not subject to disclosure and is a trade secret of a business entity.

In general, management accounting is practically not carried out in the organizations of the Republic of Belarus. This is mainly due to the fact that there is no consensus on its purpose, role and place in the management system, there is no specific methodology and recommendations aimed at organizing it, while domestic organizations are acutely aware of the need to introduce an effective management, since in modern conditions, they operate in a highly competitive environment.

Conclusions. Many organizations ignore the importance of management accounting and focus only on financial accounting, but management accounting plays an important role in the planning and decision-making functions of the management process.

It should be noted that the introduction and development of management accounting in the future is directly related to information technology. Information technology is a powerful tool that can play a big part in making an organization's business a successful one. It is acceptable to companies that the application of information technology in management is inevitable and many companies are already looking towards the implementation of information technology based on management accounting.

By adopting correct system and technology in management accounting the companies and the accountants are able to produce accurate reports to make effective management decisions. Management accounting takes an entity's financial and non-financial information and develops reports for confidential internal use by managers. The reports help in decision making and identifying ways to manage better the entity's activities and are based on the information needs of management.

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UDC 330

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INTELLECTUAL CAPITAL AS THE MAIN FACTOR OF ECONOMIC DEVELOPMENT

Introduction. The processes of globalization and information technology development were the catalyst for revolutionary changes in modern economy. Knowledge and intellectual capital are becoming the main factors for the competitiveness of modern organizations and economic development. As a result, intellectual capital is becoming a new object of management. It provides sustainable competitive advantage. Furthermore, to the traditional factors of production (labor, land and capital) today is added another, which becoming the defining, supreme — knowledge and intellectual capital.

Main part. Still, there is no single assessment and measurement of intellectual capital. Intellectual capital is “the value of company's employee knowledge, business training and any proprietary information that may provide the company with a competitive advantage”. There are different structures and sub categories of intellectual capital. According to Edvisson and Malone model, intellectual capital has two key sub categories: Human capital and Structural capital. Structural capital comprises Market (also denoted as Consumer or Relation) capital and Organizational capital, while Organizational capital has two sub components: Process capital and Renewal (Innovation) capital. Human capital is the stock of knowledge, habits, skills and personal attributes and competencies in performing labour activities. Structural capital refers to non-human storehouses as infrastructure, hardware, software, process and databases that provide work of human capital. Organizational capital is organizational philosophy and capability; it is organizational structure, patents, trademarks. Market (Consumer or Relation) capital refers to relationships with customers, vendors and others. Process capital presents procedures, programs and techniques, while IC is intellectual property, patents, copyrights. Human, relation, process and innovation capitals usually act together on economic performances and have multiple effects [1, p. 78].

Intellectual capital of the country includes a highly educated part of the population, scientists and others knowledge workers. On Figure 1 we can see the correlation between the share of people with tertiary education and GDP per capita, PPP.

In the Republic of Belarus, the share of the population receiving higher education in 2019 amounted to 18,8 % of the total population over 6 years old, while in 2009 this figure was 26,2 %. At the same time, the number of the population receiving postgraduate education is only 0.5 %.

Many authors developed their own assessment in order to see the role of intellectual capital and economic performances, growth and development. In the article [1], intellectual capital is analyzed as a driver of economic development. The correlation between national intellectual capital (NIC) and indicators of economic development is made. The results show a positive correlation between NIC and indicators of development. Based on the correlation, NIC could influence GDP per capita, unemployment, inflation and competitiveness.

That's why knowledge and intellectual capital are the new materials of modern economy. Only people with a creative mind, high education create knowledge economy.

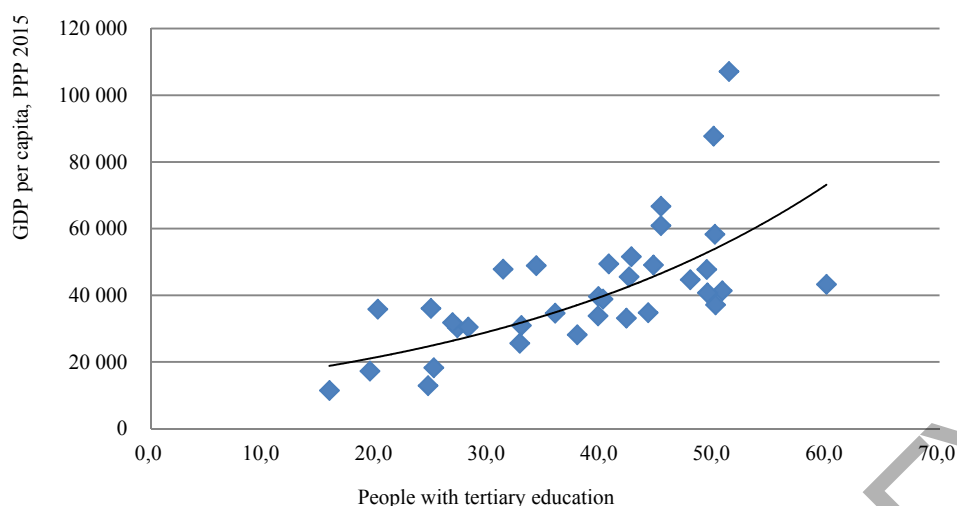


Figure 1 — The dependence of the share of the population with tertiary education on GDP per capita, 2020

The importance of the concept of intellectual capital in the age of knowledge becomes the new core of economic progress, since the influence of fixed assets and financial assets is reduced in comparison with the influence of intangible assets [2, p. 195].

Conclusion. So, intellectual capital plays an important role to make companies compete productively. It's becoming a new object of management and it provides sustainable competitive advantage for the country.

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UDC 366.1

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THE INFLUENCE OF PSYCHOLOGICAL FACTORS ON THE CHARACTERISTICS OF CONSUMER BEHAVIOR

Introduction. To improve the efficiency of any organization, a thorough study of the characteristics of consumer behavior is necessary. In the marketing system, the goal is to determine the whole complex of motivating factors that guide consumers when choosing a product. Psychological factors include motivation, personality type, perception, values, beliefs, attitude and lifestyle.

The purpose is to provide a detailed explanation of the aspects that affect consumer behavior. When studying consumer behavior, special attention is paid to the “why” and “how” issues related to consumer decision-making and purchasing behavior. This field is a dynamic combination of issues of consumer marketing strategies, psychology and behavioral discipline.

Main part. Almost all types of human behavior are somehow related to consumption: shopping, watching TV, traveling, and so on. These are processes related to when people choose, buy and use products or services to meet their needs and desires. It is quite difficult to understand consumer psychology without having an understanding of how a person processes information and makes decisions. Extensive research in consumer psychology has revealed the main aspects of personality that determine consumer engagement. The fundamental elements highlighted in the theoretical structure are internal factors influencing consumer behavior. They include perception, learning, memory, motives, personality, emotions and attitudes of the individual.

One of the factors determining how strongly a person perceives the impact of a certain stimulus is experience. This can be seen by the example of how consumers show high selectivity in how they make purchases when they enter the store [1].

The Initiative conducted a selective exposure study, and found that only 21 % of shoppers in the United States walk through each aisle of the store. The remaining 79 % simply visit aisles where they need certain goods and avoid aisles with goods that do not interest them.

Another factor that has a significant impact on consumer behavior is adaptation. This factor focuses on the extent to which consumers recognize a particular stimulus over a period of time. The effect that adaptation has on its consumer is that over time this incentive becomes so familiar that it is ignored. As an example, we can consider a billboard: after repeated passage, this incentive becomes unnoticed. There are several factors that can lead to adaptation. These factors include intensity, duration, impact and relevance. All factors can affect the consumer and lead to adaptation depending on the individual [2].

Emotions are strong, uncontrollable feelings that affect behavior. If the consumer's needs are not met, this often leads to negative emotions, causing anger, frustration or irritation. Emotions play an important role in the consumption of products, and if a brand produces advertising that evokes positive emotions, it is likely that the product will receive consumer loyalty.

The research company 4Service Group conducted a study in nine branches of the service sector of the Republic of Belarus. 7.5 thousand people took part. With the help of secret shoppers, the quality of service was monitored and it was revealed what influence the emotional factor has on the level of sales in different retail industries.

According to the results of the study, the greatest strength of the connection between the quality of service and emotions was revealed in clothing and shoe stores — 0.59 out of one, in telecommunications — 0.53 and cosmetics stores — 0.50. In other industries, the communication strength is at an average level of 0.30 [2].

There are four factors that help turn ordinary customers into fans of a particular company:

1. Compliance with standards. A friendly greeting, regardless of the fact of the purchase, increases the likelihood of repeated treatment.

2. Caring service. Customers go to stores not only to see the goods in reality, but also for live communication. Even the most rational consumer needs approval of his choice. A smile or a life story will become an effective impulse to buy.

3. Do not allow neutral emotions at the exit of the location. Being in a state of “no feelings”, the client will not recommend the brand to his friends. Ignoring this factor, the organization can lose customers, and, consequently, reduce profits.

4. Obsession spoils the service. The desire of employees to get a sale in any way has the opposite effect. Excessively active additional sales are regarded by consumers as an obsession that violates personal space [3].

Note that previously acquired loyalty is able to smooth out the negative or enhance the positive emotions of the client from staying in the location.

In the Republic of Belarus, most consumers leave the locations of the service sector in a good mood. According to research by 4Service Group, the overall emotionality index is 0.64. Customers receive the brightest positive emotions in cosmetics stores — the emotionality index there is 0.78. The high value of the index is due to the predominance, in comparison with other industries, of positive emotions — 82 %, the minimum share of negative emotions — 3 %. Customers receive less positive emotions at the exit from grocery stores (only 53 %) and sporting goods stores (64 %) [2].

The results of the study have become the evidence base of the relationship between the quality of service and the emotional mood of customers, which determines their loyalty. These studies can serve as arguments for employees in their training and involvement in the process of truly high-quality service.

Conclusion. Consumer psychology is a branch of psychology that studies the features of the consumer market, a person as a consumer, subject and object of advertising. Consumer psychology studies not only the taste preferences of the buyer, the dynamics of demand and supply of various goods and services, but also the personality and other characteristics of the buyer. Based the results of customer research, it is possible to develop effective advertising, predict a group of buyers of new goods and services, fashion trends for a certain product.

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THE IMPORTANCE OF PROFITABILITY INDICATORS IN ASSESSING THE FINANCIAL PERFORMANCE OF AN ORGANIZATION

Introduction. Having determined profit, it is impossible to make conclusions about the effectiveness of activities. Analysis of the financial efficiency of the organization's activities involves the investigation of all documentation and reporting. It is important to take into account a number of economic indicators.

Main part. To start with, in the analysis of the economic performance of business entities, it is necessary to include the calculation of indicators:

- 1) profitability of the organization's activities;
- 2) indicators of the structure and dynamics of the assets, equity and liabilities;
- 3) coefficients of current liquidity and provision with assets;
- 4) indicators of financial dependence and independence of the organization from borrowed funds.

One of the key indicators is profitability. Profitability is the percentage of the organization's profit attributable to the total revenue of the organization, revenue from the sale of products or capital [1; 2].

Types of profitability and calculation formulas are described in table 1.

Table 1 — Types of profitability

Type of profitability	Calculation formula
Return on equity	$\frac{\text{Net income}}{\text{Total equity}} 100 \%$
Return on investment	$\frac{\text{Operating income}}{\text{Cost of sales}} 100 \%$
Profitability of sales	$\frac{\text{Operating income}}{\text{Received revenue}} 100 \%$
Return on circulating capital	$\frac{\text{Net income}}{\text{Current assets}} 100 \%$

However, it is not enough to calculate these indicators and monitor the dynamics. It is also required to assess the significance and impact of profitability indicators on the organization's activities, taking into account their characteristics. If the values of the indicators tend to zero, it does not mean that the organization inefficiently uses its own resources. In fact, if the profitability in the reporting period decreased in comparison to the previous period, this does not mean that less profit was received. We justify our point of view with an example.

Example: Given data for 2 periods. In the reporting period, the company received revenue in the amount of 100 thousand rubles, in the previous period — 120 thousand rubles. The cost of sales in the reporting period amounted to 70 thousand rubles, in the previous period — 100 thousand rubles.

It is required to determine the size of the operating income and profitability of sales using the next formula:

$$\text{Operating income} = \text{Received revenue} - \text{Cost of sales.}$$

According our previous example, we have results:

$$\text{Operating income in the reporting period} = 100 - 70 = 30 \text{ thousand rubles.}$$

$$\text{Operating income in the previous period} = 110 - 100 = 10 \text{ thousand rubles.}$$

$$\text{Profitability income in the reporting period} = \left(\frac{30}{100}\right) 100 \% = 30 \%$$

$$\text{Profitability of sales in the previous period} = \left(\frac{10}{110}\right) 100 \% = 9,09 \%$$

An organization may have lower profits than competitors, but its transactions may be more profitable. Moreover, an organization can have a much higher profitability, but most of the profits can be spent on repaying the organization's debts to creditors and banks.

Analysis of the structure and dynamics of the balance sheet allows to monitor the change in the values of financial indicators of the organization's activities and determine the degree of influence of individual items on the balance sheet.

The specifics of the activity will be reflected in liquidity. In general, the turnover period of the organization's assets is higher for consumer goods, since the demand for them is quite constant and they are sold in large quantities. For organizations in the heavy and extractive industries, as well as agriculture, liquidity is much lower, since demand may depend on orders, the availability of required materials, or be seasonal.

The current ratio reflects the organization's ability to pay short-term obligations and is a multiple of the value of a short-term asset and short-term liabilities. The normative value of the current ratio in the Republic of Belarus is from 1 to 1.7. The asset coverage ratio (equity to total assets ratio) reflects the organization's ability to pay its own obligations and is a multiple of the organization's liabilities and the balance sheet total. The normative value of the asset coverage ratio is less than 0.85 [3].

The calculation of the debt ratio is determined as a part of the organization's balance sheet. The financial independence ratio formula is the sum of short-term and long-term liabilities divided by the balance sheet total. Measuring dependency is directly proportional to the value of the debt ratio.

The equity ratio of organizations represents a large share of equity and major liabilities divided by the balance sheet total.

Various approaches are used in the world practice to calculate the performance indicators of an organization. One of the methods is IFRS Financial Ratios. Return on total capital shows the interest on total capital, which comprises both total equity and liabilities. This indicator is generally used as a starting point for all further analyses using profitability indicators. The advantage of this method is that it allows us to visualize return on total capital. The disadvantage is that it is highly dependent on accounting policy [4].

However, if the amount of long-term and short-term liabilities is greater than the balance sheet, it does not mean that the company is operating at a loss or does not have its own funds. For instance, the amount of long-term and short-term liabilities is 100 thousand rubles, while accounts receivable is 120 thousand rubles. The organization has to resort to the use of borrowed funds to maintain its financial position until the accounts receivable are paid off.

In addition, in the world practice, the calculation of such ratio as return on total capital shows the interest on total capital, which comprises both total equity and liabilities.

Conclusions. Analysis of the main financial indicators of the organization's activities allows us to assess the degree of efficiency in the use of resources of an economic entity and determine the reserves and opportunities for the development of activities.

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FEATURES OF DEVELOPING SIMPLE CLIENT-SERVER APPLICATIONS BASED ON WCF AND REST ARCHITECTURE

Introduction. A plethora of network applications are used on mobile and desktop devices daily. Local area networks and the Internet allow you to use remote resources and perform operations on a centralized server for storing and processing data and control the process from any compatible workstation. This implementation involves creating client-server applications that send input data entered on the client side over the network to the server, which performs the processing and sends the results back to the client, who presents them through its GUI.

There are a considerable number of different architectures used for building network client-server interaction. However, this article will focus on REST and W F. As an example of implementing software applications using these architectures, two application projects are presented: for calculating and optimizing profit and for performing CRUD operations over information cards.

Main part. The applications were written in C# using Microsoft Visual Studio 2022.

The first application is developed using .NET Framework 4.6. The WinForms API is used to create the client’s GUI. Client-server communication relies on the WCF. Windows Communication Foundation is a platform for creating service-oriented applications. Using WCF, you can relay data as asynchronous messages from one service endpoint to another. Messages can be encrypted for data protection and require users to pass the authentication process before receiving messages. Data is transmitted using the TCP and/or HTTP(S) protocols in XML or binary format. Security standards like SSL and TLS can also be implemented [1]. At the stage of writing the source code, the platform allows you to simplify the organization of complex network interaction to a remote call of interfaces declared methods

The network interaction structure of the first application may seem quite simple, because the methods are called remotely. In practice, a two-way call requires the creation of five interfaces (they are necessary for initializing the ServiceHost<IServerOpmtimize> object on the server side and DuplexChannelFactory<IServiceOptimize> on the client side) and, accordingly, the classes that implement them. Interfaces, classes, and their components are described with a large number of attributes, writing them manually is time-consuming. Figure 1 shows a diagram of the server and client interfaces.



Figure 1 — Application’s network interfaces diagram

The IServiceOptimize interface describes the client-server interaction. IServiceOptimizeCallback describes the client methods called by the server.

Of course, the development environment allows to generate these interfaces in the client code automatically by connecting to a compiled and running server using the HTTP protocol, however, further changes on the server side (and adding new methods) require re-creation of these interfaces, which makes it difficult to develop both sides at the same time. It should also be noted that a server built using WCF usually consists of at least two parts: a class library that

performs the necessary operations (in this case, working with a database, managing users, and calculating), and a host application in the form of, for example, a console application or a Windows service. In conclusion, a conceptually simple technology requires a lot of effort, especially if it is being developed for a small system.

The second application was developed using the REST API.

Representational State Transfer (REST) is a technical description or architectural style of how the World Wide Web works. A REST API is a type of web server that allows a user-managed or automated client to access resources that model system data and functions. From the client's point of view, the architecture is represented as a set of links accessible for receiving or sending data in JSON-format. Data is transmitted over the HTTP(S) protocols, which also work according to the SSL security standard. The concept of using REST suggests using GET (receiving data), POST (adding data; actual use varies), PUT (updating data), DELETE (deletion) methods [2].

The client side of the second application was created using WPF, built on the base of .NET Framework 4.7.1. The server side uses the features of ASP.NET Core 3.0. ASP.NET Core is a cross-platform, high-performance, open-source platform for creating modern cloud applications connected to the Internet. It allows creating the web applications and services, IoT applications and mobile backends as well as deployment in the cloud or locally [3].

According to the description, server part consists of a single project, which can be immediately built both as a console application and as a Windows service. In addition, it is possible to work with the server directly from the browser, by accessing necessary URL-addresses.

In practice, the simplicity of implementation is obvious. There is no need to develop interfaces. Each server method is marked only with an attribute indicating the address and one of GET, POST, PUT, DELETE methods. Figure 2 shows diagrams of classes responsible for network interaction.

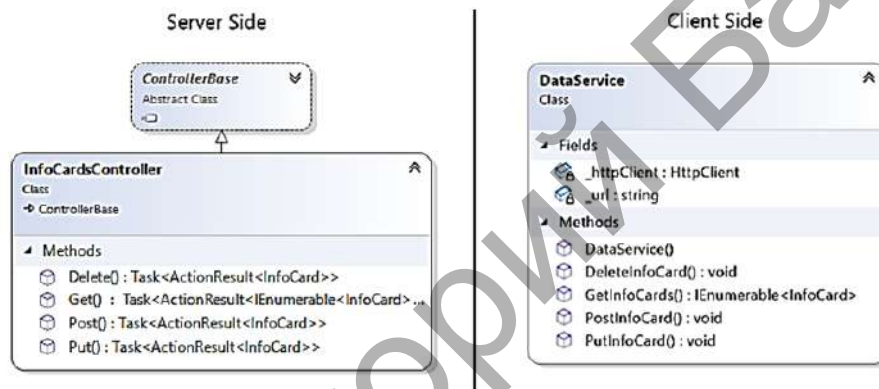


Figure 2 — Network interaction classes diagram

Despite the differences in the functionality of both applications, server implementation using REST is simpler. Classes like InfoCardsController on the server that are inherited from Microsoft.AspNetCore.Mvc.ControllerBase may be larger, but their composition will be similar. The development environment provides project templates based on the REST API, making the server part development even more simplified.

Using the JSON format may cause a file forwarding issue, since only text information is supported. In those cases, Base64String is used to represent bytes of forwarded files.

Conclusion. The applications allow to compare features and difficulties of implementing client-server applications based on the REST API and WCF. Using REST, despite using only four methods, provides ease of implementation and by default contains everything that is needed for deployment. Although WCF provides convenient functionality, it requires a lot more time to write source code, so it is not a good choice for small client-server applications.

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THE AIR FLOW COMPUTER SIMULATION INSIDE THE COMPUTER SYSTEM UNIT

Introduction. With the development of information technology, software requires more computer performance. Along with the performance of computers, the heat dissipation of its components is also growing, which forces the development of more and more advanced and advanced cooling systems.

Back in 1999, the heat dissipation of processors did not exceed 44 watts, whereas in 2022 there are models with a TDP of 105 and even 170 watts. The thermal design power (TDP), is the maximum amount of heat generated by a computer chip or component (often a CPU, GPU or system on a chip) that the cooling system in a computer is designed to dissipate under any workload [1].

There are a huge number of ways to reduce the heat output of the processor. Here are some of them:

- increased airflow;
- competent layout of the space in the system unit;
- using thermal paste;
- lowering the voltage on the processor.

For optimal placement of components in the computer case and for choosing a cooler, it is better to use computer simulation. The simulation will allow observing visually where the airflows are directed, determine the temperature of each of the components and generally check the efficiency of the cooling system without the need for real measurements.

The airflow simulation in this study was performed using SOLIDWORKS Flow Simulation. SOLIDWORKS Flow Simulation is a convenient solution for computational fluid dynamics (CFD), built into SOLIDWORKS 3D CAD and allows you to simulate fluid and gas flows to calculate the performance characteristics and capabilities of the product [2].

Main part. Before starting air flow modeling, it is necessary to prepare models of computer components and assemble them into a single assembly. Our assembly is represented by a motherboard, two RAM plates, an m.2 SSD drive, a processor with a cooler and one fan on the back wall of the case (Figure 1).

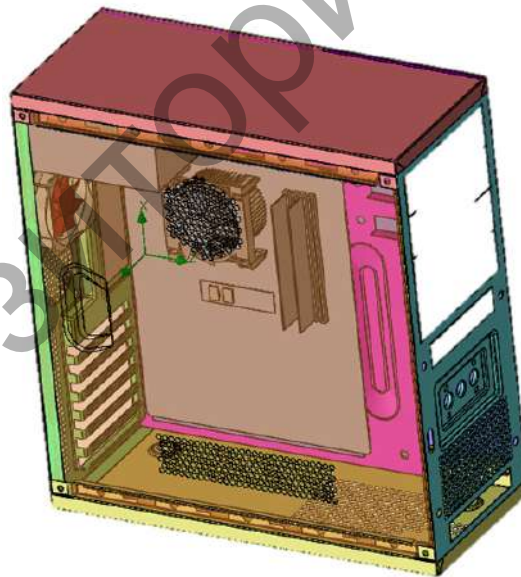


Figure 1 — Assembled system unit

When creating the Flow Simulation project, the External analysis type was selected, “Heat conduction in solids”, “Time-dependent” and “Rotation” (Sliding) were included from the physical models. Air is used as a fluid medium. The initial temperature is 38°C.

Let us begin with setting up the simulation. To facilitate calculations, we reduce the size of the calculated area to the size of the computer case. Next, it is necessary to adjust the rotation areas. The area of rotation is a model commensurate with the fan. It can be created using the tool “Rotated boss” (Figure 2).

We place the rotation areas in place of the fans and add them to the Flow Simulation (Figure 3). Models of rotation regions will not participate in the simulation, since they are not objects.

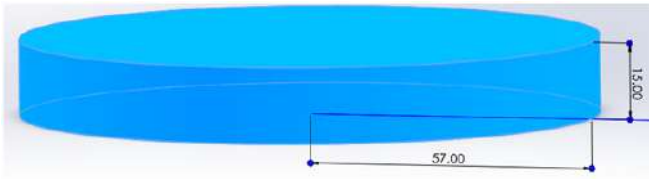


Figure 2 — Model of the rotation area

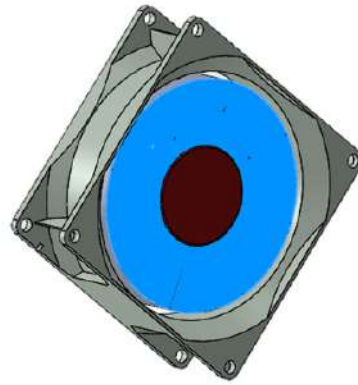


Figure 3 — Placed rotation area

Now we need to choose solid materials. We have the radiator of the CPU cooler made of aluminum, its sleeve and the heat distribution cover of the processor, which are made of copper. The chips of the processor, RAM and SSD drive are silicon.

The creation of areas that emit heat is carried out by the command “Conditions” — “Volume Source”. In our case, the CPU chip emits 65 watts of heat, RAM chips — 1.5 watts each, SSD drive chips — 20 watts each and power supply components — 30 watts.

As global targets, it is necessary to choose the average fluid temperature and the average velocity.

The setup is complete, we run the simulation. After the processing is completed, one can look at the flow trajectory and its temperature (Figure 4). We can notice that cold air enters the housing from below, and the heated air is blown out by the housing fan and the power supply.

Adding surface areas. The temperature of the hottest section is 47.6°C (Figure 5).

The picture in the cross section shows the temperature of the fluid and its directions. It looks like this (Figure 6).

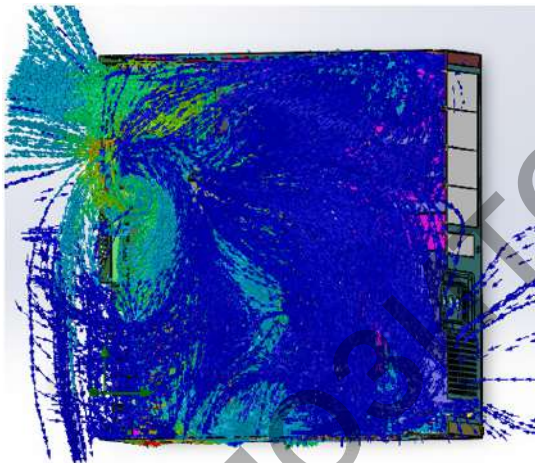


Figure 4 — Flow trajectories

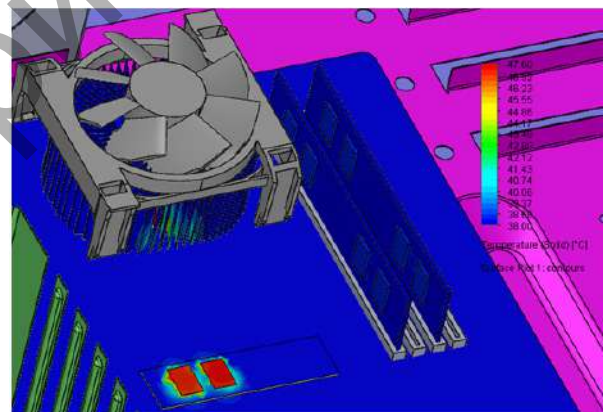


Figure 5 — Surface areas

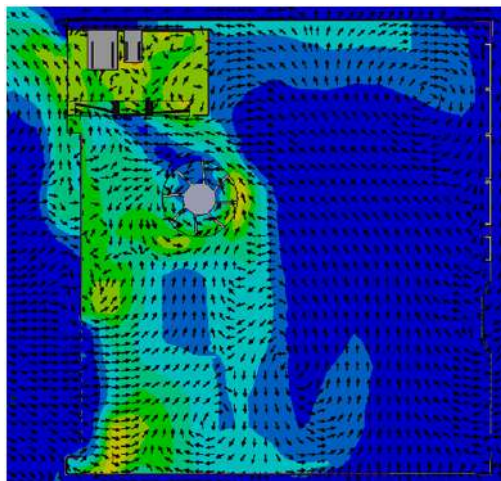


Figure 6 — Picture in cross section

None of the computer components has reached a critical temperature, then it can be concluded that the selected cooling system is suitable for this configuration.

Conclusion. Because of the research, the following conclusion was made: modeling of airflows inside the computer system unit allows placing components optimally without making real measurements.

The simulation of airflows in the computer system unit housing allows determining the efficiency of cooling systems. All the goals were achieved; the tasks of the work were completed.

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DEVELOPING A BUSINESS PERFORMANCE EVALUATION APPLICATION

Introduction. Business is an activity that is aimed at making a regular profit. In modern conditions of a market economy, it is one of the main occupations. It also ensures the economic and social development of society. Such activity covers different areas - commercial, production, consulting [1].

Evaluation of the enterprise effectiveness due to its complexity involves the use of private and generalizing indicators.

According to individual indicators, it is possible to determine:

- application efficiency of each of the company's resources;
- the sales results of each type of the company's products/services.

According to generalized indicators, we determine:

- the enterprise efficiency of all resources, products/services;
- the whole company performance.

The efficiency of a company is evaluated in several stages.

First we calculate and evaluate the overall profitability indicators, which reflect the effectiveness of the company production activities:

- 1) profitability of business — to inform about the share of net profit in sales revenue;
- 2) return on sales — to give an idea of the share of profit from sales in sales revenue;
- 3) profitability of products sold — to show the efficiency of product sales.

Then we calculate and evaluate the general indicators of profitability, reflecting the efficiency of the use of enterprise resources:

- 1) return on current assets — reflects the efficiency of the use of working capital organization;
- 2) profitability of non-current assets — reflects the efficiency of use of non-current assets of the enterprise;
- 3) return on equity — reflects the efficiency of the use of net worth by the organization;
- 4) return on invested capital — characterizes the return on the amount of monetary funds invested in the business;
- 5) return on borrowed capital — characterizes efficiency of the use of borrowed capital by the organization [2].

Main part. In this work, the main task was to develop a software product that provides an assessment of business performance and analysis of the results.

The integrated development environment Visual Studio 2019 was chosen to develop the software product. The high-level programming language C# was used to write the application code.

The principle of the application is quite simple: the user needs to fill in the initial parameters for further calculation of business performance indicators, and then click on the "Calculate" button. An example of business efficiency evaluation is shown in Figure 1.

In order to find out how exactly the economic indicators were calculated, you must click on the button "Show formulas", after which the window shown in Figure 2 will appear.

The developed application also supports the Russian language. In order to change the application language, it is necessary to perform the following actions: click on "File—Language" and select the Russian language. The method of changing the application language is shown in Figure 3.



Figure 1 — Main application form

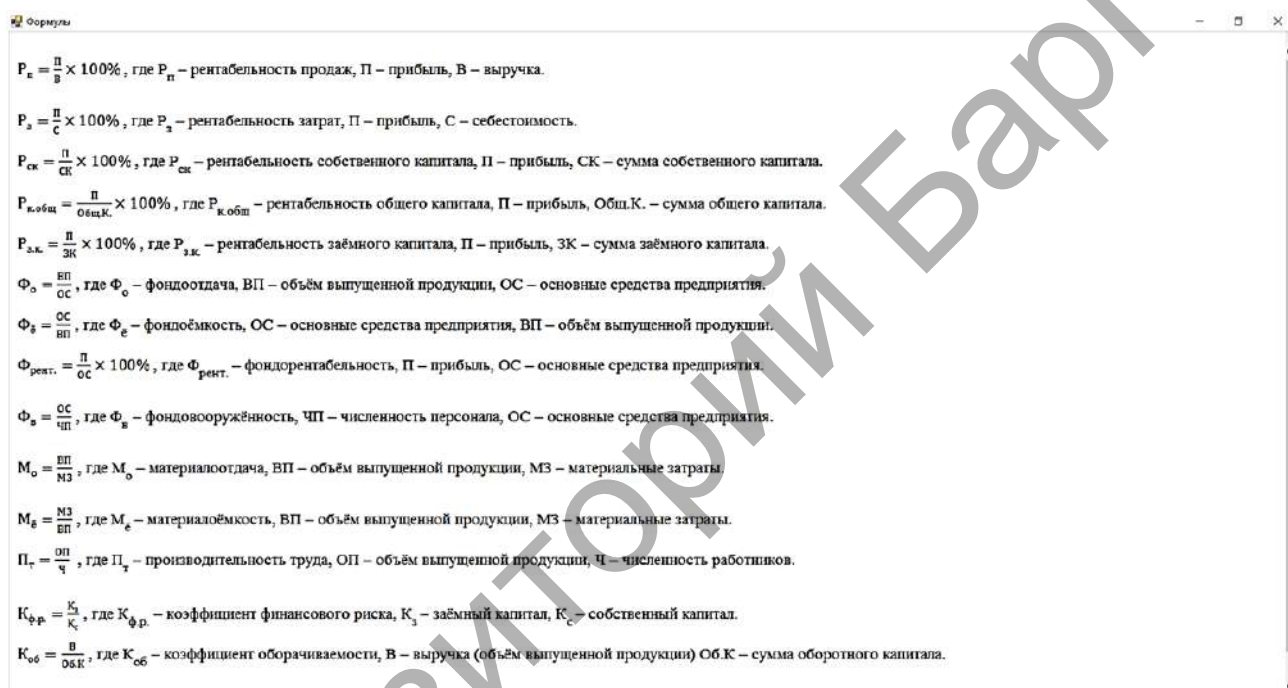


Figure 2 Formulas window



Figure 3 Changing the Application Language

Conclusion. In the course of the study, a software product that provides business performance assessment in the integrated development environment Visual Studio 2019 using the high-level programming language C# was developed.

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THE DEVELOPMENT OF A SOFTWARE MODULE TO SIMPLIFY DECISION-MAKING BY THE EMPLOYEES OF THE HR SERVICE OF PATIO CJSC

Introduction. Currently, the software market offers various information systems designed to solve the problems of accounting, tax, warehouse accounting and trading activities of the enterprise. Among them, 1C stands out: Enterprise 8 is a comprehensive enterprise management automation system in which all the necessary functions are fully implemented, and this system is also characterized by high performance and mobility. It is constantly being improved and upgraded, acquiring more and more additional functionality and has all the features necessary for accounting at any enterprise.

When developing the 1C: Enterprise platform, we focused on obtaining an integral base platform that will be used to build a variety of application solutions. At the same time, these applied solutions can be created not only by 1C specialists, but also by many other developers who are experts in various industries. Therefore, the platform was originally designed as a replicable product. This product includes all the necessary technologies for the operation of business applications and tools for their development and modification [1].

The experience of developing applied solutions shows that a significant part of developers do not create programs from scratch, but only refine standard solutions. The high level of solutions customization to specific user requirements is one of the important advantages of such a clear distinction between platform and application solutions.

Main part. The goal of the project is to develop a software module on the 1C: Enterprise 8 platform to simplify decision-making by employees of the HR service of CJSC Patio, which will allow:

- regulated document circulation;
- analyze staffing needs;
- control the employees timely movement;
- analyze the report on the inventory;
- analyze the accrual of bonuses and fines;
- automates the tracking of changes and the trial period completion, compliance with the terms of contracts;
- enter the analysis of the completed survey.

The relevance of this project is due to the introduction and development of new information technologies in the production process, which can significantly increase the speed of achieving goals and objectives with minimal time.

The introduction of a software module in an organization that can significantly increase the efficiency of work, thereby making it possible to improve the quality of services.

To work effectively with 1C configurations, the minimum computer hardware requirements for installing 64-bit Windows 10 are recommended, the following PC characteristics are recommended:

- processor with a core clock frequency of 2000 MHz;
- the amount of RAM 4 GB;
- space required to accommodate system files should not be less than 20 GB;
- Support for PC boot via USB or DVD drive.

1C: Enterprise is used as the basic software. In thick client mode, all actions are performed on the computer, the user is presented with the interface of the program module, with information. This mode is very demanding on the data channel, since most of the data is processed on the user's computer. In the thick client, a very large part of the information is stored on the user's computer in the form of temporary files [2].

Upon successful authorization, the infobase is loaded. After loading the infobase, the form of the software module automatically opens; it contains the main metadata for the work of the HR specialist of the organization, the form of the software module is shown in Figure 1.

The "Recruitment" section contains all the most important objects. The Recruitment section allows you to fix the requirements for knowledge, skills, personal qualities and other characteristics that a candidate or employee must meet, as well as describe the duties, working conditions for the position and describe the functions performed by the employee within the framework of official duties.

An important stage in the beginning of the selection is the description of the requirements for the position. From the "Position Profile" directory, it is clear which candidate is needed, what will be assessed from the candidate. The "Position Profile" directory is shown in Figure 2.

You can consider applications for recruitment in the main form of the module by clicking on the hyperlink "Applications for recruitment". When creating a document, you must specify the reason for opening a vacancy. In the document there is also an opportunity to create a vacancy. Figure 3 shows the document "Application for recruitment".

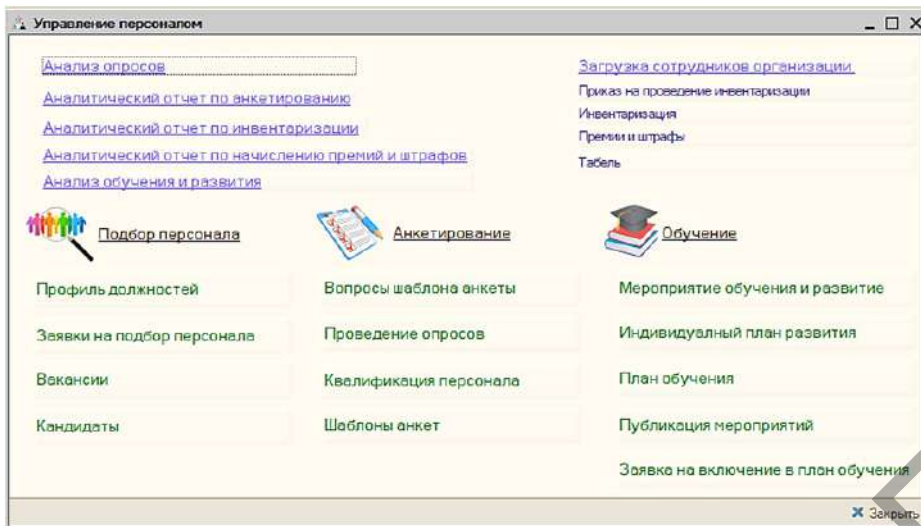


Figure 1 — Opening the software module

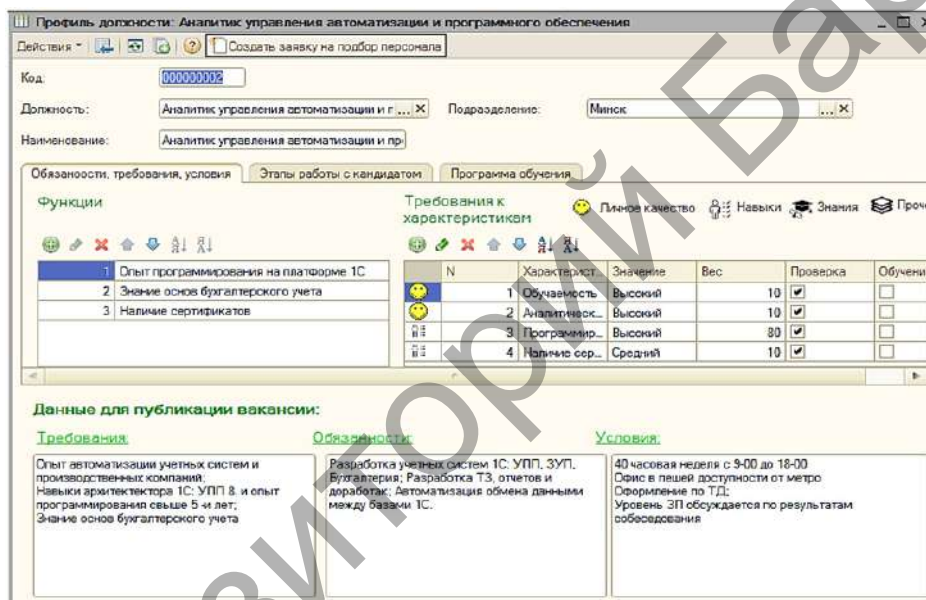


Figure 2 — Directory "Profile of positions"

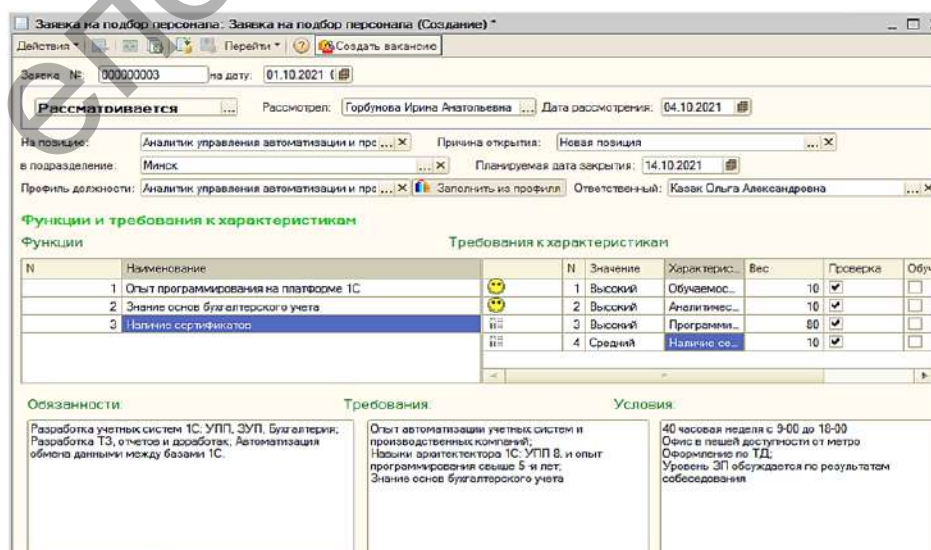


Figure 3 — Document "Application for recruitment"

An employee survey is defined as a survey process in which the opinions of employees are ascertained, as well as the motivation and performance of the company's employees. An employee survey is an integral part of ongoing employee feedback to obtain an overview of factors such as managerial behavior of superiors, motivating elements in the workplace, and satisfaction.

Conclusion. The software module is a well-thought-out information system that serves for automated processes of working with personnel, storing all the credentials about the employees of the enterprise in a single database. After the completion of the testing phase, the results that were obtained confirm the operability of the created system and its full compliance with all the requirements.

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COMPARATIVE ANALYSIS OF THE WING AND SPOILER AERODYNAMIC PROPERTIES

Introduction. In this work, the downforce of a car wing and a spoiler was compared. The creation of the car model, wing and spoiler was carried out in the SolidWorks program.

Aerodynamics is a section of continuum mechanics, in which the purpose of research is to study the patterns of air flow and their interaction with obstacles and moving bodies [1, p. 1].

The rear wing is a special part designed to improve the grip of the wheels with the road surface, as well as improve the aerodynamic properties. It is fixed on special brackets and is made much higher than the rear of the body. [2, p. 1]. You can see an example of a wing in Figure 1.



Figure 1 — Wing

The spoiler has other aerodynamic features and takes the shape of the body, tightly fitting it around the edges. In addition, the spoiler has a tight mount, smoothly flowing into the body of the car. [3, p. 1]. The spoiler is shown in Figure 2.

Downforce is the aerodynamic force that pushes the vehicle against the road surface. This force improves the grip of the car's tires on the road and thereby improves its maneuverability, braking and acceleration. [4, p. 1]



Figure 2 — Spoiler

Main part. A model of a Tesla Cybertruck car, as well as a rear wing and a spoiler for it were created. The image of the car is seen in Figure 3.

Further calculations of the wing were carried out in the FlowSimulation add-on. For downforce calculations, a speed of 180 km/h was set. Then the optimal angle of the wing was calculated to obtain the maximum possible downforce. The result is shown in Figure 4.

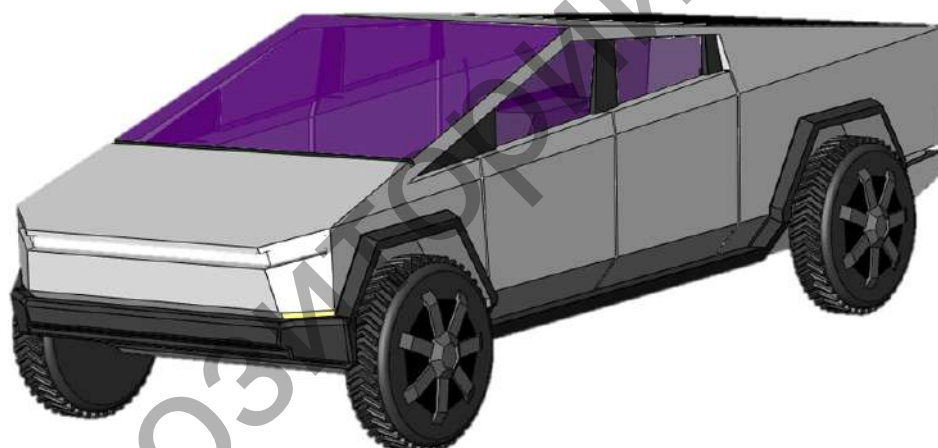


Figure 3 — Automobile model

Сводная таблица	Расчетная точка 1	Расчетная точка 2	Расчетная точка 3	Расчетная точка 4	Расчетная точка 5	Расчетная точка 6
D1@Угол1@Антикрыло в сборе.Assembly	0	0.0872665	0.174533	0.2617995	0.349066	0.4363325
ПЦ Сила давления 1 [N]	35.6186682	101.781465	233.17366	270.317665	387.49073	341.723869

Figure 4 — The results of the parametric calculation of the wing

Based on the calculations, we can conclude that the optimal angle is 0.35 radians (20 degrees). Downforce is 387.5 Newtons, or 39.5 kilograms. Such a low load value is justified by the angular shape of the car body. The direction of the flows passing through the wing can be seen in Figure 5.

Finding the optimal spoiler angle occurs with the same settings as the wing. The results are shown in Figure 6.

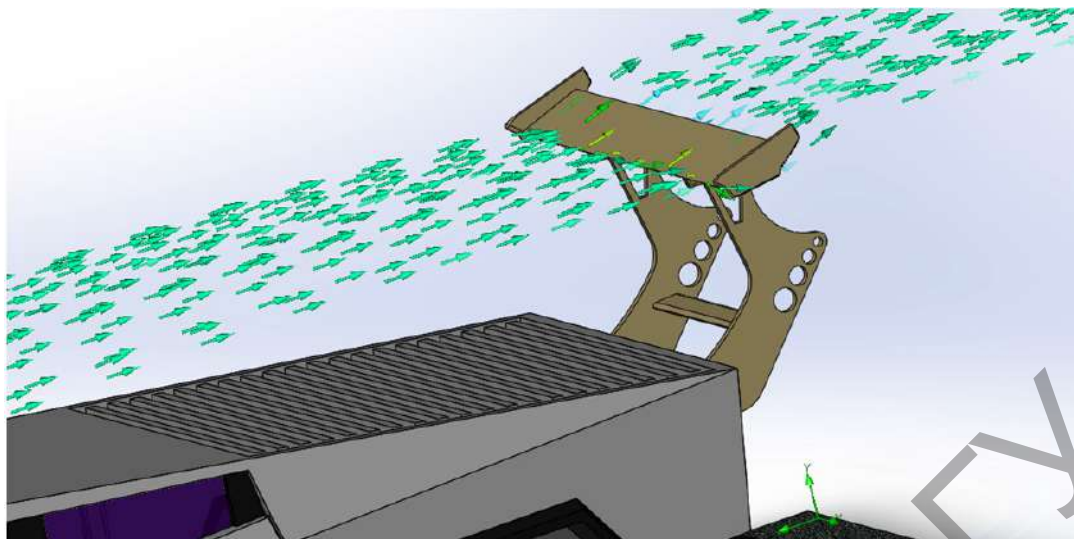


Figure 5 — Flow direction

Сводная таблица	Расчетная точка 1	Расчетная точка 2	Расчетная точка 3	Расчетная точка 4	Расчетная точка 5	Расчетная точка 6
D1@Угол2@Flow tesla spoiler.Assembly [rad]	0	0.0872665	0.174533	0.2617995	0.349066	0.436332
ПЦ Сила давления 1 [N]	210.285401	174.224822	151.385879	126.582579	94.2695868	77.5858667

Figure 6 — Spoiler parametric calculation results

Based on the calculations, we can conclude that the optimal angle is 0 radians (0 degrees), that is, the spoiler is located parallel to the ground. Downforce is 210.29 Newtons, or 21.44 kilograms. The flow direction is shown in Figure 7.

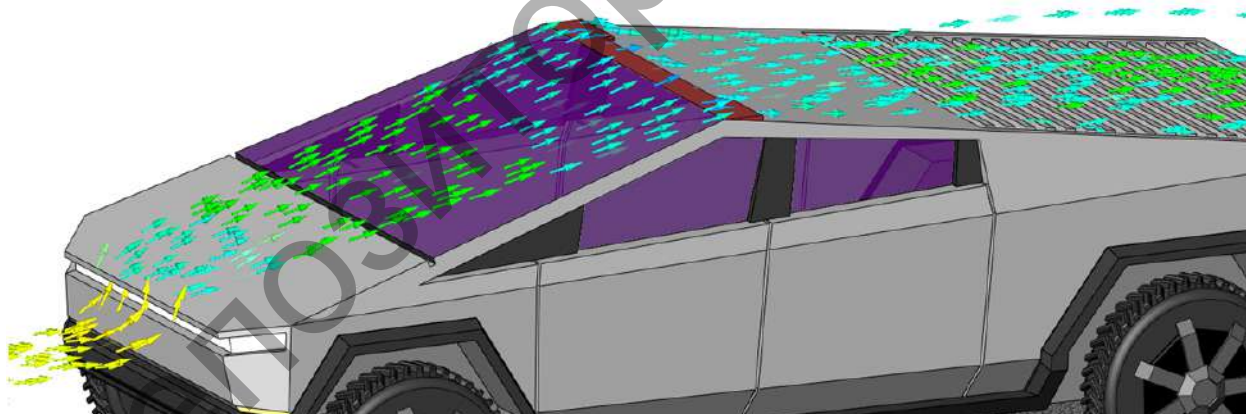


Figure 7 — Flow direction

Conclusion. Based on the calculations obtained, it can be argued that the wing has more downforce than the spoiler and performs its main functions. It has also been proven that the spoiler is not able to replace the wing completely, as it does not have similar aerodynamic properties. Although it is intended to increase downforce, it also has one more purpose: redirecting air flows to reduce the aerodynamic drag of the car and combat body pollution.

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INTERNET ANONYMOUS

Introduction. By most Internet users the concept of “anonymity” is perceived in its broad sense as a certain situation in which the actor is unknown. The adjective “anonymous” is used to describe situations when the name of the actor is unknown. The idea of anonymity is the inability to identify a person, while anonymity can be associated with the concepts of confidentiality and freedom.

Anonymity can reduce the level of responsibility for your actions and eliminate the impact that these actions have on your reputation. This may have different consequences for different parties to the situation. Thus, anonymity can be used to realize any goals, while people will support or deny any beliefs without compromising their own reputation. Anonymity allows people to overcome embarrassment, express their opinion or describe their emotions. Electronic means of communication, in addition to anonymity, ensure the physical isolation of a person. This can be useful when discussing very personal cases, forbidden topics or expressing views that may entail physical, financial or legal danger [1].

The use of anonymous connections with customers, including employees of the company, increases trust in the organization, and also affects the development of the organization.

Anonymity refers to the process of protecting the user’s ID and location data. The ability to provide anonymous access to services that avoid tracking personal information about the user and user behavior, such as user location, service frequency, etc.

In other words, anonymity in the Internet means various ways to go unnoticed on the World Wide Web. The reasons for hiding their actions on Internet sites are diverse. They can be related both to the desire to protect themselves from possible unlawful actions of third parties, and to the commission of unlawful actions by the person seeking anonymity.

To achieve anonymity, anonymous networks running on top of the wide area network are used. The specifics of such networks are that developers are forced to compromise between the degree of protection and the ease of using the system, its “transparency” for the end user. The aspect of maintaining anonymity and confidentiality is also important, subject to the influence of social engineering methods or any pressure on the server operator. Multilevel encryption of the distributed nature of anonymous networks, eliminating a single point of failure and a single vector of attacks, make it possible to intercept traffic or even break into part of network nodes not a fatal event.

Articles 18, 28 and 40 of the Constitution of the Republic of Belarus directly concern the protection of human rights related to his private life, thoughts, views, etc. Anonymity on the Internet is in essence the ability of a user of the network to feel real freedom of expression without threatening to reveal an individual. This is the main argument of advocates of digital anonymity. This argument looks especially weighty against the background of the existence of the famous, “great Chinese firewall”, which, in order to combat ideological opponents and protect party structures from criticism, limits Chinese citizens’ access to the most popular sites [2].

In this article, the concept of “anonymity” will be considered as positive, and the phenomenon of anonymity will be considered on the example of the popular Telegram messenger. Telegram is a cross-platform instant messaging system. Telegram is not a commercial project and, from the privacy point of view, it is extremely important that it has an open API, source code and protocol.

Main part. Telegram positions itself as the most protected public messenger, and has every reason for this. To transmit messages, Pavel Durov’s team developed its own MTP roto protocol. It is not only safer, but faster than analogues with other companies. By the way, so far Durov is offering \$200 000 for hacking this protocol, that is, while the skillful hands of hackers could not break through the defense, although there were many attempts.

Anonymity in the Telegram is ensured by the ability to hide the display of the phone number in your profile, as well as use special secret chats using window encryption and protecte from attacks by third-party users. According to the rating of the EFF electronic frontier fund, Telegram’s encryption of secret chats was assigned the highest security index — 7.

However, what if we want to run a public channel where we are going to publish various information, for example, novelties of any industry, news of recent days, the best jokes of the month? How in this case to ensure anonymity, because if you publish all the records yourself, then anyone can go to our profile and find out our username, which in no way can be hidden. Knowing the user name is easy, through bots, you can find out both the user id and again through bots, but for a small fee, you can also find out the phone number. How, then, can you protect yourself?

The solution to this problem will be a simple bot, directly to which we will send all that we want to publish in our group, and it, in turn, will forward ours to the group, where our bot will be displayed by their author. The bot also has its own user name, however, knowing it, it is impossible to go to its owner. The maximum information that an attacker can get is the date of registration of the bot. However, this will not help him get to the author.

To develop such a bot, we used the Python programming language and a secure server on the service hoster.by.

When the bot is started, a welcome message, as shown in Figure 1, appears.

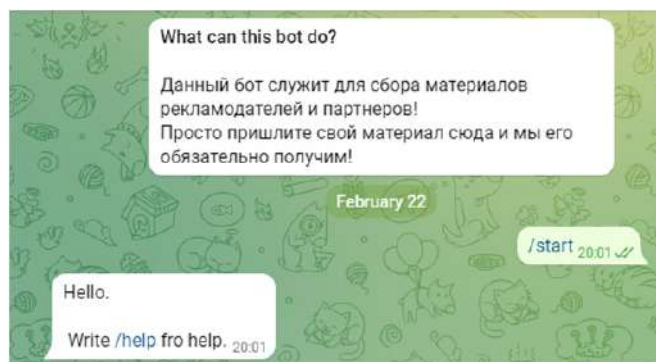


Figure 1 — Hello message

You can send any information: text, pictures, stickers, audio and video files.

After the material has been sent, the bot will prompt you to wait and then display a successful receipt message (Figure 2).

The bot works on the principle of receiving files, no logs of the one who sent the message he does not collect. The recipient group receives the material without a username (Figure 3).

As you can see, the bot does not specify the sender's name, maintaining complete anonymity.

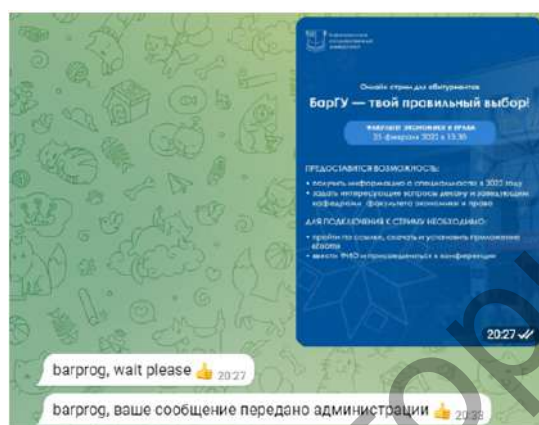


Figure 2 — Material dispatch result



Figure 3 — File retrieval result

Conclusion. Thus, it is seen that the use of bots telegrams to send messages to a public group is a sufficiently reliable means of concealing information about the author of the message and provides a high level of anonymity.

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UDC 004.67

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USING THE CAPABILITIES OF THE C++ PROGRAMMING LANGUAGE TO CALCULATE HUMAN BIORHYTHMS

Introduction. The human body organism is subjected to various biological rhythms that affect various processes within the human body. Taking into account these rhythms and the right attitude to them allow maintaining man's health at the proper level, choosing the best time for various activities, selecting correctly people for joint activities. At the moment, the C++ programming language is relevant for this task.

Main part. The purpose of the study is to study the possibility of using the C++ programming language for calculating and plotting biorhythms, as well as calculating the compatibility of people. The developed program has the following functionality:

- allows to enter a person's date of birth,
- allows to enter the time interval at which human biorhythms are calculated,
- builds physical, emotional, intellectual charts of biorhythms,
- calculates the compatibility of people by biorhythms, according to the dates of birth.

The program was developed in the C++ Builder environment.

Biological rhythms (biorhythms) (from Greek. — bios, "life" and μ — rhythmos, "any repetitive movement, rhythm") — periodically recurring changes in the nature and intensity of biological processes and phenomena. There are periods of biological processes. For physical processes, this period is 23 days, for emotional — 28 days, for intellectual — 33 days.

Biorhythms are calculated using the following formula:

$$\text{bio} = \sin\left(\frac{2\pi t}{P}\right) 100 \%,$$

where "bio" is an indicator of human activity by rhythm,

$P = \{23, 28, 33\}$ — cycles of physical processes,

t — the number of days lived [1], calculated in the program based on the date of birth and the 2nd date entered.

The graphs (Figure 1) show the activity of various processes of the human body.

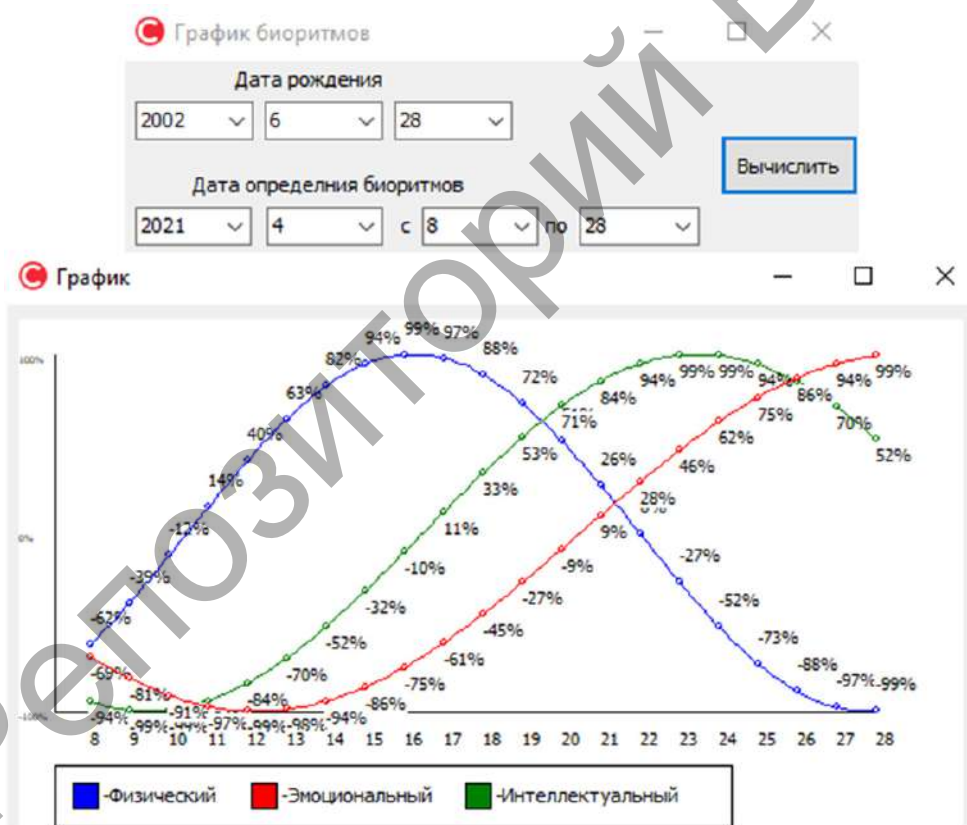


Figure 1 — Plotting biorhythms by the entered date

Let us analyze the results obtained. So from April 25, a person will be in the best physical condition, and from April 8 to April 17, it is better to refrain from physical activity. From April 24, the testee will be in the worst condition for mental work, and from April 14 to April 19 is the best time for mental activity. From April 20 to 27 is the time of the optimistic state, when the abilities for creative activity manifest themselves.

The program also calculates the compatibility of two people based on their dates of birth.

The compatibility of people shows the coincidence of biorhythms, on the basis of which it is possible to determine how well these people fit each other.

Compatibility is calculated by the formula:

$$\text{sov} = 100 - \text{raz} \% P \cdot 100 / P,$$

where “sov” is the compatibility level. $P = \{23,28,33\}$ — cycles of physical processes, raz is the difference in the number of days lived.

In Figure 2, you can observe the result of the program’s work.

Category	Value
Интеллектуальная	93%
Эмоциональная	7%
Физическая	13%

Figure 2 Calculating the compatibility of two people

0—25 % — extremely poor compatibility;

25—50 % — poor compatibility;

50—70 % — normal compatibility;

70—90 % — good compatibility;

90—100 % — excellent compatibility [2].

Let us analyze the received data. Individuals will interact poorly physically. They will interact intellectually very well. And they will diverge greatly emotionally.

Conclusion. The C++ Builder development environment is well suited for solving the problem of calculating biorhythms, plotting their graphs and calculating the compatibility of people. This program can be used for the best man’s activity planning for a certain period of time.

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**SPECIFIC PERCULARITIES OF THE PROCESS
OF TEACHING MATHEMATICS TO SCHOOLCHILDREN**

Introduction. In the article we examine the concept and features of mathematics as a science and as an academic subject are issues and problems of teaching mathematics at school, features of the process of teaching mathematics in the modern period.

Mathematics occupies one of the first places in the school education system both because of its specific features and because of the role that mathematics plays in modern science. Mathematics as an academic subject at school, which is studied from the 1st grade, includes elements of arithmetic, algebra, principles of mathematical analysis, Euclidean geometry of the surface and space, analytical geometry, trigonometry. For a school mathematics course the obligatory part of mathematical knowledge which gives a general idea of science, helps to master mathematical methods and contributes to the necessary development of mathematical thinking in schoolchildren should be chosen.

The content of mathematical material is changing due to the expansion of educational goals, the emergence of new requirements for school preparation, changes in educational standards.

Main part. Teaching mathematics is aimed at the mastery of the system of mathematical knowledge, skills and abilities necessary for further study of mathematics and related academic subjects, as well as solving practical problems, for the development of logical thinking, spatial imagination, oral and written mathematical speech, computing skills, solving equations and inequalities, instrumental and graphic skills. Mathematical knowledge includes knowledge of mathematical facts, definitions, procedures and the relationships between them; knowledge of mathematical ideas and knowledge of mathematics as a discipline, in particular, how mathematical knowledge is applied, the nature of discourse in mathematics, as well as norms and standards for presenting arguments and proofs.

Mathematics as an academic subject differs from mathematics as a science not only in the capacity, system and profundity of presentation, but also in the applied orientation of the issues studied. The course of mathematics is constantly facing the need to overcome the contradiction between mathematics — a developing science — and the stable core of mathematics — an academic subject. The development of science requires constant updating of the content of mathematical education, bringing the subject closer to science, matching its content to the social order of society [2].

Although the need to study mathematics in primary, secondary and higher education is well-known, the question of how to teach mathematics remains controversial. All over the world, there are increasingly high demands on schools and teachers regarding the use of effective methods. Teaching mathematics at the level of general secondary education is based on the theoretical basis of three approaches: knowledge-based, personality-oriented, competence-based.

The methodology of teaching mathematics is a pedagogical science of tasks, content and methods of teaching mathematics. The purpose of the mathematics teaching methodology is to study the main components of the mathematics teaching system at school (goals, content, methods, forms and means of mathematical teaching) and the connections between them. It studies and examines the process of teaching mathematics to improve its efficiency and quality.

In addition to general learning goals, there are also some goals, which are determined by the peculiarities of mathematical science. One of them is the formation and development of mathematical thinking, which contributes to the detection and more effective development of students' mathematical abilities and prepares them for mental activity in general as well as in mathematics with its numerous applications.

The content of the school mathematics course is reflected in a number of regulations, curricula and programs, textbooks, methodological manuals. The basic curriculum is mandatory for all secondary educational institutions. This is the main document for the development of educational and thematic planning and training programs. Math programs include a list of topics for studying, time recommendations for each topic, a list of necessary knowledge, skills and subject skills.

In programs focused on mathematical thinking of children, teachers learn to recognize and evaluate the mathematical significance of informal methods of solving problems, as these methods eventually turn into more abstract and more effective, and can serve as a basis for teaching students. After teachers have studied the development of children's mathematical thinking, they tend to pay more attention to solving problems, listen to their students more and learn more about their students' abilities, and also provide their students with more opportunities to use various methods of solving.

Currently, there are the following problems in the methodology of teaching mathematics in secondary school:

- standardization of education;
- differentiation of the content of education;
- methodological support of the mathematics course within permanent updating of school education content;
- breaking of interdisciplinary relations;
- monitoring and evaluating students' knowledge in math lessons;
- staff support;
- regional peculiarities of teaching mathematics, etc.
- The disadvantages of traditional teaching are:
- the predominance of verbal teaching techniques that contribute to the distraction of attention and the inability to focus on the essence of the educational material;
- average rate of studying mathematical material;
- a large amount of material that requires study and memorization;
- lack of differentiated tasks in mathematics, etc.

The disadvantages of traditional teaching can be eliminated by improving the learning process itself. Traditional teaching methods have been criticized for a long time, but there are teachers who are constantly looking for new, advanced teaching methods, trying to improve old traditional ones. At the elementary school level, mathematical concepts can be motivated through properly designed practical exercises supported by manipulative materials. Recently, new teaching methods which are aimed at activating the cognitive activity of schoolchildren and wider use of their independent work in the classroom have become widespread. New forms of learning are used: programmed learning, distance learning, interactive learning, project method and others.

Conclusion. To improve the teaching of mathematics, it is reasonable to develop additional new methods of using non-standard tasks. It is important to use tasks that will take into account individual characteristics of students, contribute to the formation of students' cognitive interest and independence. Purposive teaching of schoolchildren to solve problems with the help of specially selected exercises will help teach them to observe, use analogy, induction, comparisons and draw appropriate conclusions. In the classroom, it is advisable to use intellectual tasks, joke tasks, mathematical puzzles, rebuses, sophisms. Stimulating questions, the use of technology and classical well-known problems are important motivating tools in the study of mathematics.

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SCHOOL VIOLENCE: PSYCHOLOGICAL AND PEDAGOGICAL ANALYSIS

Introduction. In recent years the entire world community has expressed concern about the growth of school violence in various forms. Students of modern educational institutions are increasingly using cold steel and firearms [1]. Smartphones and laptops serve to demonstrate inappropriate behavior towards their teachers and peers. At the same time modern domestic psychological and pedagogical research practically does not consider this problem, despite its undoubted relevance. The search of ways for effectively solution this problem has attracted our attention.

Main part. Organization and execution of our experimental study on the problem of school violence was preceded by a critical analysis of literary sources during which we determined the interpretation of key terms and identified the main issues in the problem under study and ways of their solution proposed by various scientists.

We believe that the reason for increase of school violence is the deterioration of educational work quality of teachers and parents. The principle of “harmonious development of personality” has been violated [2], the values of patriotism and citizenship have been nearly lost. At the same time there happened a drop in the prestige of the teacher profession due to the sharp deterioration of the socio-economic situation in the country, a decrease in the level of salaries of representatives of the public sector and the outflow of the intellectual elite to the West. The society stopped respecting teachers. Parents, engaged in earning money, are increasingly removed from the upbringing of their children. And as a result, there is a sharp shift in violation of schoolchildren normative behavior towards illegality.

According to our research plan we examined the problem of school violence from the following positions:

1. The influence of school violence on the psychological status of a student.
2. Possibilities of pedagogical prevention of school violence.
3. Possibilities of pedagogical correction of the consequences of school violence.

As V. P. Ustinov remarks it is necessary to distinguish between psychological, physical, sexual and emotional violence which have a different level of influence on the psyche of a student [3]. The consequences of psychological violence are as follows: periodic depression, a high level of internal tension, low self-esteem. Physical violence contributes to the formation of distrust of others, fears towards adults, a high level of aggression, a sharp decrease in the child's abilities. Sexual violence forms in a child ambivalence of reactions towards adults, feeling of guilt, mood swings, a high level of talkativeness or, conversely, isolation. The consequences of emotional violence are: verbal aggression, vindictiveness, loss of communicative contact with others, a high level of negativity towards the person who acts as a source of violence. The general result of violence against a child is a violation of the system of trusting relationships between him and the adult world which leads to a decrease in the student's learning ability since he does not accept the help of a teacher and has a negative attitude to school and study.

The second direction of our theoretical and methodological analysis of the school violence problem is focused on the study of a possibility of pedagogical prevention. We believe that the tasks of pedagogical prevention of family violence against a child are: cooperation of the family, the state and the church; harmonization of family relationships; scientific understanding of the phenomenon of violence.

The third aspect of our theoretical and methodological analysis includes the study of the problems of pedagogical correction and elimination of violence consequences. It should be emphasized that the choice of a correction method of the schoolchildren deviant behavior depends on many reasons: age, social status of the family, the nature of the violence experienced. In each specific case, an individual correction program is needed.

Conclusion. Having considered the theoretical and methodological aspects of the psychological and pedagogical analysis of the problem of school violence prevention we propose to take as the main premise of the study the assumption that the main factor in the prevention of school violence can be the formation of younger generation legal culture, which contributes to the development of legal awareness of young citizens, their social and civic activity, prevention of antisocial phenomena in the youth environment.

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UDC 373.2

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ADDIE MODEL: ORGANIZATION OF EDUCATIONAL SERVICES FOR TECHNICAL DESIGN

Introduction. The development of an educational service for technical design is a time-consuming process that requires taking into account many factors. The ADDIE model helps to cope with the task.

ADDIE is a traditional model of curriculum development (both full-time and distance). The ADDIE model is a system that allows you to create an educational project and evaluate its effectiveness after launch. The ADDIE model is universal and suitable for working on any task if the educational process is linear and does not carry any risks.

Main part. The key idea of ADDIE (analysis, designing a training course, development of a training program, conducting, evaluation) is to break the process into phases and finish the previous one before you start the next one.

The process of designing educational materials is in many ways similar to such disciplines as programming, logistics, design, and applied psychology. This is a sequence of well-defined procedures that are grouped into several stages and have specific tasks and methods for solving them. When developing an educational service for technical design, you can use the well-proven ADDIE model (Analysis, Design, Development, Implementation, Evaluation), which breaks the entire process into 5 stages.

Analysis. The most important stage of development: the key elements are identified, the needs of students and the task of the teacher are studied, measurable and understandable learning goals are formulated, the target audience and forms of work with it are evaluated, and a list of expected results is compiled. Here it is possible to clearly define the methods of evaluating the effectiveness of the learning process itself. Clearly and precisely set expected results will allow you to

formulate the content and form of exercises, control questions, final tasks, and the form of their submission. And they will also allow comparing materials and techniques of various authors, choosing only the most suitable ones. This will help the pupil in the learning process, focus on the essence of the proposed material, and direct efforts to achieve goals.

Designing a training course. The most extensive and unpredictable stage of the project. At this point, it is necessary to take into account all the conclusions of the analysis stage and develop a general plan and structure of the material, draw up a scheme of exercises and assessments, visual series, interface, and overall design, link dozens of sometimes very different components together. A prototype is being created, a scenario for the entire project that determines the impact of each element on the tasks identified at the first stage. It should also be divided into several steps since an attempt to solve all problems without a systematic approach is most often doomed to failure.

Development of a training program. The main “technical” stage of any project, is when all the created materials take their place in the overall structure, acquire new elements and logical connections, and undergo debugging and “lapping” among themselves. Here you can also fine-tune the choice of methods of presentation of the material, pitch, style, and form of presentation of individual elements based on the goals of the entire project and the characteristics of the audience.

Conducting. At this stage, the program is uploaded to the appropriate Learning Management System (LMS) or to a resource through which students or parents can access the materials. Despite the seemingly small significance of this stage, it allows us to assess the applicability of educational materials in practice. It is here that you can check whether the program is suitable for the selected audience, get primary data on its implementation and effectiveness, and establish communication with the community of students, which will provide additional material for the preparation of instructions, and accompanying documents.

Evaluation. After the accumulation of primary information about the implementation of the training course, it is necessary to evaluate its effectiveness. It is necessary to correlate the tasks set at the analysis stage with the results obtained in practice. The study materials themselves are evaluated, the achievement of learning goals, the feasibility of a particular type of task, and their compliance with the overall task. Based on this, the program as whole or individual classes are being finalized, the results of educational work are evaluated and ways to adjust educational materials are outlined. Ideally, this stage should end with a revision of the requirements for individual blocks and an updated version of the entire program.

A well-mastered and developed ADDIE methodology will provide a powerful toolkit for creating universal training courses focused on obtaining fundamental knowledge, but requires very highly qualified developers.

The technical type of construction includes: construction of building material (painted or unpainted wooden parts of geometric shape); construction of parts of constructors with different mounting methods; construction of large-sized modular blocks; designing based on computer programs.

In technical design classes, children mostly demonstrate real objects and also come up with crafts by association with images from fairy tales and films. At the same time, they model their main structural and functional features: a building with a roof, windows, a door; a ship with a deck, stern, rudder, etc. [2].

Designing always involves solving a certain constructive and technical problem, providing for the organization of space, and establishing the mutual arrangement of elements and parts of objects per a certain logic. At preschool age, constructive activity has several features:

- children learn how to examine objects and how to create structures;
- preschoolers learn the constructive properties of parts and materials;
- the field of creative manifestations is expanding [1].

The management of constructive activities in a preschool educational institution involves:

- creation of a subject-developing environment and its compliance with the implemented technology (availability of material, drawings, illustrations, drawings of building schemes or crafts);
- equipping group rooms or classrooms for technical and creative design classes;
- creating an interesting and exciting environment in the classroom or free activity;
- methodological support for constructive activities in each age group;
- psychological and pedagogical control over the qualitative characteristics of the educational process (diagnostics, control sections of children’s knowledge, analysis of products of activity);
- improving the professional competence of teachers;
- interaction of teachers and parents.

Conclusion. Summing up, we can say that the ADDIE model can be used to develop a training program for technical design classes.

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THE IMAGE OF THE FAMILY AS AN OBJECT OF THE FORMATION OF FAMILY SELF-DETERMINATION

Introduction. In modern society, the transformation of ideas about the family and family lifestyle is clearly visible, which is expressed in the spread of alternative forms of marriage and family relations and the destruction of the traditional functional-hierarchical structure of the family. Negative phenomena in the marriage and family sphere lead to a distortion among modern youth of ideas about the meaning of the family and the meaningful aspect of family life. It should be noted that premarital ideas in young people are formed in the process of family self-determination and are the basis for subsequent family self-realization. Unfortunately, despite its great importance, the problem of family self-determination is not in high demand as an independent object of psychological and pedagogical research [1].

The concept of “self-determination” is applicable to many areas of human life, as evidenced by its many types: professional, collectivist, family, social, personal, religious, etc.

Thus, family self-determination is a multi-stage active and conscious process of constructing an image of a family in a time perspective (“my family”, “my future family”, “ideal family”). Depending on the specific cultural and historical situation, a system of value orientations is built, the meaning of parent-child and marital relations is acquired, and abilities for arbitrary regulation and reflection are developed.

Main part. Ideas about the family can be considered as a component of a multifaceted image of the world of the individual. The images are “embedded” in the emerging image of the personality’s world and eventually acquire a stable character. Synonyms of the image of the family are the concepts of “family myth”, “beliefs”, “beliefs”, “family credo”, “role expectations”, “coordinated protection”, “our image”, “naive family psychology”.

T. M. Mishina in 1983 introduces the concept of “image of the family” or “our image”, as a kind of family identity, the most important function of which is the regulation of family behavior based on the coordination of the positions of its individual members, which means a holistic, integrated education [2].

In the structure of the idea of a family, one can single out: an idea of oneself, an idea of a partner, an idea of a situation that includes goals, family roles and functions. In a group setting, social representations define the field of possible communications, values, or ideas represented in the group’s shared viewpoints, and thereby guide and regulate desired behavior.

The meaning of the “image of the family” lies in the fact that in accordance with the images in adolescence, an idea of the self, self-esteem is formed; in the process of forming the “image of the family” students learn life values. All this leads to a certain attitude towards people, towards the world around them as a whole on the part of young men and women. The “image of the family” influences the construction of certain parent-child relationships and influence future behavior in adulthood

Family structure is a basic concept used in describing family interaction. According to the provisions of the structural approach, one of the founders of which is the American psychotherapist S. Minukhin, described four subsystems that, being parts of the system, perform relatively independent functions within its framework and represent differentiated sets of family roles [3].

1. The marital subsystem, which is formed earlier than others and determines the rules for the functioning of the family in the future. The interaction of spouses in the modern type of nuclear family is aimed at creating conditions for meeting the needs of its members. The functioning of a family of a traditional type is primarily associated with the reproduction of social relations in it in the form of the proper performance of family roles, therefore the creation of a marriage union is associated with the fulfillment of family responsibilities in relation to each other. Both are carried out through the solution of many tasks by the spouses: the development of rules for living together, the distribution of responsibilities and roles, the definition of priorities and values, the creation of joint rituals on which family identity is built. The married couple, therefore, is the legislator of family life, determining the rules by which the entire nuclear family will live (Figure 1).

2. Parent subsystem. The patterns of interaction between spouses that arose during the upbringing of children, caring for them and their socialization form another subsystem — the parental one. Its tasks reflect the main parental practices accepted in the culture — guardianship (care for the child), requirements (expectations for the development and behavior of the child) and control of parents in relation to children’s activity. In the process of solving these problems, in the process of interaction with the child and with each other, various parental feelings are formed (“crystallized”) about him — attachment to the child, love for him, anxiety, responsibility (Figure 2).

Parental and marital subsystems represent different sets of behavioral patterns and have dissimilar functions and tasks — husband and wife, father and mother. In order to preserve the foundation of the family (husband and wife), so that it is not completely absorbed by parental functions and the child, the spouses must retain the time and space they value for their communication.



Figure 1 — Married couple

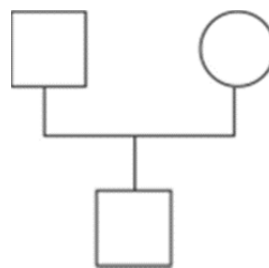


Figure 2 — Nuclear family with one child (boy)

3. Sibling subsystem. It consists of brothers and sisters of the nuclear family (Figure 3). Its main function is to learn how to communicate with peers (representatives of the same generation) in the context of common resources. Such common resources that children in the same family share can be material resources: a common room, a desk, toys; and interpersonal or emotional: parental attention, parental pride, parental indulgence. The tasks of the sibling subsystem include: the manifestation of sympathy, the ability to stand up for oneself, the ability to negotiate, compete, enter into conflict and get out of it, put up.

The sibling (children's) subsystem is an important condition and resource for the development of a child's personality. "Siblings form the first group of equals that a child enters. In this context, children support each other, enjoy themselves, attack, pick scapegoats, and generally learn from each other. They develop their own stereotypes of interactions — negotiation, cooperation and rivalry..." [2].

4. Individual subsystem. We can say that it is not directly related to family interests and roles, we are talking about what a person is in addition to the family, his interests and hobbies, the history of his development. On fig. Figure 4 shows that the younger the child, the more his individuality (circle in the center) is identified with the life of the family, all his connections with the world are mediated by family ties. Adolescents and adults are, to varying degrees, included in other social contexts and systems.

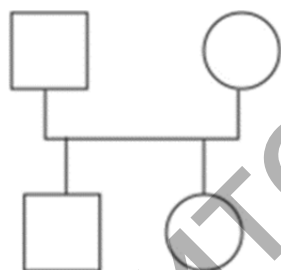


Figure 3 — Nuclear family with a sibling subsystem (older brother and younger sister)



Figure 4 — Conditional image of the ratio of the involvement of different family members in family and extra-family processes

The structural component involves an assessment of the structure of the future family: the number of family members, the presence or absence of children and their number, the sex of children, the system of dominance-subordination, the similarity of the future family with the parent, correlation of the family image with a certain type of family (extended, nuclear), distribution of responsibilities (here they meant the obligations of material support for the family and the upbringing of children), as well as the age of marriage.

Revealing the value component in the image of the family, we first of all represent the family as a carrier of values, accompanied by an ideological concept with a predominance of the spiritual dominant. Being the basic social value of society, the family recreates exceptional meanings and traditions and is valued by all socio-demographic groups of the population. And this is natural, since each person has a direct connection with the family. In particular, B. B. Khubiev notes that the family throughout history has developed values that ensure its self-sufficiency in the implementation of individual and social needs, values that are adequate to its main functions [4].

Conclusion. Speaking about the formation of family self-determination, as a multi-stage active and conscious process of constructing the image of the family in the time perspective, we noted that this image is defined as a component of the multifaceted image of the personality world. We have singled out two components in the integral image of the family: structural and value. And if the image of the family is a subjective picture of the family, including the subject himself and other family members, his ideas about the marital union and family ties — the relationship between husband and wife, parents and children, brothers and sisters, and other relatives living together and maintaining a joint household, then we logically approach the fact that the development of emotional intelligence will be an important factor in its formation. It is the emotional component of the family image that determines the experiences and feelings of young men and women, demonstrating the significance of a particular value, and is a kind of marker for determining priorities.

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INTERNET ADDICTION AMONG TEENAGERS

Introduction. When we think about addiction, we usually associate it with alcohol or illegal substance abuse. However, addiction is more intertwined with our daily lives than we think. For example, most of the world's population is addicted to caffeine. Although caffeine is known to be addictive, many people around the world don't start their day without a cup of coffee.

We are so absorbed in our daily lives that we may even become addicted to everyday activities, such as surfing the Internet. In particular, for the younger generation, being online scrolling on social networks, watching videos and reading articles takes up most of their lives. As the Internet is constantly becoming more advanced, there has been an increase in Internet addiction over the past few years. Although Internet addiction is spreading more and more, it has not yet been officially recognized as a mental disorder. But as more and more people use the Internet uncontrollably every day, additional research is constantly being conducted to understand this condition.

Main part. Internet addiction is called addiction, i.e., a deviation in behavior in which a person's sense of reality is disrupted, a sense of time is lost, critical thinking is lost, and control of their actions is limited. The child becomes less active, the sleep/wake cycle is disrupted.

Internet addiction is a constant desire to go online and spend as much time there as possible. There are several types of Internet addiction:

1. Surfing — aimless flipping pages, clicking on different links and reading unnecessary information.
2. Gaming addiction is a constant hang-up in online games.
3. Financial dependence — there is a constant desire to buy something in an online store.
4. Gambling — frequent participation in auctions, lotteries, sweepstakes, online gambling.
5. Communication addiction is characterized by a large number of correspondence, participation in chats, forums, too many friends and subscribers on social networks that the child is not even familiar with.
6. Cybersexual addiction — frequent visits to sites with pornographic content, watching videos and photos of a sexual nature, intimate correspondence.
7. Video addiction — watching a large number of movies, TV series, videos of various subjects on the Internet. Often the viewer can't even tell what the video was about.

Recently, this addiction is increasingly observed in children and adolescents. The main symptom is the desire to go online at any free moment. The eye is glued to the smartphone for a very long time or a lot of time is spent at the computer without a specific purpose. Often the reaction to irritating factors around disappears, and any attempts to distract the addict from this activity causes aggression or hysteria.

On average, teens spend nine hours a day online, which is about six hours a day more for children aged from eight to twelve. Even teenagers themselves worry about how much time they spend on their phones. A study organized by Pew found that 60 % of teens aged 13—17 consider Internet overuse a “serious” problem for their age group, and 54 % say they spend too much time on their phones. This data shows that not every teenager glued to their phone is addicted to the Internet. However, there are some teens who take their Internet use to the extreme, spending more than nine hours online and turning their smartphones into life-saving tools.

Internet addiction can be difficult to diagnose, as many young people use the Internet every day. In addition, the Internet is beginning to become a major part of primary and secondary school education. However, there are some common signs of Internet addiction in adolescents.

If your child exhibits any of the following signs or behaviors, they may have an Internet addiction:

1. The child conceals the amount of time they spend on the Internet.
2. The Internet is positioned above other hobbies.
3. The daily routine is ignored.
4. The child expresses joylessness or irritability without the Internet.
5. Most often they spend their free time at the computer and rarely go outside.
6. The child does not tell the parents about their interests, may lie to them.

7. Memory and attention deteriorate.
8. The child doesn't respond to requests.
9. The child stops taking care of themselves, becomes sloppy.

The first step to getting rid of Internet addiction in a teenager is to admit that the problem exists. Then it's important to talk to them about the problem. Make sure they know that you are not attacking them, but are worried about their health. Coordinate an action plan with your child and start creating boundaries, without excluding the Internet from their life completely.

After the conversation, it's time to act. Talk to your child's doctor about the next steps for your teenager. Ultimately, a doctor may discover underlying mental health issues that require treatment. Therapy can also be a useful form of treatment in helping teens understand their Internet addiction.

Conclusion. The problem of Internet addiction is one of the most urgent at the moment. Teenagers are in great danger when interacting with the Internet, as they represent the most vulnerable audience. They are less able than adults to filter the amount of information that the Internet gives them. There are several factors influencing the development of Internet addiction. Especially among them, the personal factor stands out: an unformed or unstable psyche, lack of self-control skills, dissatisfaction with real life, the desire to compensate for unrealized life needs make a person more susceptible to the development of dependence on the Internet. Most of these qualities are inherent in a teenager who does not fully know how to control their needs and desires. Computer culture education, proper time allocation, self-education of users — this is the antidote to Internet addiction.

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BUSINESS GAME AS A METHOD OF FORMING FOREIGN LANGUAGE COMMUNICATIVE COMPETENCE IN FUTURE SPECIALISTS OF PRESCHOOL EDUCATION

Introduction. In the process of teaching foreign languages, the active and conscious cognitive activity of students should occupy a leading place. The main ways of activating the educational and cognitive activity of students are the methods of active learning. These methods encourage students to actively think and practice in the process of mastering the language. Since not only the teacher but also the students have an active role. In the process of forming a foreign language communicative competence of future preschool education specialists, we use the business game method [1].

Main part. Foreign language communicative competence is defined by us as a system of knowledge, skills, and abilities of the student, acquired in the process of natural communication or specially organized training, which allows communicating adequately in specific communicative situations, organize verbal communication, taking into account socio-cultural norms of behavior, adequately to the goals, areas, and situations of real communication [2].

The future specialist of preschool education owns a system of general and special communication skills

To solve the problem of forming communicative foreign language competence among future specialists in preschool education, we developed a program of the discipline “Communicative English in preschool education” and a model of the process of formation of the studied competence, which is implemented as part of the work of future specialists in preschool education in the interest association “University for Children”. This association is a structural subdivision of the Technology Transfer Center of the BarSU and represents the conduct of additional educational and developmental classes for preschool children in the following areas: robotics, mental arithmetic, literacy, speech creativity, art studio, cartoon studio, communicative English, culinary master class and children's fitness. Classes with children are conducted by members of the faculty of the departments of preschool and primary education and psychology and physical education and student volunteers of the “University for Children” detachment.

The model of foreign language communicative competence of future specialists in preschool education is shown in Figure 1

In the process of forming this competence among future specialists in preschool education, the use of the business game method helps in teaching students to solve educational and professional problems playfully. In the process of classes, students take on roles, and by the established rules, in a given game situation, perform professional functions, imitate professional activities, and enter into collective relationships [3].

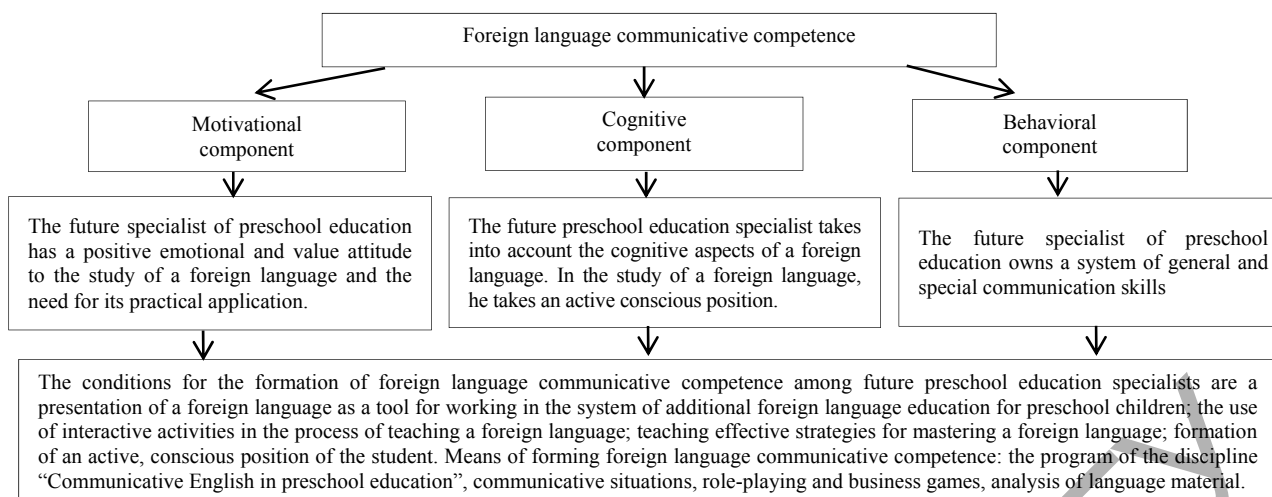


Figure 1 — Model of foreign language communicative competence of future preschool education specialists

The business game becomes a means of modeling the pedagogical conditions of professional activity. Using the business game method, future specialists in preschool education have the opportunity to simulate the process of teaching preschool children a foreign language, analyze it and develop their pedagogical skills.

An important feature of game modeling is that future specialists in preschool education may encounter real professional difficulties and find ways to solve them within the framework of the model they have created. The teacher is faced with the task of organizing the learning process in such a way that there is a natural transition of the student from educational activities to professional ones. In the process of transition, the subject, motives, goals, means, methods, and results of the activity have changed by the change in the student's leading activity.

With the help of game forms of learning, analysis of specific production situations, and role-playing, the following competencies of the future teacher can be provided: theoretical and practical thinking of a specialist, the ability to manage activities, the ability to make collective decisions, the skills of pedagogical and social interaction, the skills of leadership and subordination [4].

The positive qualities of the business game method include high motivation, emotional saturation of the learning process, the formation of knowledge and skills, and the consolidation of knowledge when discussing the game. We also attribute the advantages of using this method in the formation of foreign language communicative competence among future preschool education specialists to the fact that the game allows you to reduce the time of accumulation of professional experience, makes it possible to experiment, try different strategies for solving the problems posed, forms a holistic image of the pedagogical situation, allows you to acquire a social experience.

Having studied the methodology of organizing a business game, we concluded that there are several complications that teachers may encounter. These complications include the fact that the business game is a labor-intensive and resource-intensive form of training. Also, a business game must be organized taking into account the current knowledge, skills, and abilities of students and carrying out the necessary preliminary training as part of the professional activities of students.

The success of a business game depends on the preparation of a plan and the effectiveness of managing the course of the game. As part of the formation of foreign language communicative competence among future specialists in preschool education, we consider the experience of learning a foreign language at the previous level of education and in an institution of secondary specialized and higher education as a preliminary stage.

When preparing a business game, the role of the teacher is to indirectly manage the process of the game, determine the type of game, the composition of the participants, the goals and objectives of the participants. Participants realize the role of teachers formulate the content of classes or their elements for teaching preschool children a foreign language. They predict problem situations that may arise in the process of solving educational problems, prepare the necessary props [3].

Conclusion. The formation of foreign language communicative competence among future specialists of preschool education using the business game method will allow teachers to solve the problems of forming holistic and adequate ideas for a future specialist about work in the framework of additional foreign language education of preschoolers and the importance of professionally important qualities that determine this competence, to form self-esteem and self-reflection of teachers. Also, this method contributes to the understanding, assimilation of a foreign language, the activation of knowledge, abilities, skills of foreign language communication, the development of personal qualities and behavioral relationships built on the conditions of a specific situation of foreign language communication and the individual's willingness to implement them in action.

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PHILOLOGY AND METHODS OF TEACHING LANGUAGES AND LITERATURES

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PECULIARITIES OF ADJECTIVE USAGE IN ENGLISH-LANGUAGE COMMERCIALS

Introduction. Every day modern people face such a phenomenon as advertisements. Advertising texts lure potential buyers by all possible means, making products attractive and desirable, giving them supernatural properties, encouraging a person to purchase a product at any price, even if he does not need this thing or service. Multimedia technologies play a special role in the process of mass suggestion [1]. That's why multimedia texts of mass culture attract the close attention of specialists in various fields of knowledge: linguistics, semiotics, translation studies, sociology, psychology, etc. Advertising as an integral part of mass culture provides rich material for the polycode message study that combines the languages of verbal and nonverbal sign systems [2].

Main part. This article analyzes the linguistic aspects of the use of adjectives within the framework of a functional-pragmatic approach and also examines the place and role of the adjective in the text of English-language advertising.

Among a vast range of lexical and grammatical means used in teletext advertising adjectives occupy a truly leading position. However, upon closer examination it becomes obvious that most of them are subjected to some degree of desemantization, i.e. their dictionary meanings in commercials are often leveled, erased, suppressed by a general positive evaluation connotation. This happens, apparently, because in the flow of speech all means including adjectives are subordinated to a common holistic idea. For example, let's consider a five-star hotels description: "*The **small, lovely** beach hotel you seek for a **restful** vacation beside the **luxurious** Mediterranean. **Magnificent** sea under the **lovely** sun. You will find our **modern** hotel directly at the **spaceful** beach. The **busy** town centre, with **tasty smelling** tavernas, **joyful** bars and **alluring** shops, is only 300 meters away. The **beautiful, long, sandy** beach lies right in front of the hotel. The **new extramodern** hotel has been set up in **ancient** style. There are **nice, flourishing** gardens between the **elegant** buildings that create a **unique** atmosphere...*".

There is not even any need to name the hotel. This text is suitable for almost any hotel. The video itself without an advertising text usually looks as simple as possible. The obvious goal of advertisers is to make an advertising booklet out of teletext, a kind of guide to the hotel. As a rule, they succeed: the viewer manages to see almost the entire hotel, starting from the general plan and ending with rooms and restaurants. The main burden, of course, falls on the verbal series, designed to describe a completely stereotypical image. The abundance of adjectives gives the video a certain sweetness and bombast. In some places there is a clear exaggeration but it is overlaid by a general positive attitude and positive assessment. It is necessary to remark that almost each of the adjectives being taken from the advertising text separately is colorful and expressive. When they are included in the text of the videos they are all desemantized and acquire a single common positive meaning. In such commercials we often meet the following adjectives: *superior, superb, convivial, timeless, obvious, gracious, sheer, luxurious, spacious, comfortable, finest, magnificent, stunning, marvellous*, etc. The most popular adjectives in English-language advertising, according to the study of M. Donskaja, are "good", "great", "new" and "special" [2]. Having lost their unique meaning, they turn into semi-empty adjectives with a positive connotation [1]. Adjectives in commercials are often used in comparative and superlative degrees and this is their advantage for advertising, because it allows to strengthen the positive connotations.

And one more phenomenon which often met in linguistic content of advertising — is adjective invention, for example: "*The **en-route** form for natural resources!*"; "***Ready-to-shoot, film-in** camera!*"; "*Make it a **must-see** place!*" Such commercials look sometimes funny.

Conclusion. Thus, adjectives due to their pragmatic features are widely used in modern English-language advertising. Qualitative adjectives in all three degrees of comparison are distinguished by increased frequency. However, in most cases in the text of advertising they undergo process of desemantization and serve only the purpose of positive connotation.

Sometimes the situation is the opposite: we meet with almost silent commercials. In this case each word carries a large semantic load. Here even ordinary words sound very colorful not to mention adjectives. Such cases need some additional study.

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VISUALIZATION AND THE SEMIOTIC METHOD

Introduction. The problem of motivation of learning English is as relevant as ever. One way to increase motivation is to visualize the material as an active learning practice. This is proved by numerous articles and materials presented at educational forums and in electronic pedagogical journals [1].

Main part. The term “visualization” means a change in the form of presentation of information without violating its content, the systematization and ordering of the material for its presentation in a graphic form.

According to modern approach, the search for optimal ways of organizing the educational process, as well as rational options for the content of education and its structure requires modern visualization methods. Special role of which is not only the result of the development of technologies that simplify the search for and access to information, but also the need for quick learning and memorizing large amounts of material.

The main goal of using any method of visual demonstration of educational material is the possibility of implementing a two-channel communication and increasing the amount of transmitted information. The language material becomes compact and devoid of unnecessary details, which allows students to spend less time memorizing it. For the same reason the fear of a large amount of information disappears, which leads to an increase in motivation. The clarity of the structure of the rendered material and its ergonomics simplify the process of perception. These visualization properties are especially useful when introducing new vocabulary as they positively influence the students’ language guess, which plays an exceptional role when it comes to a previously unknown phenomenon for students [2].

Visualization meets the principles and requirements of student-centered learning, activates the thinking of students, corresponds to the age characteristics of students, and is also suitable for independent work and work with students with special needs. It helps not only to involve students in the educational process, but also to use modern ICT tools, which play a special role in foreign language education at the present stage of its development.

The study of literature on modern methods of increasing motivation in a foreign language lesson at school through information visualization allowed us to identify such methods as:

- 1) multimedia presentation;
- 2) interactive quiz;
- 3) infographics;
- 4) mental map.

It should be noted though, that the list is incomplete and may contain other examples of visualization techniques.

In methodology such methods of organizing educational material are called active learning, defined by A. Verbitsky as a transition from algorithmic methods of organizing the didactic process to research, developing and promoting creative and motivating learning.

Let us exemplify the usage of multimedia presentations. By this we understand slides containing brief and structured information on a specific topic. It is fair to call presentations one of the main requirements for the usage of modern technologies in the classroom. They include the use of dynamics, sound, images, combining a number of aspects to most effectively hold the listener’s attention. Multimedia presentations are distinguished by greater clarity of the material provided. They are material creatively adapted by the teacher for a certain age of students.

Today multimedia presentations are one of the most effective and frequently used ways to provide educational material since almost every teacher has the skills to create and integrate them into the educational process.

Proper selection of the content of the presentation implies first of all that the content of the slides should not duplicate the material voiced by the teacher. Otherwise the level of attention of students will decrease, as well as their interest in the presentation itself, and the necessity of this method during the class.

The proper way to present something implies the systematization of the selected material, the development of a single design and avoiding lots of black-and-white text; using illustrations, graphics, photographs, video and audio fragments instead.

Thus, the correct approach to presentations compilation can greatly increase the transfer of a number of language items due to its clarity, brevity and visual nature [3].

An interactive quiz in the form of a presentation game saturated with various visualization elements is effective due to its game orientation. This is due to the fact that the game creates the necessary mental tension for any student while revealing it through active creative and exciting activities.

The search for new ways of presenting information in a concise and accessible form, the fast pace of learning associated with the development of new trends in teaching methods, as well as the availability of modern technologies, their popularity and demand among students determine the relevance of the problem of visualization in teaching English.

Semiotics is the science of signs and sign systems in linguistic and non-linguistic communication.

The information capabilities of a sign system are much broader than the capabilities of its constituent elements, taken outside the system. The fact is that the meaning of the transmitted message may depend not only on the presence

of certain sign in it, but also on what combination they form. The disadvantages of the sign system are that if the combination of signs is not entirely accurate or confusing, it hinders the meaning of author's intention.

The main function of a sign is to convey a message. The properties of the sign are motivation, i.e. the presence of logical connections, arbitrariness, variability. The same word can be denoted in different ways or informational content because any sign carries some kind of information in it.

Conclusion. Combining semiotics and the visual aspects may allow to observe better results during classes at all levels of education. Visual part may pave the way for the proper presentation of the material and help to move away from the black-and-white texts, and the semiotic approach may help structure the information to further increase the rate at which students are able to learn new information.

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THE FUNCTIONS OF THE FOREIGN LANGUAGE TEACHER AS A CULTURAL MEDIATOR

Introduction. It is widely accepted that culture is a crucial element in learning and teaching a foreign language. In teaching, it is not enough to develop students' linguistic competence to guarantee success in intercultural communication. Therefore, teaching a foreign language doesn't mean dealing with the theoretical aspects of a language but also promoting cultural literacy that will help learners to be aware of cultural similarities and differences. The society nowadays is experiencing a massive mobility of people from one country to another for work, study or travel. Due to this mobility, it is required to prepare students for the future, to face difficult challenges and overcome conflicts that occur as a result of culture differences.

According to the national educational standards, students must learn to accept and understand people of a different cultural background. For this reason, a foreign language teacher is seen as the mediator between two different cultures. Foreign language teachers bear the responsibility to help students to understand and raise their awareness of the target culture, a complex phenomenon that is not acquired easily. In the mobile, digital world more emphasis is given to revealing cultural specificity to predict and overcome barriers in intercultural communication. Therefore, the foreign language teacher performs as a cultural mediator in the classroom, and defining their functions is necessary to design lessons and teaching materials.

This paper is aimed at exploring the functions of the foreign language teacher as a cultural mediator.

Main part. The relationship between language and culture is of extreme complexity because "on the one hand, language is an integral part of culture, but, on the other hand, it is an expression of culture" [1, p. 27]. The role of a teacher is culturally defined, and language teaching needs cultural aspects to be taken into account as any language is culture bound. Therefore, teachers of a foreign language should be able to act as cultural mediators. They provide information about different sets of values, orientations, beliefs, assumptions and socio-cultural conventions by clarifying culture-specific expressions and concepts that might give rise to misunderstanding.

It is obvious that in order to fulfill the role of an intercultural mediator, a foreign language teacher should have intercultural competence as an integrative quality of personality. It is expressed in the readiness to actualize the manifestation of competence in various situations of solving social and professional tasks [2, p. 104]. The teacher should have specific skills, knowledge and abilities. Mediation between target and native cultures means interpreting and analyzing the cultural phenomena. It is done by reflecting and understanding their own and target cultures. The teacher should diligently influence students' attitudes; teach them to be tolerant, respectful, free from prejudice towards people from other cultures. To be a cultural mediator, the teacher should have deep knowledge of the target language.

The role of teachers in mediating cultures and teaching cultural literacy in the foreign language classroom consists of: (a) acting as a cultural mediator between different cultures, helping students overcome sociocultural barriers and cultural prejudices and destroy cultural stereotypes; (b) creating a comfortable cultural space for students so that they can fully interact and collaborate with people from different national, regional, religious, and social subcultures; (c) transferring the skills and abilities necessary for cultural interaction [3, p. 101].

To achieve that, the foreign language teacher performs the following functions:

1) cognitive, which is aimed at assimilation of the system of socio-cultural knowledge for further application in other activities and the formation of prerequisites for overcoming barriers that hinder the implementation of intercultural mediation;

2) educational, the essence of which is to spread the native culture of the intercultural mediator and the culture of the peoples of the target language;

3) communicative, the meaning of this function is manifested in interaction with representatives of the culture of the target language [4, p. 129].

For learning a foreign language and using it effectively in real life, a mediation of the native and foreign culture is an undeniable necessity. An ability to mediate two cultures will help teachers to bring students closer to the target language culture by specifying the difference between their native language and the foreign language that they wish to learn. In this way, successful mediation of the native language culture and the target language culture ensures meaningful intercultural communication.

Conclusion. To sum up, in order to fulfill the role of an intercultural mediator, a foreign language teacher should have intercultural competence and a certain set of skills and abilities: interpreting and analyzing the cultural phenomena, influence diligently on student attitudes, teach them to be tolerant, respectful, free from prejudice towards people from other cultures. Also, a foreign language teacher as a cultural mediator should perform the following functions: cognitive, educational and communicative.

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THE IMPORTANCE OF FOREIGN LANGUAGE LEARNING IN BELARUS AND THE UK

Introduction. Globally, the foreign language (FL) acquisition encourages respect for other peoples: it fosters an understanding of the interrelation of language and human nature, because foreign languages expand one's view of the world, liberalize one's experiences, and make people more flexible and tolerant. Thus, the relevance of this theme cannot be underestimated. Besides, the necessity of research is proved by the fact that it can help the foreign language teachers to become more professionally competent as the research reveals the attitudes toward learning FL. Discovering students' attitudes about language learning will help both teachers and students in the teaching-learning process. The data obtained in the study can be useful for cross-cultural educators and anyone who is interested in foreign language teaching and investigation. The goal of the study is to explore the students' attitudes to learning FL in Belarus and the UK.

Main part. The research is based on the theory of attitudes towards the otherness. As we know there are three types of attitudes towards the otherness: attitudes of superiority, equality and genuine exploration [cit: 1, p. 73]. Our hypothesis is that genuine exploration attitude is the least frequent among the FL learners. We suggest that even if the majority of people think that learning it is important, not everyone is ready to change attitudes and are eager to spend extra time doing it. To have such attitude of exploration, the person should possess such qualities as curiosity, flexibility, openness and ambiguity. But first of all, such an individual should seek to explore other cultures and make efforts to do it.

This study was undertaken by questioning the responders from two countries: Belarus and the UK. 15 people from each country took part in the survey which was done in March 2022.

The study was organized in two stages. The aim of the 1st stage is to design the questionnaire and obtain the data by questioning the responders via social media. The responders were asked the following questions:

1. How important is to learn foreign languages for you?
 - A. Very important.
 - B. Quite important.

- C. Not very important.
 D. Not important at all.
 E. Don't know.
2. How much time do you spend doing home tasks for foreign language classes?
 A. Too much.
 B. Too little.
 C. About the right.
 D. Unsure.
3. Complete the sentence "Learning foreign language is necessary to...".

The aim of the second stage is to interpret the data and make recommendations. We presented the responses in graphics which illustrate students' attitudes to FL learning in theory, and the actual attitudes to studies in the classroom.

Having compared the data obtained after the analysis of the responses on the first question, it is seen that there is some difference between attitudes of the representatives of Belarus and the UK (Figure 1). Though, people from both parties think that learning foreign languages is very important (30 % and 33 %) and quite important (41 % and 25 %) — that is 74 % and 55 % of the responders — 30 % of the British and 18 % of the Belarusians think that FL learning is not important, moreover 10 % of the British, and 4 % of the Belarusians find them as not important at all. It is 40 % of the British, and 22 % of the Belarusians: thus the difference of 18 % proves that the Belarusians have a little bit more positive attitude towards FL learning.

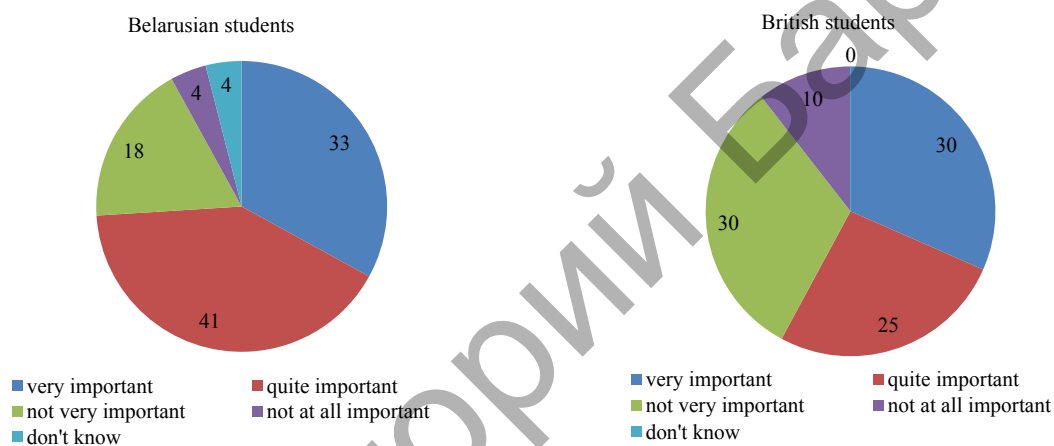


Figure 1 — Importance of FL learning in Belarus and the UK

The analysis of the responses on the second question helps us create the picture of real learners' motives and attitudes to do their homework (Figure 2).

Doing the analysis, we paid special attention to the word "too" which illustrates the learners' attitudes to FL acquisition. So, the statistics show that 60 % of Belarusians and only 16 % of the British consider that they spend "too much time" learning a FL — the difference is 44 % which means that the Belarusians' attitude is much worse. At the same time 0 % of Belarusians think they spend "too little time" on it in comparison with 16 % of the British responders — this fact confirms the idea that the actual attitudes of the British are much more positive to learn the target language.

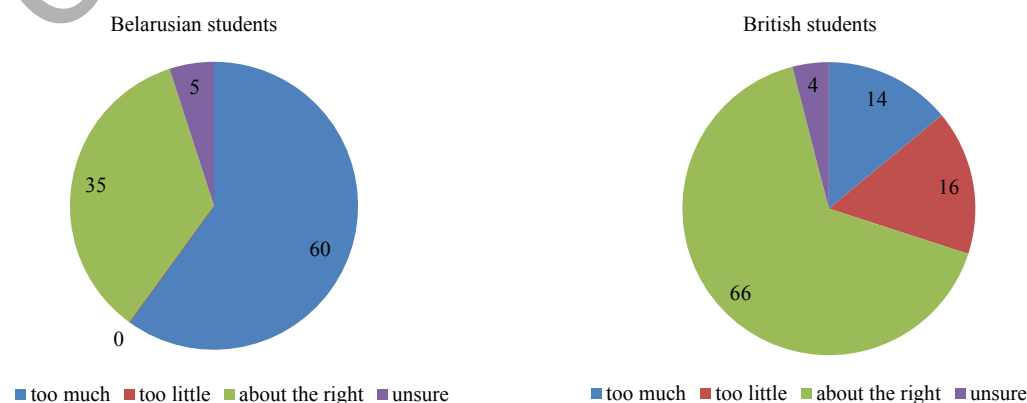


Figure 2 — Attitudes to the time spent on doing home assignments in Belarus and the UK

As for the third task — Complete the sentence “Learning foreign language is necessary to...” — the results were quite similar in both countries: to find a prestigious job, to go abroad, and for self-development. All these responses demonstrate pragmatic, practical oriented goals which have nothing in common with curiosity, flexibility, openness and ambiguity — the character traits that characterize a learner who is eager to explore the target language and culture.

Conclusion. Research results prove the hypothesis, that the attitude of genuine exploration of another language which is an essential part of culture, is the least frequent among the FL learners both in Belarus and the UK. However, the British responders — who in general underestimate the significance of learning a FL — demonstrated a better attitude towards its actual learning. In fact, not many people show readiness towards the exploration of another language and the adequate attitude. Though the study has a number of limitations — a small amount of the interviewees and their profilisation (some people’s occupation may be connected with linguistics or foreign language teaching) — the results could be useful for students, educators and researchers. Summarizing the results, we can give the following recommendation: the intrinsic motivation should be increased and one of the ways is to develop the learners’ attitude of genuine exploration of the language. Finally, students will make more efforts and achieve progress.

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THE LANGUAGE GAME TECHNIQUES IN THE ADVERTISING TEXT

Introduction. In the modern world advertising is a multidimensional phenomenon that often acts as a regulator of the literary language, thus the language is replenished with certain techniques as neologisms, new syntactic constructions that are atypical for a particular language [1, p. 9]. These language changes can be interpreted as the term “language game”. The study of advertising discourse from the point of view of modern linguistics allows us to consider advertising not only as a part of the modern culture, but also to follow the linguistic changes that occur in advertising texts.

Main part. Almost all modern advertising texts are characterized by the use of various language game techniques that are directly related to the semantic content of advertising, which aims at attracting the attention of the addressee of the advertised product or service.

In “The Cambridge Encyclopedia of Language” the language game is interpreted as the following: “Intonational, rhythmic, phonetic, lexical, morphological et. al. modifications of language norms which use the same principle, of deviating from language norms” [2, p. 62]. Therefore, the language game includes phenomena that differ from standard language forms and function at different language levels.

The main purpose of language games in advertising slogans is to catch attention mostly to the product and convey the “freshness” of the message. Therefore, it is distinguished by its uniqueness and the emphasis on easy-to-remember words and expressions. It includes various deviations from language and speech norms. The most common types of language game are lexical, stylistic, syntactical, phonological and graphical means.

On the lexical level the most widely-used devices of the language game in advertising texts are metaphor, lexical repetition, occasionalisms, hyperbole, etc. So, in the following advertising text of the lipstick company “Lancôme” hyperbolization and lexical repetition are used: *Absolutely Lancome luxirous color. Absolutely versatile from classic creme to richest matte to the irresistible hint of sheen in new Matte Lustre* [3]. In this example, we observe the repetition of the adjective *absolutely* and the superlative form of the adjective *richest*. These words are used in order to emphasize the high quality of the advertised product.

Epiphora, also known as “epistrophe”, is a stylistic device in which a word or a phrase is repeated at the ends of successive clauses [4]. In the following example of “Doral Cigarettes” slogan *Taste Me! Taste Me! Come on and Taste Me!* [5] we can notice a vivid manifestation of emotionality in the advertising text. Also, each sentence ends with an exclamation mark and syntactic block *Taste me!* These techniques give an imperative coloring to the given slogan. In general, the advertising text sounds like a call to action, thus it is able to evoke a response from potential consumers of the advertised product.

Phonological means of expressiveness are often used to create the language game in advertising texts. The most common device is alliteration. It is a method of speech sound construction, which consists of the symmetrical repetition of homogeneous consonant sounds [4]. As an example of alliteration in the advertising text, you can use the following slogan of the cosmetics company Revlon: *Take your lashes to Luxurious Lengths* [6]. In the considered example of the language game, alliteration is used to force the recipient to pay attention to the product and stimulates to the particular actions.

The graphic level techniques of the language game in advertising texts include various types of pseudo-articulation of words, font and color selections; intentional violation of word spelling; abbreviation. This technique is noted as the most effective one due to its brightness and noticeability. Consider the example of an advertising slogan of “Polo Jeans/Ralph Lauren” with abbreviation technique: *G.I.V.E. Get Involved. Volunteer. Exceed* [7]. In this example, the verb *to give* contributes to build a certain advertising image of the brand and forces people to react to the advertisement faster.

Conclusion. The language of advertising texts as a whole has a huge range of various means and techniques for expressing the idea and message of advertising itself. At the same time, advertising texts are characterized by huge variety of lexical, stylistic, syntactical, phonological and graphical means, the main purpose of which is to achieve the greatest impact on the recipient and to attract their attention to the product with the help of language games.

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COMPULSION EXPRESSION MEANS IN ENGLISH PHRASEOLOGICAL UNITS

Introduction. In linguistics the issue of studying phraseology is always relevant since each generation recognizes the universality of phraseological units and finds new facets of meaning in them. Proverbs combine in their structure the signs of units of different language levels and are represented by sentences of all communicative types. At the same time scientists remark the lack of knowledge of phraseological units as means of will verbal representation [1], as well as ways of transmitting compulsion, especially if it is transmitted indirectly. This issue is in the center of our scientific interest.

Main part. During our study 2.300 English proverbs were analyzed and only 170 were found with compulsion semantics.

The proverbs were selected from lexicographic sources by a solid sampling method. We refer to the class of English proverbs of compulsion semantics as a group of one-part/two-part sentences expressing the direct meaning, direct with reverse meaning, indirect or hidden compulsion aimed at direct will expression, the result of which is the commission/imperfection by the addressee of causal actions expressed by various lexical and grammatical means.

It is generally recognized that all the moods of the verb and both voices participate in the expression of compulsion. Depending on the leading means of compulsion expression — the structure of the communicative-pragmatic form of compulsion itself or a certain linguistic unit included in it — the whole set of means is divided into morphological, syntactic and lexical means. At the morphological level the meaning of will expression is most often conveyed by the verb in the imperative mood. We have identified 89 such proverbs, for example: “*Eat, drink and be merry for tomorrow you die.*”; “*Don’t put all your eggs in one basket*”; “*Make hay while the sun shines.*” This fact proves that imperative sentences express compulsion directly.

The construction “let + Infinitive” is used to convey compulsive semantics and it corresponds to a Russian imperative sentence with the particles « », « » and still has not unambiguous interpretation in terms of its status among the ways to express the meaning of compulsion in English. This construction involves performing an action expressed by the infinitive of a notional verb. In the “let + Infinitive” construction, the indirect appeal to the 3rd person through the 2nd [2, p. 88] is formally preserved but the obligatory metaphoricity of the subject of the 3rd person obscures it. As a result a compulsive meaning of the proverb is focused not on the impact on the 3rd person who must perform/not perform the action named by the infinitive but on the impact on the 2nd person to whom the proverb is actually addressed, for example: *Let bygones be bygones*, which also brings it closer to imperative forms.

These constructions somewhat differ in the degree of categoricity, but in the morphological form of predicate verbs they contain potencies that allow, on the one hand, “to express an order, demand, request, advice, etc.” directly and indirectly [3, p. 192]; on the other hand, they should be attributed to one functional-semantic imperative field of the English language, which is a “two-sided (content-formal) unity formed by grammatical (morphological and syntactic) means of this language together with lexical, lexico-grammatical and word-forming elements interacting with them, belonging to the same semantic zone” [4, p. 40], based on the implementation of a single communicative task of the utterance-proverb which makes the addressee to commit/imperfect some action.

Conclusion. The results of the analysis of practical material show that compulsion is objectified in

phraseological units by means that belong to different levels of a language system: morphological, syntactic and lexical. The fact of the multiplicity of ways and means of compulsion expressing in the English language proves the universality of the category of “motivation”. The study of phraseological units with modal verbs can complement the picture of the expression of the compulsion category in the phraseological layer of the English language. This is the prospective of continuing our research.

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STORYTELLING IN A FOREIGN LANGUAGE CLASS

Introduction. Stories are all around us, be it in oral or written form. Some entertain, some educate, some explain and many transmit our feelings, beliefs and values. Every day, every year, every meal, holiday, encounter, tells a story.

All people think in narratives 24/7, making up stories for every action and conversation they had. This is how we understand the world. When we hear and share stories, our brains are activated. Stories not only trigger parts of the brain that process speech, but also stimulate other parts of the brain that we would use if we were actually experiencing the events. We are emotionally involved and more likely to understand and remember the information we hear. Sharing stories in the EFL classroom not only improves listening and speaking skills, but also helps students express their thoughts and feelings. It encourages active participation and collaboration, and inspire the use of imagination and creativity.

Main part. Storytelling is the interactive art of using words and actions to reveal the elements and images of a story while encouraging the listener’s imagination (this is actually National Storytelling Network definition) [1].

The process of storytelling is divided into three phases: a pre-story phase (or warm up). That helps students to prepare for listening by presenting the target vocabulary and using some regalia-style posters to draw students’ attention to the story. The second phase is the part of the story which helps students understand the context without worrying about the joyful atmosphere. The final phase is post-narrative is aimed to follow-up or storytelling that encourages students’ abilities to anticipate or be creative.

Storytelling has many advantages for social, emotional and psychological development. The narrator and the listener produce a strong, comfortable and positive relationship during a story. Storytelling encourages the learners to continue studying the language because it motivates. This is playing a big role in, both, foreign language teaching and foreign language studying. Also, it offers the students to widen their imagination by getting involved into the stories or identifying themselves as one of the character of the story.

A story is something that everybody is acquainted with. A great number of people used to listen to stories and extremely like them. Little children also enjoy stories and like to listen to stories. Storytelling gives many opportunities for students to practice everything they have learned.

In EFL class, where storytelling is used, students share their social, communicative and psychological experience. Especially young students like to listen to stories more than once. This repetition causes them to adopt language unconsciously. Moreover they desire to participate in the story. Teachers find ways to present or repeat new vocabulary in contexts that are varied, memorable, and familiar to students in order to learn the English language casually [2].

If it’s needed to build up reading competency, students significantly need to get enough auditory and spoken language intelligence. Storytelling supplies crucial auditory input during social narrative communication. Many researches show that storytelling develops vocabulary learning and the teachers should make attempts to influence the learners to listen to the story.

Storytelling may be assumed as an important element to present the grammatical and syntactic features in interesting and meaningful framework. Teachers may draw the learners’ focus on the linguistic features and different tenses of the language [3]. So the students first recognize the varied types of the structures and they may contextualize what they have gained through storytelling class.

The method of storytelling is intended language subject in EFL classrooms, enriching educators’ teaching styles and providing a wide variety of classroom activities. As students blend their real life experiences with stories told in class,

they can easily engage in the learning process and deliver fruitful language productions. This will allow them to better remember what they have learned in class. In addition, students will be able to learn how to organize events in their real life.

Stories give students a rich and useful vocabulary context so they can master the vocabulary of stories in a shorter time, because they usually become the characters in the stories and memorize phrases and structures. When students activate their imagination by telling stories, stories provide them with different models and thus students can be more productive in practice. In addition, most of the stories carry a moral message that helps students become strong individuals.

Conclusion. EFL students need much more support to make measurable progress in their language learning by running down authentic materials. Therefore, the teacher uses the storytelling method in modern language class to facilitate and speed up the learning process, although this requires additional workload to prepare for the course. Young learners have a remarkable variety of personal experiences, values, and understandings. The language they learn in class is the tool they use to shape their thoughts and feelings. It's more than just a way to share information and spread ideas, it's your way to reach and connect with other people. Narratives can create a connection not only between the classroom world and the home, but also between the classroom and beyond. Stories provide a common thread that can help bring cultures together and bridge cultural differences.

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GLOBALIZATION AND REGIONALIZATION AS MAJOR TRENDS IN HIGHER EDUCATION

Introduction. At the present stage of social development, globalization and regionalization stand out as the leading trend of transformation processes that embraces all spheres of public life.

The word “globalization” was originated by Theodore Levitt in 1985 when he described the changes in the global economy affecting production, consumption, and investment as the interconnectedness and interdependence of people and institutions throughout the world [1, p. 102].

Main part. There are many ways to define Globalization. Ruud Lubbers in his article “Globalization and Sustainable Development” describes globalization as “the phenomenon that the degree of global human interaction increases to such an extent that both its primary effects and the reactions it provokes, give rise to numerous new developments. Globalization is the interaction between economies, technologies and politics. It creates an environment that reduces state regulation of the market promoting a more dominant role for large multinational corporations” [2, p. 92—93].

Globalization has become one of the key issues in education since 1990 through which different nations are continuously increasing foreign graduate students’ populations. The globalization of education has replaced the internationalization of education. It is transforming the higher educational institutions to be exchangeable in an open market to compete for the globally available benefits for their institutions.

Scholars explained the numerous ways through which the globalization of education took place, such as design and implementation of international curriculum, mobility of students and faculties, offering joint degrees by the institutions, enhancing collaboration and cooperation through signing the Memorandum of Understanding, Articulations and Agreements and through joint research [1].

One of the most prolific scholars in this domain, Jane Knight defined globalization of education as the process of integrating an international, intercultural or global dimension of post-secondary education.

According to statistics, the level of mobility of foreign students is growing rapidly in the world. So, if in 1980 there were about 1.1 million people wishing to get a foreign higher education, then in 2012 — 4.5 million people. From 2007 to 2015, there has been an almost 50 % increase in the number of foreign students in the world, with three quarters of students from around the world studying in “developed” countries [3, p. 35].

As for Belarus, Belarusian universities are characterized by multidisciplinary international educational activities, including pre-university training of foreign citizens in Belarus; the presence of a permanent contingent of foreign students, graduate students and interns studying on a commercial basis (including under contracts with foreign industrial organizations, grants from international organizations, partnerships); stable admission to training specialists for foreign countries under international treaties of the Republic of Belarus.

An overview of national strategies for the development of education allows us to identify the following universal directions for the development of higher education internationalization and globalization:

1. Provision of education that meets international standards and the formation of a brand of the national education system as having a high quality mark.
2. Expanding research activities by strengthening international research networks.
3. Promoting cooperation with members of the international community through international non-governmental organizations and international partnership.
4. Improving the infrastructure of educational organizations [2, p. 97].

The regional educational space should be inscribed in the national and world practice, organically combining global and local, general and private, unique and universal, the uniqueness of regional needs and the need to raise education to the level of world samples.

Z. B. Eflova as an essential sign of the education regionalization emphasizes its focus on meeting the needs of the regional labor market and the needs of people living on a particular territory. Consequently, the coordinated work of all regional education system components, of any level and type of education, is aimed at forming among the trainees such competencies that are in demand in this region, in cities and rural (non-urban) settlements. It is emphasized that regionalization is reflected in the content of education, where it is represented by the regional component of educational programmes, oriented at local cultural and historical values, knowledge, skills and competencies. The regionalization of the regional education system as a whole and of each educational organization is defined separately as the inclusion of the entire sphere and each structure in the life of the region [4, p. 10].

To make regional universities more efficient, “the ethno-regional” approach was proposed. “The ethno-regional approach in education is based on the unity of the cultural and educational space, equality in the preservation and development of the peoples’ languages inhabiting the territory of the region. This approach is aimed at protecting and developing the culture and traditions of all the indigenous peoples of the region” [4, p. 11].

Conclusion. Thus, the globalization and regionalization processes have their own tendencies. They are the leading trends in higher education. Globalization and regionalization coexist and play an important role in the educational system in general.

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UNIVERSITY STUDENTS’ PREFERENCES IN STUDYING THE HUMANITIES IN BELARUSIAN AND AMERICAN CULTURES

Introduction. In the 21 century learning preferences of students have received unprecedented attention by scholars worldwide. However, there is always a need for new research that will investigate the problem of learners’ motivation to study Humanities. According to the Cambridge Dictionary, the Humanities include literature, language, history, philosophy, etc. [1]. These subjects influence people’s creativity, communication and critical thinking which are considered the core 21 century skills. Such studies became especially important because of social mobility of young people who aspire to get education at universities across the globe, including massive open online courses.

The necessity of researching the indicated subject is determined by the contradictions between the learners’ inner representations of preferences, and a certain deficit of choice of Humanitarian subjects at universities. At the same time, there is a tendency for increasing virtual and traditional interactions between students in the modern world and providing personalized and inclusive education.

The purpose of this research is to find out students’ preferences in studying Humanities in Belarusian and American universities. It was hypothesized that there will be a certain difference in learners’ preferences in studying the Humanities in both countries.

Main part. The foundations for this study are taken from the theory of cross-cultural communication, which helps us understand how to communicate effectively within different parts of the world. As a result, people are able to realize how prevalent norms work to adapt to new cultures, and cross-cultural understanding occurs, that is the ability to value cultural similarities and differences.

Also, this research is based on the self-efficacy theory, the author of which is the psychologist A. Bandura. He suggested that, self-efficacy is a person's particular set of beliefs that determine how well one can execute a plan of action in prospective situations. Self-efficacy is a person's belief in their ability to succeed in a particular situation. It also involves determination and perseverance — seeing as how it helps one overcome obstacles that would interfere with utilizing those innate abilities to achieve goals [2].

This study was undertaken at universities in two cultures in March, 2022. The respondents of the survey were ten American students who study Linguistics and ten Belarusian students of Linguistic specialization. The age of the respondents was, on the average, 21 years; 60 % were females and 40 % were males.

The present research was organized in three stages. The goal of the first stage was to find out Humanitarian subjects in the curriculum which they: (1) like, (2) dislike, (3) would like to study. For this reason they were asked to answer the questions: (1) What is your favourite subject? (2) What subject don't you like? (3) What would you like to study to become more competent in the Humanities?

The form for the survey was designed in English for both American and Belarusian university students. As a result, we received the following data:

1) the subjects the learners like include: Pedagogy, Literature, History, English, Vocal, Russian (at American University); and Discourse Practice, Pedagogy, Literature, Typology, Semantics, Country Studies (at Belarusian University);

2) the subjects that respondents don't like include: Pedagogy, Psychology, PE (at American university); and Methodology, Belarusian language, Country Studies, Pedagogy (at Belarusian University);

3) the subjects which the students wish to study include: Arts, Foreign cinematography, Political Science, Russian, Psychology, History (at American University); and Art, Linguistics, Philosophy, Economics, Sociology (at Belarusian University).

All the mentioned subjects we grouped in three areas: language oriented, culture oriented, profile oriented disciplines.

The second stage of the study was aimed to process the obtained empirical data, summarize and compare the statistics on the responses received in the survey. The obtained data are presented in the tables below.

Having compared the obtained data which are presented in Table 1, it is seen that there is a big difference in learning the Humanities by Belarusian students who prefer language oriented subjects (70 %) much more than culture and profile oriented disciplines. As for American students, all the courses are preferable but culture oriented courses have a slightly higher position. Also, these statistics show a low focus by Belarusians on the future profession, only 10 %.

The courses in the present curriculum which students don't like are seen in Table 2.

Table 1 — The students' real preferences in studying the Humanities

Subject area	Belarusian students (%)	American students (%)
Language oriented	70	30
Culture oriented	20	40
Profile oriented	10	30

Table 2 — Outsider courses

Subject area	Belarusian students (%)	American students (%)
Language oriented	10	10
Culture oriented	30	—
Profile oriented	60	90

Comparing the data in Table 2, it can be noticed not too big difference in students' dissatisfaction of language oriented subjects: only 10 % in each group dislike them. The main area of courses that are regarded as non-favourite is profile, or profession, oriented subjects: 60 % in Belarusian, and 90 % in American culture. Also, the third of Belarusian students dislike the suggested culture oriented subjects, meanwhile Americans did not find them uninteresting.

Summarizing the data in Table 3 in cross-cultural perspective, the preferences in both groups are similar. They are both more interested in learning profile oriented subjects (60 %).

Table 3 — Optional subjects

Subject area	Belarusian students (%)	American students (%)
Language oriented	20	20
Culture oriented	20	20
Profile oriented	60	60

Having interpreted the data, we verified the hypothesis that there is a certain difference in learners' preferences in studying the Humanities in both countries. Self-efficacy, as a personal judgment of "how well one can execute courses, deals with prospective situations" [2]. Based on the ideas of self-efficacy theory, it is possible to suggest that students like certain subjects because they succeed in them or they are given an understanding easily, and vice versa. The reason why there are subjects that do not completely satisfy them is that there is no success in activities. One of the best proven ways to learn a new skill or to improve one's performance in a given activity is by personalizing learning and keeping in mind learning preferences by educators. It would allow the teacher to prepare strategies and techniques to provide student autonomy. It means the teacher will give instruction more effectively to achieve learning objectives.

Conclusion. The findings of this study prove that there is a certain difference in studying learners' preferences in the Humanities among the students of the USA and Belarus. As for Americans, they are satisfied with culture oriented subjects, as statistics show. The Belarusian students prefer the language courses. All the respondents are eager to have other profile oriented subjects. It could be an area of innovation at universities, or optional lessons as part of self-education in massive open online courses.

Interestingly, in cross cultural prospective, the students could be involved in mutually beneficial discussions about preferable courses for their education as all the students have similar aspirations. Also, the Belarusian students could inform more facts about language oriented courses.

In conclusion, the following recommendations can be given to educational institutions and cross-cultural researchers: (1) in general, our findings can be used in other cross-cultural studies and international educational projects; (2) university departments could introduce innovations in the course choice; (3) educators can improve methodological aspects of teaching the subjects which the students classify as outsiders.

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BRITISH IRONY VS RUSSIAN AND BELARUSIAN ONES

Introduction. A big number of conflicts in the modern world indicate that people have ceased to understand one another in almost all spheres of life: riots in the European Union, Asia and Africa, America, Russia, Belarus, Ukraine, Kyrgyzstan — the list of countries is unfortunately very long. There are many reasons for that, and one of them is an incorrect interpretation of perceived information. That's why it is so important to continue research in all branches of science concerning human relations.

Main part. The subject of our scientific interest is the phenomenon of irony and the peculiarities of its implementation in the British linguistic picture of the world.

The research is carried out on the basis of a linguoculturological approach.

Irony is used in all languages. But it's a mistake to investigate it as a kind of abstract phenomenon. For this reason there is not universal definition of irony. In this article irony is understood as a value judgment with a hidden negative modality. Using the technique of irony, the speaker does tend to make his interlocutor laugh. On the contrary, there is a negative note in the statement, addressed to the listener or to himself. And so the common features of irony in different linguistic cultures seem to be over. Let's compare peculiarities of irony in Russian, Belarusian and British cultures.

The peculiarity of English irony — is its more hidden meaning than in Russian and Belarusian cultures [1]. The principle of politeness unexpectedly plays an important role here. Politeness and common sense are in the first place for the British who use irony quite often. In case of a conflict this technique being correctly used helps to come to an understanding. For this reason English irony can be called diplomatic. Wise nature of this strategy allows to maintain a harmonious social environment: sarcasm and barb are pushed to the background. For example, in Jerome K. Jerome's novel "Three Men in a Boat", friends use rude expressions at first glance, but they are harmless:

George's head ... said: "Give us a hand here, can't you, you cuckoo; standing there like a stuffed mummy, when you see we are both being suffocated, you dummy!" [2, . 91].

An unexpected feature of British conservatism and self-confidence is self-criticism: residents of foggy Albion are able to laugh at themselves, that indicates their sense of inner freedom and adequate self-esteem. It is not polite to emphasize your own importance. Hence the desire of well-bred gentlemen to downplay their real merits and sometimes treat them with irony. Using such tactics the speaker still consciously or subconsciously expects the listener to refute his self-critical statements. And, thus, the principle of cultural behavior — politeness — will be on the first place.

The above mentioned principle cannot be called the leading one in the Russian and Belarusian linguistic cultures. Moreover, the latter cannot even be considered as one whole, at least within the framework of the expression of the phenomenon of irony. The character of Russian irony is associated with the names of A. Raikin, M. Zadorny, F. Ranevskaya, M. Zhvanetsky, etc. In general, Russian irony can be called brave, sharp (not malicious), straightforward and wise. The Russian man is simple-minded, even when he is ironic, and sometimes there is sadness in his words: «...» [3]. The irony of F. Ranevskaya is called wise and eccentric: «...» [4].

And finally, the irony of the Belarusians. It is very different from Russian and British styles. The Belarusians are humble, gentle, tolerant, quite painlessly able to adapt to new circumstances, although they are ironic, in fact, on all life topics. However, the Belarusian irony cannot be called acute, even if the topic is quite exciting: «я хадзіў на суразмоўе ў гандлёвы цэнтр. І такое адчуванне, што я прасіўся да іх не дворнікам, а дырэктарам» [5, . 4]. The Belarusians tend to express criticism through praise. The Belarusian irony is somewhat straightforward, it is good-natured and it is rather comic, which brings it closer to the Ukrainian linguistic culture.

Conclusion. As a rule, they distinguish three degrees of irony: explicit, hidden and secret. All of them are present in the British, Russian and Belarusian language pictures of the world. However, irony within each of these linguistic cultures differs in its own set of characteristic features, ignorance of which in the context of intercultural communication can lead to misunderstanding or even conflict.

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THE SYMBOLISM OF COLOR IN PEOPLE'S LIVES

Introduction. The surrounding world is painted in various colors. People are used to giving a certain symbolism to every thing. Color is not an exception. With the help of color people describe the surrounding world and events and also evaluate it. Unfortunately, color symbolism does not coincide in different linguistic pictures of the world. This fact leads to confusion and misunderstandings within the framework of intercultural communication and proves relevance of a comprehensive study of the above mentioned phenomenon.

Main part. Color is one of the most interesting issues that draws the attention of researchers in many branches of science.

The goal of our scientific interest is the evaluative meanings of phraseological units with color meaning in Russian and English. We considered phraseological units with the lexemes “white”, “black”, “yellow”, “green”, “blue” and “red”.

Despite the relative universality of a particular color perception by all people in cultural traditions of different nations unconscious correspondences have developed between types of color and certain images. So “red” in the USA means danger, in France — aristocracy, in India — life and creativity, in Japan — anger and danger, in China — happiness.

In English and Russian, the following microsystems of symbolic meanings of color adjectives are distinguished:

- “good” — white, “nothing special” — gray, “bad” — black;
- “permissive” — green, “warning” — yellow, “forbidding” — red;
- “revolutionary” — red, “counter-revolutionary” — white;
- “gentle, weak, joyful” — pink, “serene” — light blue.

On the bases of mentioned above information we can draw to the following conclusion:

- white color symbolizes good qualities of a person in many cultures — nobility, moderation, peace of mind (, white dove, white flag). This color is also a symbol of peace [1, p. 100];
- black color in the meaning of “bad” is reflected in the majority of idioms in Russian and Belarusian. Black color

in many cultures is associated with mourning, misfortune, symbolizes trouble, death (black, grey); look on the black side (of things) — pessimistic, sad) [1, p. 104];

– green color, in addition to the meaning “permissive”, has one more meaning in Russian and English. It is a symbol of youth, naivety, joy of life. Green color also symbolizes hope, joy, youth (green, greenish); as green as grass — very young, inexperienced, greener (green, greenish); beginner, simpleton) [2, p. 115];

– yellow in the Russian language is strongly associated with insanity. This color means bad, joyless; it can even be attributed to diseases [2, p. 111];

– red color reflects the peculiarity of the physiological process when, as a result of nervous excitement, blood rushes to the face. In the Russian language, along with the meaning of “good, bright”, the word “red” in the phraseological units is used in the meaning of “beautiful” (red, redness); red in the face, embarrassed, see red — to get very angry) [2, p. 102];

– blue color symbolizes infinity, eternity and truth, devotion, faith, purity, chastity, spiritual and intellectual life (blue, blueish) [1, p. 113].

It should be noted, however, that as a part of phraseological units, color can convey a completely different meaning. For example, in the idiom «green as grass» the color “green” is an intensifier of negative evaluation. It transfers the characteristic of the conceptual sphere “color” to the conceptual sphere “phenomenon”. Thus, it describes the situation as very sad.

Conclusion. On the basis of the above mentioned facts it can be concluded that color plays an important role in a person’s perception of the surrounding world and it is able to cause certain associations. Differences in the semantic structure of color designation in Russian and English are due to national and cultural characteristics, the symbolism of color in a particular language. In both languages phraseological units with color are oriented on expressive description of a person, his moral qualities, appearance, physical disposition, actions and states. But with time the meaning of different colors can change.

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