16+

INTERNATIONAL RESEARCH CONFERENCE ON TECHNOLOGY, SCIENCE, ENGINEERING & MANAGEMENT

SCIENTIFIC PUBLIC ORGANIZATION
“PROFESSIONAL SCIENCE”,

SEATTLE, USA

UDC 330-399
LBC 60

Editors
Natalya Krasnova | Managing director SPO “Professional science”
Yulia Kanaeva | Logistics Project Officer SPO “Professional science”

International Research Conference on Technology, Science, Engineering & Management, January 25th, 2023, Seattle, USA. SPO “Professional science”, Lulu Inc., 2023, 39 p. / DOI 10.54092/9781447871415

ISBN 978-1-4478-7141-5

Presenters outline their work under the following main themes: education, equality and development, pedagogy, language and culture in education, principles of environmental health, physiology, economics, finance & accounting.

The conference is well attended by representatives from more than 5 universities with participation of higher education institutional policymakers, governmental bodies involved in innovating, deans and directors, educational innovators, university staff and umbrella organizations in higher education.

www.scipro.ru

UDC 330-399
LBC 60

table OF CONTENTS

SECTION 1. CULTURE IN EDUCATION

UDC 37

Zorin A. The Theme of Love in the Work of Francoise Sagan

Zorin Alexander
The Undergraduate Student of Law Faculty
The North Western branch of the Federal State Budget-Funded Educational Institution of Higher Education
"The Russian State University of Justice"

Abstract. *The purpose of this article is to research the theme of love in the creativity of Francoise Sagan. The author tells of the significance of the topic of love in various time intervals and epochs after which he expresses the opinion that Sagan was able to reveal it most competently. The biography of the writer is revealed next and her competence in the aforementioned issue is proved with studying three of her works. The study uses historical and analytical methods. In the end, the author summarizes Francoise Sagan's contribution to world literature.*

Keywords: *the theme of love, Francoise Sagan, "Hello, sadness", "A little sun in cold water", "A vague smile"*

DOI 10.54092/9781447871415_4

1. Introduction

It is fair to state that the most discussed theme almost in every sphere of art is love – a mysterious and magical feeling. Love was reflected even in the days of ancient Greece. For example, Plato wrote the work "Feast" in the 4th century BC which was exactly about love [1]. However, from our point of view, the dawn of the aforementioned theme began in the 19th and 20th centuries in Europe where freedom of speech and democracy were laid. Thus, problems and aspects that had not previously been focused on were touched upon. "Love has found new colors". The theme of the real existence of love was seriously discussed. Francoise Sagan was able to consider it most competently. Love is the main engine of the plots in Sagan's novels.

2. Material and methods

Before delving into her creativity, consider the biography of this unique woman. The life of the writer began in a small French town - Kazhar in 1935. Her family was quite wealthy thanks to her father who was a successful businessman. So, parents could buy books of any author their daughter wanted. From an early age she showed love for the works of Sartre and later for Marcel Proust whose work played a powerful role on Francoise's writing career. First of all, it is worth mentioning that her real surname is Quare. Sagan is a pseudonym taken in honor of Dorothea Sagan, a character from Marcel Proust's "In Search of Lost Time" [2]. Secondly, Francoise's work is full of pessimism and loneliness which is also a characteristic of Proust's work. And, finally, in many Sagan's works there are quotes belonging to her predecessor.

Despite her erudition and an interesting inner world, the writer could not enter the most prestigious university in Paris - the Sorbonne because she could not pass the entrance exam. However, that fact did not particularly affect her life as a year later she was able to gain fame and a considerable fee for her first work - the novel “Hello, sadness” [3]. Thus, her career as one of the most controversial 20th century French writers began.

As mentioned earlier, love was a central theme for the writer. Consider this thesis through the prism of her three works.

Let us start with the aforementioned “Hello, sadness”. The plot of the novel revolves around the young heroine Cecile who lives with her father. While on holidays the girl meets a young man whose name is Cyril and a love affair begins between them. At about the same time her father abandons his mistress Elsa and starts meeting with the friend of the deceased wife, Anna.

Continuing the studying of the novel it is worth making a portrait of the girl and her father. They both lead rather rampant lifestyles without any lack of money or attention, as both are distinguished by their attractive appearance. Thus, after the death of the teenager’s mother, her father had a considerable number of women whom Cecile managed to get used to.

The relationships between Cyril and the girl develop rapidly, they often spend time together sometimes on the beach and sometimes on the young man's sailboat. The heroine admires the young man noting his beautiful body and his attention to her. However, she understands that she does not love him and just uses. Cyril is another entertainment for her which she cannot forget after the end of summer.

Moreover, having known that her father has serious intentions towards Anna, Cecile decides to prevent them from getting married when returning to the city. She resumes communication with Elsa in order to return her to the life of her dad. Realizing the frivolity of her father, the girl does everything to make them see each other more often and, in the end, there is a meeting between them, as a result of which Elsa and the girl’s father kiss. Anna finds out about this and later commits suicide.

After a certain time, the family returns to Paris, having mourned for some time. However, later everything returns to normal. The daughter and her father are surrounded by the attention of fans, indulging frivolity and lust.

It seems that one of the main ideas that Sagan tried to reveal in her novel is the following: some people are not able to love and are real cynics. For them, other people are “things” to get emotions and attention from.

Another Sagan’s work dealing with the theme of love is “A little sun in cold water” [4].

The main character, Gilles Lantier, suffers from depression for a long period of time. He is no longer pleased with his work, his wife and the world around him in general. Once, thanks to the advice of his entourage, the hero has to leave Paris for Limoges, where his sister lives with her husband, in order to change the situation and recover. At first, it does not change much there. However, soon at one of the receptions the man meets a certain Natalie. This meeting becomes fatal.

An affair ensues between them, through which Gilles is able to be reborn mentally and to love life anew. In turn, Natalie also finds happiness with him. After a while, Gilles and Natalie move Paris and begin to live together, loving and understanding each other.

Over time, the man realizes that his life with the new lover has become hard for him. He shares these feelings with his best friend and colleague Jean. Natalie hears their conversation while she is in the next room. Soon she leaves Paris for a motel, where she accepts a successful attempt to commit suicide, being in complete despair.

When Gilles fins that out, he falls into hysterics and tears, realizing that he lost a really dear person for him.

The main idea of this novel is that often, being in a relationship, people are not able to appreciate their soul mate, but sometimes they realize that too late, only having lost the person.

Another amazing work of Francoise "A vague smile" should rightfully be considered [5]. The author of the article believes that this novel is the best in Sagan's career since, in addition to the theme of love, it perfectly reveals the theme of loneliness (including intellectual) and some other important problems.

The plot unfolds in France, just like it was in previous Sagan's novels. Dominica, the main character, leads a rather routine lifestyle which sometimes drives her crazy. One day a boyfriend of Dominica decides to introduce her to his uncle Luke. During the meeting the heroine realizes that she is gradually beginning to fall in love with him. After a number of such meetings Luke makes an appointment for the girl at which he will offer her to become his mistress. Initially, Dominica protested and rejected this idea but over time she realizes that she really loves Luke despite the fact that he is married.

After a few weeks of the love affair the heroine declares to the uncle of her boyfriend that she cannot live without him and that she loves only him, she is not interested in any other men. However, for Luke, she is another young girl to have fun and get emotions. The man is simply insensitive and knows that over time he will easily cool down to the young beauty. At the end of the novel Dominica realizes that for the first time in her life she fell in love with a person who is just like her in almost everything and is able to find the right approach.

One of the central themes of the novel is unrequited love, which torments a person for a long time and sometimes all his or her life.

Conclusion

To summarize, it is worth noting that Francoise Sagan made the enormous contribution to world literature. She skillfully described the feelings and emotional state of her heroes who were often greedy, depressive, insensitive but at the same time highly intelligent and imbued with everyday wisdom. Love is just one of a dozen presented and well-made themes in her masterpieces. The contribution to the theme of love is worth of separate attention and analysis.

References

1. Plato. (379 BC). “Feast”.
2. Proust, M. (1913-1927). “In Search of Lost Time”.
3. Sagan, F. (1954). “Hello, sadness”.
4. Sagan, F. (1969). “A little sun in cold water”.
5. Sagan, F. (1956). “A vague smile”.

SECTION 2. JUSTICE

UDC 34

Tulaganova G.Z., Ibratova F.B., Otaboeva M.R. Civil legal status of artificial intelligence

Tulaganova Gulchekhra Zakhidzhanovna
Professor of Tashkent State Law University, Doctor of Law
Ibratova Feruza Babakulovna
Professor of Tashkent State Law University, Doctor of Law
Otaboeva Maftuna Ravshanovna
Student of the Tashkent State Legal
Universities of the Republic of Uzbekistan

Abstract. *The article deals with the issues of artificial intelligence as a phenomenon, a group of technologies and a scientific and technical direction. Technological solutions in the field of computer vision are analyzed that allow finding, tracking and classifying objects, synthesizing video and photo images. It is concluded that the choice of mode in the future will be different for different models of artificial intelligence and will depend on the characteristics - their level of complexity and potential risk.*

Keywords: *artificial intelligence, computer vision, technology, information and communication infrastructure.*

DOI 10.54092/9781447871415_8

We know that artificial intelligence is a set of technological solutions that allow achieving results when performing specific tasks comparable to the results of human intellectual activity. The complex of technological solutions includes information and communication infrastructure, software, data processing processes and services and includes the search for solutions.

We can talk about artificial intelligence as a phenomenon, a group of technologies and a scientific and technical direction. The embodiment of artificial intelligence as a phenomenon is a specific system (software and hardware complex) of artificial intelligence, created on the basis of appropriate technologies. Artificial intelligence technologies are a whole group of technologies (subtechnologies) that allow solving the problems of artificial modeling of human activity related to intellectual activity. Artificial intelligence technologies are developed and improved within the framework of the relevant scientific and technical direction, the purpose of which is the creation and implementation of artificial intelligence systems with abilities traditionally associated with the human mind: language understanding, learning, reasoning, problem solving, and more.

The complex of technological solutions includes the development of software and solutions using information and communication infrastructure and machine learning methods, processes and services for processing large data arrays.

As you can see, artificial intelligence technologies are a set of technological solutions that allow simulating the creative function of a person and demonstrating cognitive abilities. Solutions based on these technologies, when performing the tasks assigned to them, show results that are at least comparable to the results of human intellectual activity and significantly exceed them.

The main subgroups (subtechnologies) of artificial intelligence technologies include:

1) computer vision technologies;

2) natural language processing technologies;

3) speech recognition and synthesis technologies;

4) machine recommendations and decision support technology.

Technological solutions in the field of computer vision allow finding, tracking and classifying objects, synthesizing video and photo images. Natural Language Processing aims to understand speech and extract meaningful text, allowing you to communicate in natural language when a person interacts with a computer. Speech recognition and synthesis technologies allow you to translate a verbal request into text, analyze the timbre and tone of voice, recognize emotions and synthesize speech. For example, it can be used to confirm the identity of a speaker or to search for hidden content in a speech. Intelligent decision support systems ensure the execution of processes without human intervention, help in choosing a solution, and predict objects.

The relationship between artificial intelligence technologies and neurotechnologies is so close that they are often combined into one group in policy documents on the development of digital technologies. Neurotechnologies - neurological sciences (neurophysiology, neurobiology, neuroengineering, neuroinformatics and others) are a group of technologies that have become widespread in practice due to their development. They allow us to understand the structure of the brain, to have an idea of consciousness, thought processes and higher mental functions.

With the help of neurotechnologies, neural interfaces are designed to exchange information between the brain and the computer. The future compatibility of artificial intelligence technologies with neurotechnologies allows us to predict the creation of human-machine hybrid intelligence[1].

Artificial intelligence can be used in almost all areas of activity and provide people with new opportunities. Artificial intelligence can be used to free people from repetitive tasks, automate hazardous jobs, support decision making, and keep people connected. The use of artificial intelligence can improve the well-being of society and the quality of life of people. In terms of its transformative impact on society, artificial intelligence can be compared with electricity, which at one time completely changed production, brought the economy to a fundamentally new level of development, and changed the technological order of the world. The introduction of artificial intelligence in industry accelerates the digitalization of the economy, stimulates the development of

[1] Филипова И.А. Нейротехнологии: разработка, практическое применение и правовое регулирование // Вестник СПбГУ. – 2021. – Т. 12. – № 3. – С.502–521.

information and telecommunications infrastructure in our country, increases the share of domestic software in the domestic and foreign markets, so the future belongs to artificial intelligence, probably in a symbiosis of mathematical and biological methods.

The prevalence of artificial intelligence systems in production and everyday life is growing. Intelligent computer applications are purchased by consumers, industrial robots are integrated into the production environment, so artificial intelligence systems are included in civil circulation and act as objects of civil law. The more complex the AI system, the more questions about its state. For example, some of these systems may go beyond the designer's intent, improve themselves, and create new objects and inventions that weren't there before. Accordingly, among the issues of regulation discussed by civilists are the following issues:

- the possible status of the artificial intelligence system as a subject, not an object of civil law;
- allocation of liability for damage caused by artificial intelligence;
- intellectual property rights to works created with the participation of artificial intelligence, etc.

Artificial intelligence is not currently recognized as a legal entity, although the issue of its legal personality has been discussed by researchers and politicians for some time. In 2017, it was noted that the European Parliament approved a resolution on civil rights rules for robotics[2].

The resolution was a response to a report prepared by the Department of Civil Rights and Constitutional Affairs of the Legal Affairs Committee of the European Parliament. The report explicitly pointed to the risk of dehumanization associated with the proliferation of "intelligent" robots. The authors of the report opposed the recognition of the status of legal entities for robots in order to prevent the equalization of natural and artificial intelligence (human and machine).

Incidentally, the 2017 European resolution was rightly criticized for being wrong, as “the new civil law solution should include a distinction between AI and robots and consider robots as central elements in defining the regulatory framework... based on the concept of AI, and not on the concept of robots, as this is proposed in the Resolution"[3].

With the development of artificial intelligence and an increase in the level of autonomy, it is becoming increasingly difficult to control its activities. An artificial intelligence system is a person, although he is controlled by the system, but may have limited control over the possible actions and reactions of the system, and developers cannot always predict the behavior of self-learning systems - only the approach should be understood to determine the possible legal personality and legal

[2] Резолюция Европейского парламента от 16 февраля 2017 г. с рекомендациями Комиссии по гражданско-правовым положениям о робототехнике (2015/2103(INL)). URL: https://www.europarl.europa.eu/doceo/document/TA-8-2017-0051_EN.html (дата обращения: 12.01.2022)

[3]Ксенжак П., Войчак С. ИИ против робота: в поисках области применения нового европейского гражданского права // Право, инновации и технологии. 2020 Том. 12. Вып. 2. Д. 297–317.

liability of artificial intelligence. The fact of the objective existence of artificial intelligence systems that have the ability to exert certain types of impact on the world around is clearly visible[4].

Experts suggest possible models of civil law regulation, for example:

1. Artificial intelligence can be considered as a special kind of property, like animals, which are property by law and can behave autonomously. Then the owner should be responsible for artificial intelligence. However, existing civil law provisions are primarily intended for domestic animals, which under normal circumstances should not cause harm.

2. Artificial intelligence can be seen as a decisive electronic entity, similar to legal entities. The problem is that the actions of legal entities always go back to the actions of an individual or a group of people, and the actions of artificial intelligence systems do not necessarily go back to the actions of an individual. However, artificial intelligence, which has the special legal status of an electronic person, may be solely responsible for damages.

The development of artificial intelligence continues, both people and artificial intelligence with the ability of self-development are working in this direction. It is impossible to stop the process, because modern civilization has already accepted artificial intelligence as an integral part of itself: people refuse smartphones (at least until something “ilor” appears in this area), utilities, but technological products. not only to help a person, but also to replace him, capable of acting independently, this is most clearly expressed in unmanned vehicles that have begun to appear on the roads. All this suggests that the discussion of the issue of legal personality may eventually move to the recognition of the status of a subject of law for artificial intelligence. It is clear that the choice of mode in the future will be different for different artificial intelligence models and will depend on the characteristics - their level of complexity and potential risk.

The issue of recognizing artificial intelligence as a subject of law was initially raised in connection with the problem of liability for damage caused by artificial intelligence, since in practice there are already cases of harm to a person, for example, a robot. With the spread of artificial intelligence systems, the number of such cases will increase. In both criminal and civil law, the question arises - who should be held liable: the inventor, the software developer, the manufacturer, the owner, the user, the artificial intelligence system itself? It is important to strike a reasonable balance between new technologies and traditional law constructs, leaving room for future changes.

[4] Шестак В.А., Волеводз А.Г. Современные потребности правового обеспечения искусственного интеллекта: взгляд из России // Всероссийский криминалистический журнал. 2019. Т. 13. № 2. С. 197–206

References

1. Филипова И.А. Нейротехнологии: разработка, практическое применение и правовое регулирование // Вестник СПбГУ. – 2021. – Т. 12. – № 3. – С.502–521.

2. Резолюция Европейского парламента от 16 февраля 2017 г. с рекомендациями Комиссии по гражданско-правовым положениям о робототехнике (2015/2103(INL)). URL: https://www.europarl.europa.eu/doceo/document/TA-8-2017-0051_EN.html (

3. Ксенжак П., Войчак С. ИИ против робота: в поисках области применения нового европейского гражданского права // Право, инновации и технологии. 2020 Том. 12. Вып. 2. – С.297–317.

4. Шестак В.А., Волеводз А.Г. Современные потребности правового обеспечения искусственного интеллекта: взгляд из России // Всероссийский криминалистический журнал. 2019. Т. 13. № 2. – С. 197–206

SECTION 3. LIFE SCIENCES, MEDICAL AND HEALTH SCIENCES

UDC 61

Chertanova D.R. Prevalence of signs and symptoms of temporomandibular disorders in the adult population.

Распространенность признаков и симптомов височно-нижнечелюстных расстройств у взрослого населения.

Chertanova Diana Rashidovna,
chief physician of the Dental Center "Orthodontist City", orthodontist-gnatologist, Ph.D.
Чертанова Диана Рашидовна,
главный врач Стоматологического центра "Ортодонт Сити", врач- ортодонт-гнатолог, к.м.н

Аннотация. *Данное исследование направлено на оценку распространенности признаков и симптомов у взрослых пациентов с височно-нижнечелюстными расстройствами (ВНЧС).*

В исследовании приняли участие пациенты в возрасте от 18 до 75 лет, у которых имеется подтвержденное заболевание ВНЧС. Были собраны и проанализированы данные протоколов интервью и опросников 193 пациентов, которые затем были разделены на две группы: мужчин (n = 18) и женщин (n = 175). Логистический регрессионный анализ был использован для оценки распространенности признаков и симптомов заболеваний ВНЧС и наличия взаимосвязи симптомов и возраста пациентов.

Чаще всего пациенты отмечали у себя головные боли (55,96%). 100 пациентов имеют неправильную осанку (51,81%). Боли в суставе испытывают 88 пациентов (45,60%), шумы в области сустава - 83 пациента (43,01%). Среди внешних признаков чаще всего встречается лицевая асимметрия - 88 пациентов (45,60%). На втором месте нарушения открывания рта - 54 пациента (27,98%) и немного реже встречается вогнутый / выпуклый профиль лица - 50 пациентов (25,91%).

При клиническом осмотре врачи-гнатологи чаще всего всего отмечали сужение верхней или нижней зубных дуг - 70 пациентов (36,27%), скученное положение нижних передних зубов - 60 пациентов (31,09%), стираемость нижних передних зубов - 52 пациента (26,94%). Сточенные бугры зубов или трещины эмали наблюдались у 51 пациента (26,42%). Женщины показали более высокую частоту всех признаков и симптомов ВНЧС, чем мужчины.

У большого количества пациентов наблюдаются нетипичные симптомы и признаки заболеваний ВНЧС. Это усложняет диагностику и выявление болезней на ранней стадии. Результаты сопоставимы с другими соответствующими популяционными исследованиями у взрослых.

Ключевые слова: *Височно-нижнечелюстные расстройства (ВНЧС), исследования.*

Abstract. *This study aims to evaluate the prevalence of signs and symptoms in adult patients with temporomandibular disorders (TMD).*

The study involved patients aged 18 to 75 years who have a confirmed TMJ disease. Data from interview protocols and questionnaires were collected and analyzed from 193 patients, who were then divided into two groups: men (n = 18) and women (n = 175). Logistic regression analysis was used to assess the prevalence of signs and symptoms of TMJ disease and the presence of an association between symptoms and patient age.

Most often, patients reported headaches (55.96%). 100 patients have incorrect posture (51.81%). 88 patients (45.60%) experience pain in the joint, 83 patients (43.01%) experience noise in the joint area. Among the external signs, facial asymmetry is most common - 88 patients (45.60%). In second place are mouth opening disorders - 54 patients (27.98%) and a slightly less common concave / convex face profile - 50 patients (25.91%).

During a clinical examination, gnatologists most often noted narrowing of the upper or lower dental arches - 70 patients (36.27%), crowded position of the lower anterior teeth - 60 patients (31.09%), abrasion

of the lower anterior teeth - 52 patients (26 .94%). Grinded tubercles of teeth or enamel cracks were observed in 51 patients (26.42%). Women showed a higher incidence of all signs and symptoms of TMJ than men.

A large number of patients have atypical symptoms and signs of TMJ disease. This complicates the diagnosis and detection of diseases at an early stage. The results are comparable to other relevant population-based studies in adults.

***Keywords**: Temporomandibular disorders (TMJ), research.*

DOI 10.54092/9781447871415_13

Височно-нижнечелюстные расстройства (ВНЧС) подразумевают широкий спектр клинических паттернов, включая дисфункцию височно-нижнечелюстного сустава, нарушения жевательных мышц и нарушения связанных структур [1 , 2]. Наиболее распространенными симптомами заболеваний ВНЧС считаются боли в суставах и мышцах, головные боли, шума в суставах, ограниченность открывания рта и лицевые боли [3 , 4]. С распространенностью от 10% до 15% заболевания ВНЧС представляют собой наиболее частую причину боли в челюстно-лицевой области не связанной с зубами [5].

В ранее проведенном исследовании было показано, что 15–50 % пациентов сообщают, по крайней мере, об одном симптоме, связанном с ДВНЧС, а 30–90 % сообщают, по крайней мере, об одном клиническом признаке [6 , 7].

Эпидемиологические и клинические исследования показывают, что в некоторых случаях пациенты с установленным заболеванием ВНЧС не испытывают болевые симптомы. Тем не менее, боль является основной жалобой и основной причиной, по которой пациенты обращаются за медицинской помощью [8].

Согласно другому исследованию, распространенность различных, по крайней мере, случайных симптомов ВНЧС, о которых сообщали сами пациенты, варьировала от 5,8% (затрудненное открывание челюсти) до 27,8% (щелчки в области ВНЧС) среди мужчин [9]. Этиология заболеваний ВНЧС считается сложной и многофакторной, включая окклюзионные нарушения, травмы, эмоциональный стресс, глубокую боль и парафункциональную активность, такую как бруксизм [10]. Роль различных факторов в развитии дисфункциональных расстройств ВНЧС до сих пор остается неясной.

В предыдущих исследованиях проводился анализ лишь некоторых наиболее очевидных симптомов и признаков заболеваний. В данном исследовании проводился анализ состояния ВНЧС по 53 показателям.

Материалы и методы

В ретроспективном исследовании приняли участие 193 пациента (175 женщин и 18 мужчин; средний возраст 37 лет), которые проходили лечение в ортодонтическом центре в период с января 2020 г. по сентябрь 2022 г. В выборку включались только пациенты, у которых было установлено заболевание ВНЧС. Все пациенты были осмотрены врачами-гнатологами с опытом работы более 7 лет, им было проведено диагностическое МРТ и КТ-обследование височно-нижнечелюстного сустава.

Критерии невключения в группу были следующими: возраст пациентов менее 18 лет, диагностированные системными мышечными заболеваниями (например, фибромиалгия, ревматоидный артрит, воспалительные заболевания суставов), наличие неврологических

нарушений или заболеваний (например, инсульт, опухоль или эпилепсия), беременность, психические расстройства в анамнезе.

Для данного исследования была специально разработана анкета для регистрации симптомов и признаков заболеваний ВНЧС. Анкета была разделена на 3 части: симптомы, признаки после внешнего осмотра и признаки после осмотра полости рта. Анкета была разработана таким образом, чтобы можно было отметить только заранее определенные ответы.

Результаты

После обработки и систематизации заполненных анкет были получены количественные данные по наличию симптомов и признаков заболеваний ВНЧС у исследуемой группы (Таблица 1).

Таблица 1

Раздел анкеты	Симптом/признак	Количество пациентов	Процент пациентов, у которых наблюдается симптом/признак
Симптомы	Головные боли	108	55,96
	Боли в суставе	88	45,60
	Шумы в области сустава	83	43,01
	Ограниченное открывание	75	38,86
	Воспаление уха	17	8,81
	Головокружение	39	20,21
	Звон в ушах	48	24,87
	Затруднения при глотании	26	13,47
	Подвижность зубов	14	7,25
	Бруксизм / сжатие зубов	73	37,82
	Боли в лицевой области	54	27,98
	Невралгия тройничного нерва	9	4,66
	Парез / паралич тройничного нерва	2	1,04
	Чувствительность зубов от холодного/горячего	70	36,27
	Чувствительность зубов при надавливании	23	11,92
	Затруднения при жевании	42	21,76

Раздел анкеты	Симптом/признак	Количество пациентов	Процент пациентов, у которых наблюдается симптом/признак
	Боли в шейном отделе	91	47,15
	Неправильная осанка	100	51,81
	Онемение кончиков пальцев рук	32	16,58
	Нервозность / бессонница	59	30,57
ВНЕШНИЕ ПРИЗНАКИ (после внешнего осмотра)	Лицевая асимметрия	88	45,60
	Укороченная нижняя треть лица	38	19,69
	Увеличенная нижняя треть лица (открытый угол)	15	7,77
	Сухие губы, ангулярный хейлит	33	17,10
	Изменения положения и линии смыкания губ	34	17,62
	Глубокая подбородочная складка	44	22,80
	Вогнутый / выпуклый профиль лица	50	25,91
	Отечность лица	41	21,24
	Лингвальные и небные торусы	5	2,59
	Смещение головы вперед (лордоз)	42	21,76
	Нарушения речи	17	8,81
	Нарушения открывания рта	54	27,98
ВНЕШНИЕ ПРИЗНАКИ (после осмотра полости рта)	Скученное положение нижних передних зубов	60	31,09
	Стираемость нижних передних зубов.	52	26,94
	Лингвальный наклон нижних передних зубов	22	11,40
	Лингвальный наклон верхних передних зубов	19	9,84
	Лингвальный наклон боковых зубов	30	15,54
	Сужение верхней или нижней зубных дуг	70	36,27
	Несовпадение центральных линий лица и зубных дуг	41	21,24

Раздел анкеты	Симптом/признак	Количество пациентов	Процент пациентов, у которых наблюдается симптом/признак
	Ступенька нижнего зубного ряда в области премоляров	40	20,73
	Деформация плоскости Spee	40	20,73
	Абфракции, клиновидные дефекты	25	12,95
	Сточенные бугры зубов, трещины эмали	51	26,42
	Сточенные режущие края передних зубов	30	15,54
	Отсутствие премоляров	27	13,99
	Открытые апроксимальные контакты	16	8,29
	Подвижность зубов	7	3,63
	Расхождение верхних передних зубов	11	5,70
	Жевательные фасетки на зубах	15	7,77
	Перекрестный прикус	13	6,74
	Открытый прикус	10	5,18
	Глубокий прикус	30	15,54
	Несовпадение окклюзионных взаимоотношений зубных рядов	15	7,77

Из таблицы 1 следует, что чаще всего пациенты отмечают у себя следующие симптомы:

- Головные боли (55,96%)
- Неправильная осанка (51,81%)
- Боли в шейном отделе (47,15%)
- Боли в суставе (45,60%)
- Шумы в области сустава (43,01%)
- Ограниченное открывание (38,86%)
- Бруксизм / сжатие зубов (37,82%)
- Чувствительность зубов от холодного/горячего (36,27%)
- Нервозность / бессонница (30,57%)
- Боли в лицевой области (27,98%)

Наиболее явные признаки дисфункции ВНЧС - боли в суставе и шумы в области сустава находятся на 4 и 5 месте соответственно. Чаще всего пациенты отмечали у себя головные боли (55,96%). Такой симптом, как неправильная осанка отмечают у себя 51,81% пациентов, что является подтверждением тесной взаимосвязи состояния височно-нижнечелюстного сустава и опорно-двигательного скелет.

Среди внешних признаков чаще всего встречается лицевая асимметрия - 88 пациентов (45,60%). На втором месте нарушения открывания рта - 54 пациента (27,98%) и немного реже встречается вогнутый / выпуклый профиль лица - 50 пациентов (25,91%).

В 3 части анкеты, которую заполняет врач-гнатолог после осмотра наиболее частые признаки заболеваний ВНЧС: сужение верхней или нижней зубных дуг - 70 пациентов (36,27%), скученное положение нижних передних зубов - 60 пациентов (31,09%), стираемость нижних передних зубов - 52 пациента (26,94%). Сточенные бугры зубов или трещины эмали наблюдались у 51 пациента (26,42%).

Кроме это было проанализировано суммарное количество симптомов и признаков у пациентов (Рисунок 1). Наибольшее количество пациентов отмечают у себя всего 2 и менее признака заболевания. Аналогично врачи чаще всего обнаруживают не более 2 признаков. При этом по количеству симптомов ситуация не такая однородная, 77,2% пациентов испытывают 3 и более различных симптомов.

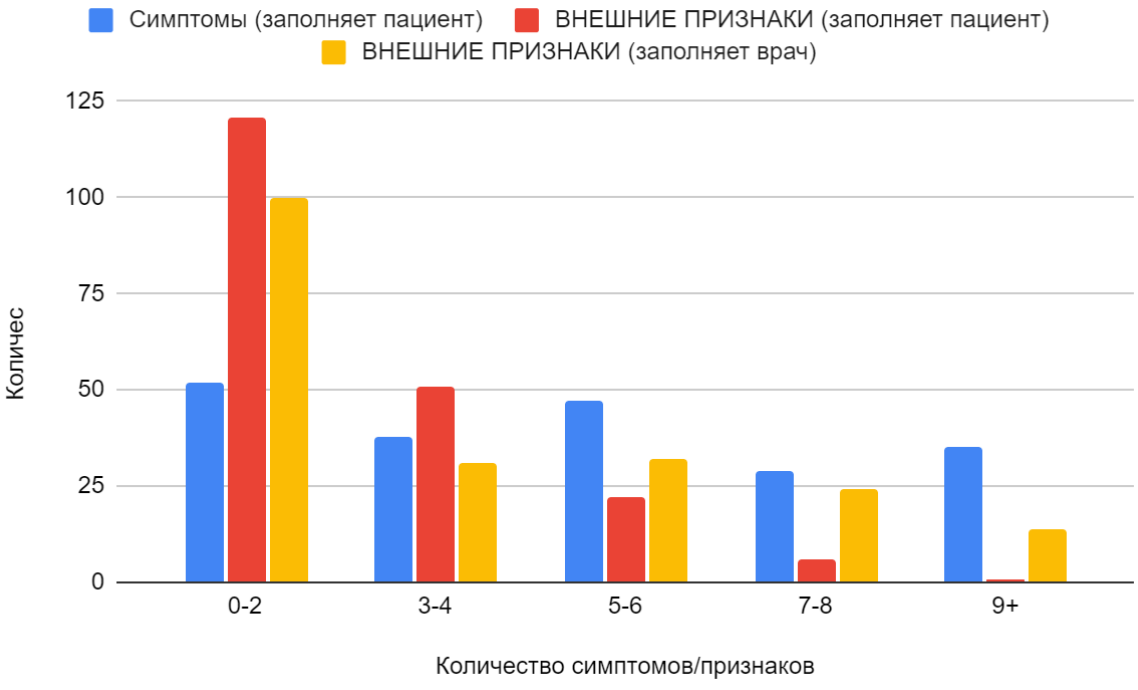

Рисунок 1. Суммарное количество симптомов и признаков у пациентов

Для определения наличия взаимосвязи симптомов и признаков заболеваний от пола пациентов было рассчитано среднее количество симптомов и признаков, отмеченных в анкете (Таблица 2).

Таблица 2

	Симптомы	ВНЕШНИЕ ПРИЗНАКИ (после внешнего осмотра)	ВНЕШНИЕ ПРИЗНАКИ (после осмотра полости рта)
Женщины	5,55	2,42	3,09
Мужчины	4,89	2,11	4,61

Из Таблицы 2 видно, мужчины самостоятельно отмечают у себя меньше симптомов и признаков, чем женщины. При этом количество количество признаков, которые отмечает врач у них выше - 4,61% против 3,09%.

Обсуждение

В последнее десятилетие увеличивается количество пациентов с заболеваниями ВНЧС. В связи с этим было предпринято много усилий, чтобы улучшить диагностику заболеваний и выявлять их на ранних стадиях.

Чаще всего пациенты обращаются за стоматологической помощью уже с запущенной формой дисфункции ВНЧС, при этом ранее они проходят консультации и лечение у врачей других специальностей (отоларингологи, неврологи, ортопеды). Даже доступность современных и сложных диагностических инструментов, таких как магнитно-резонансная и компьютерная томография, не уменьшает количество запущенных случаев. Из этого следует вывод, что осведомленность о факторах риска возникновения дисфункции, симптомах и признаках заболевания довольно низкая. [11-18].

Основная цель этого исследования заключалась в изучении распространенности признаков и симптомов у взрослых пациентов с височно-нижнечелюстными расстройствами.

Наиболее частым симптомом, который отмечали у себя пациенты была головная боль (55,96%). Жалобы на головную боль могут быть результатом либо боли в голове из-за сокращения мышц, либо первичных головных болей, поскольку дифференциальная диагностика не проводилась. Взаимосвязь между первичными головными болями и признаками и симптомами ВНЧС заслуживает дальнейшего изучения, поскольку оба состояния имеют один и тот же путь передачи боли в ЦНС, т. е. в систему тройничного нерва.

Что касается пола, настоящее исследование выявило статистически значимую связь между полом и распространенностью ВНЧС. Этот вывод согласуется с предыдущими исследованиями. [19-21] Это может быть связано с более высоким уровнем подвижности суставов, стрессом и наличием специфических болевых рецепторов у женщин.

В ранее проведенных исследованиях была выявлена статистически значимая связь также наблюдалась между признаками и симптомами ДВНЧС и самооценкой эмоционального напряжения. Сообщаемое эмоциональное напряжение, очень частая жалоба в наши дни, может влиять на общее состояние здоровья, а также предрасполагать и вызывать мышечные сокращения и парафункциональные привычки, увеличивающие риск возникновения симптомов ДВНЧС. [22] В нашем исследовании 59 пациентов (30,57%), имеющих заболевания ВНЧС, отмечают у себя нервозность или бессонницу.

Шумы в области сустава - одни из наиболее выраженных признаков, был отмечен у 83 пациентов (43,01%). Суставные шумы часто связаны с передним или переднемедиальным смещением диска с репозицией.

Библиографический список

1. Пек С.С., Гуле Дж.П., Лоббезоо Ф., Шиффманн Э.Л., Альстергрен П., Андерсон Г.К. и соавт. Расширение таксономии диагностических критериев височно-нижнечелюстных нарушений. J Оральная реабилитация. 2014;41:2–23.

2. Шиффман Э., Орбах Р., Трулав Э., Андерсон Г., Гуле Дж. П., Лист Т. и др. Диагностические критерии височно-нижнечелюстных расстройств (DC/TMD) для клинического и исследовательского применения: рекомендации международной сети консорциума RDC/TMD* и группы по изучению орофациальной боли. 2014; 28: 6–27.

3. Al-Hasson HK, Ismail AI, Ash MM Jr. Опасения пациентов, обращающихся за лечением дисфункции ВНЧС. Джей Простет Дент. 1986; 56: 217–21.

4. Wiesinger B, Malker H, Englund E, Wanman A. Существует ли зависимость доза-реакция между болью в позвоночнике и височно-нижнечелюстными расстройствами? BMC Расстройство опорно-двигательного аппарата. 2009; 10-28.

5. Kusdra PM, Stechman-Neto J, Leão BLC, Martins PFA, Lacerda ABM, Zeigelboim BS. Взаимосвязь между отологическими симптомами и ВНЧС. Int Tinnitus J. 2018; 22:30–4.

6. Руткевич Т., Конёнен М., Суоминен-Тайпале Л., Нордблад А., Аланен П. Возникновение клинических признаков височно-нижнечелюстных нарушений у взрослых финнов. Дж. Орофак. Боль. 2006 г.; 20 :208–217.

7. Юссила П., Кивиахде Х., Няпанкангас Р., Паккиля Й., Песонен П., Сипиля К., Пирттиниеми П., Раустиа А. Распространенность височно-нижнечелюстных расстройств в когорте новорожденных в Северной Финляндии, 1966. J. Оральная лицевая боль Головная боль. 2017; 31 : 159–164.

8. Wassell, RW (1989) Играют ли окклюзионные факторы роль в височно-нижнечелюстной дисфункции? Журнал стоматологии, 17, 101-110.

9. Миеттинен О., Анттонен В., Патинен П., Паккиля Й., Тьядерхане Л., Сипиля К. Распространенность симптомов височно-нижнечелюстного расстройства и их связь с алкоголем и курением. J. Оральная лицевая боль Головная боль. 2017; 31 :30–36.

10. Окесон Дж . П. Лечение височно-нижнечелюстных расстройств и окклюзии. 8-е изд. Эльзевир; Амстердам, Нидерланды: 2019. стр. 102–128.

11. Окесон Дж.: Лечение височно-нижнечелюстных расстройств и окклюзии. Эльзевир, 2019.

12. Бонжардим Л., Гавидо М., Перейра Л., Каштелу П., Гарсия Р.: Признаки и симптомы височно-нижнечелюстных расстройств у подростков. Браз Орал Рез. 2005 г.; 19 (2): 93–98.

13. Осевич М. и др.: Исследовательские диагностические критерии височно-нижнечелюстных расстройств (RDC/TMD) — Польская версия двухосевой системы для диагностики формы ВНЧС RDC/ВНЧС. Дж Стома. 2013; 66 (5): 576–649.

14. Ferreira C., Da Silva M., de Fellicio C.: Орофациальное миофункциональное расстройство у субъектов с височно-нижнечелюстным расстройством. Cranio: журнал краниомандибулярной практики. 2009 г.; 27 (4): 268–274.

15. Хираи К., Икава Т., Шигета Ю., Шигемото С., Огава Т.: Оценка бруксизма во сне с помощью спроектированной окклюзионной шины. J Протезирование Res. 2017; 61 (3): 333–343.

16. Лю Ф., Штейнкелер А.: Эпидемиология, диагностика и лечение височно-нижнечелюстных расстройств. Стоматологический Клиники Северной Америки. 2013; 57 (3): 465–479.

17. Гларос А., Уильямс К., Лаусте Л.: Роль парафункций, эмоций и стресса в прогнозировании боли. J Am Dent Assoc. 2005 г.; 136: 451–458.

18. Bertolli E., de Leeuw R., Schmidt J.E., Okeson J.P., Carlson C.R. Распространенность и влияние симптомов посттравматического стрессового расстройства у пациентов с болью в жевательных мышцах или височно-нижнечелюстном суставе: различия и сходства. J Орофак Пейн. 2007 г.; 21: 107–119.

19. Conti PC, Ferreira PM, Pegoraro LF, Conti JV, Salvador MC. Поперечное исследование распространенности и этиологии признаков и симптомов височно-нижнечелюстных расстройств у старшеклассников и студентов университетов. J Орофак Пейн. 1996; 10 (3): 254-62.

20. Сольберг В.К., Ву М.В., Хьюстон Дж.Б. Распространенность дисфункции нижней челюсти у молодых людей. J Am Dent Assoc. 1979 г., 98 (1): 25–34.

21. Липтон Дж. А., Шип Дж. А., Ларах-Робинсон Д. Оценочная распространенность и распространение зарегистрированной орофациальной боли в Соединенных Штатах. J Am Dent Assoc. 1993 г.; 124 (10): 115–21.

22. Маркос Фрейтас, Пауло Конти, Хосе Энрикес, Гильерме Янсон. Взаимосвязь между признаками и симптомами височно-нижнечелюстных нарушений и ортодонтическим лечением: кросс-секционное исследование. Угол Ортод (2003) 73 (4): 411–417.

SECTION 4. MEDIA, SOCIETY AND IDENTITY

UDC 8

Notik M. Verbal behavior as an effective form of communication of a socio-political figure (on the example of Dwight David Eisenhower)

Notik Maksim
The 2nd year student of specialty of the faculty of training of specialists for the judicial system (legal faculty)
"The Russian State University of Justice", Saint-Petersburg
Scientific adviser
Bashmakova N. Ph.D., Associate Professor,
Department of Humanitarian and Socio-economic Disciplines
"The Russian State University of Justice", Saint-Petersburg

Abstract. *The article examines verbal behavior of Dwight David Eisenhower, the 34th President of the United States of America. The specificity of the socio-political language is traced (by the example of the speech, named "Eisenhower's farewell address to the nation"). The specifics of the construction of the speech of a public and political figure of the USA are revealed. It is concluded that verbal behavior largely determines the success of verbal communication.*

Keywords: *socio-political speech, verbal behavior, linguistic means, verbal communication.*

DOI 10.54092/9781447871415_22

The issue of verbal communication concerns different spheres of life, including socio-political. The importance of verbal behavior can hardly be overemphasized, as some socio-political figures succeed through verbal behavior, while others fail in the process of verbal behavior. An example in this case is the public-political figure Dwight David Eisenhower with his final public speech, where Eisenhower opposed the expansion of the military-industrial complex.

The purpose of the research is to characterize the verbal behavior of a socio-political figure (on example of Dwight David Eisenhower).

The object of the research is the speech behavior of a socio-political figure.

The subject of the research is the specificity of language means used in socio-political speech.

The material of the research is the speech "Eisenhower's farewell address to the nation", proclaimed on January 17, 1961.

The choice of research material is determined by the significance of "Eisenhower's farewell address to the nation". In this speech Dwight David Eisenhower proclaimed, that nation should stand against the potential influence of the military-industrial complex.

Being the 34th of the United States of America (1953-1961). In domestic policy, the Eisenhower government sought to form, reduce federal taxes and strengthen the regional powers of

the administrations of individual states, which were cut during the Great Depression and World War II. Eisenhower based the US foreign policy on the struggle against the strengthening of the USSR and its allies from the socialist camp.

The stated topic seems relevant. The importance of research is explained by the fact that the study allows to conduct comparative analysis of the speeches of the socio-political figures, correlating verbal and nonverbal factors while considering categories of interpersonal communication.

The aim defined the logic of the narrative in the article: to concretize the concept of "verbal behavior", to identify the main features of the construction of speeches of socio-political figures of the United States of America, to analyze the "Eisenhower's farewell address to the nation" and to illustrate the main speech techniques used by Dwight David Eisenhower.

The analysis of the available sources revealed several interpretations of the concept of "verbal behavior". Within the framework of this research, the most appropriate interpretations seem to focus on rhetoric and verbal reactions. N. Romanova suggests considering verbal behavior as "human actions, that include verbal reactions (speaking, understanding, other reactions to words, memorizing verbal materials, etc.)" [3, p. 33]. V. Zhmurov focuses on speech behavior (speaking, reactions to words, memorizing words, solving tasks presented to the subject in verbal form, etc.) [2, p. 730].

Linguistic means in the speech of a socio-political figure	**Speech by a socio-political figure**
Cliché	"Good evening, my fellow Americans."
Archaic vocabulary	"***Akin to,*** and largely responsible for the…"
Lexical repeats	"But each proposal must be weighed in the light of a broader consideration: the need to maintain ***balance*** in and among national programs, ***balance between*** the private and the public economy, ***balance between*** the cost and hoped for advantages, ***balance between*** the clearly necessary and the comfortably desirable, ***balance between*** our essential requirements as a nation and the duties imposed by the nation upon the individual, ***balance between*** actions of the moment and the national welfare of the future." "***As one who*** has witnessed the horror and the lingering sadness of war, ***as one who*** knows that another war could utterly destroy this civilization which has been so slowly and painfully built over thousands of years, I wish I could say tonight that a lasting peace is in sight."
Introductory words	"Three days from now, ***after half century in the service of our country***, I shall lay down the responsibilities of office as, ***in traditional and solemn ceremony***, the authority of the Presidency is vested in my successor." "So, my official relationship with the Congress ends in a feeling **-- on my part --** of gratitude that we have been able to do so much together.
Emphasis on words	"Only an alert and knowledgeable citizenry can ***compel*** the proper meshing of the huge industrial and military machinery of defense with our peaceful methods and goals, so that security and liberty may ***prosper together***."
Short sentences	"We should take nothing for granted" "But so much remains to be done."
Запинки	"***Like every other -- Like every other citizen***" "We annually spend on military security alone more than the net income of all United States ***cooperations -- corporations."*** "That table, though scarred by many past ***frustrations -- past frustrations,*** cannot be abandoned for the certain agony of ***disarmament -- of the battlefield."***

The analysis suggests that Dwight David Eisenhower's speech behavior characterizes his linguistic personality. The audience is influenced by linguistic means, which, combined with communicative tactics, allow for an impact on the audience. The tactics are: 1) the tactic of identifying the speaker with the people ("We should take nothing for granted", "As we peer into society's future, we -- you and I, and our government -- must avoid the impulse to live only for today, plundering for our own ease and convenience the precious resources of tomorrow.");
2) the tactic of promise ("Only thus shall we remain, despite every provocation, on our charted course toward permanent peace and human betterment.").

Research findings:

1) the concept of "verbal behavior" has been clarified;

2) main linguistic tools peculiar to speeches of public and political have been identified;

References

1. Bashmakova N. Verbal etiquette: the genesis and development of the concept in historical retrospect. Electronic scientific and educational bulletin. Health and education in the XXI century, 2017. №6. – P. 3-10.

2. Zhmurov, V. The Great Encyclopedia of Psychiatry / V. Zhmurov. – 2nd edition. – Jangar, 2012. – P. 865.

3. Romanova N. Dictionary. Culture of speech communication. Ethics, pragmatics, psychology / N. Romanova – M: Flinta: Science, 2009. – P. 302.

4. Eisenhower's farewell address. – URL: https://www.americanrhetoric.com/speeches/dwightdeisenhowerfarewell.html

SECTION 5. SCIENCE, TECHNOLOGY AND EDUCATION

UDC 371.2

Bashmakova N. Professional training of specialists for the judicial system at the university as a pedagogical problem

Bashmakova Nataliya
Ph.D., Associate Professor, Department of Department of Humanities and Socio-Economic Disciplines
The North Western branch of the Federal State Budget-Funded Educational Institution of Higher Education
"The Russian State University of Justice"

Abstract. *The article deals with the problem of professional training of specialists for the judicial system from a pedagogical point of view. The concept of professional readiness of specialists for the judicial system is specified. The main components of training systems are revealed. The key goals of higher education in the preparation of specialists for the judicial system are identified.*

Keywords: *professional training, specialists for the judicial system, pedagogical problem, modeling, socio-cultural space, key goals of university education, professional readiness.*

DOI 10.54092/9781447871415_25

Introduction

The new educational paradigm assumes modeling of socio-cultural space, where there is the development of a citizen as a subject of intellectual, professional and spiritual self-development.

With regard to the judicial system, we are talking about the formation of a professional, acting as a bearer of ideas and norms of creative transformation of legal reality.

In this regard, it is the development of future specialists for the judicial system as subjects in the system of higher education is regarded as one of the most important pedagogical problems that need to be solved.

As for the goals of the university, it is the goals of the intellectual, spiritual and professional level are the key goals that the university needs to achieve during the professional training of specialists for the judicial system.

Given the fact that the subject of the activity is the carrier of the goals and ways of their implementation, it seems appropriate to model the training system of future professionals for the judicial system accordingly.

To model such systems, it is necessary to take into account a number of components:

1) a list of system elements;

2) an invariant of relations between system elements;

3) functioning [2].

It is obvious that the relations between the elements of the system are determined by the goal.

Development of goals and ways of their realization, subjective development of students in humanitarian educational systems is professionally obligatory in work with future specialists for judicial system.

Proceeding from the fact that the strategic goals of higher education - the development of intellectual, spiritual and professional potential of students, we will rely on the provision that university teachers in preparing and conducting classes with future specialists for the judicial system determine the goals that correspond to the previously stated strategy. Such goals affect mainly the issues of content (called content-educational), worldview (called worldview), profession (called professional-pedagogical).

It seems appropriate to decompose these goals to the level of applicability in the course of professional training.

1. Material and methods

The purpose of the study is to model a training system for the harmonious development of specialists for the judicial system as subjects of educational and socio-cultural space.

To achieve the objectives, we used mainly the system approach.

The analysis of scientific and pedagogical literature suggests that researchers have not yet been able to reach a consensus on the content of the concept "readiness for professional activity".

Being a complex, multi-level concept, the latter is studied at the following key levels [1]:

1) personal, where readiness acts as a manifestation of individual-personal qualities, determined by the nature of forthcoming activity (B.G. Ananyev, A.N. Leontiev, I.S. Kon, A.G. Spirkin, E.V. Shorokhova et al.);

2) functional, in which readiness is interpreted as temporary readiness and diligence, the forthcoming activation of mental functions, the ability to initiate the necessary physical and mental potential to implement the activity (E.P. Ilyin, N. D. Levitov, L.S. Nersesyan, V.N. Pushkin, etc.);

3) personality-activity, in which readiness is viewed as a holistic manifestation of all components of personality, allowing the ability to effectively perform their duties (A.A. Derkach, L.A. Kandybovich).

T.A. Amelchenko's position, according to which professional readiness of a specialist represents a transitional stage from cognition of professional environment to its transformation on the basis of intellectual, situational, retrospective and prospective reflection and includes such components as awareness of professional tasks and determination of professional behavior in specific situations, assessment of one's capabilities in accordance with the complexity of the task [1], appears relevant within the framework of this study.

Decomposition of content-educational goals is performed by levels of assimilation, which are offered to students to choose the final result of their intellectual development in the classroom.

At the lesson occurs assimilation of information on the subject area of the academic discipline according to the predicted content-educational goals of the lesson, which are expressed by the levels of assimilation.

Students (and teacher) gain the experience of subjects of learning (teaching), modeling their activities according to the goals and technologies of self-development, ensuring the achievement of results according to the overall goals of synchronously interacting systems.

There is a realization that the subject area of the academic discipline is not a goal, but a means of developing the intellectual potential of students as subjects.

The next component of the goal of the university lesson, which determines the spiritual and moral development of future specialists for the judicial system, is connected, as indicated above, with the worldview. Therefore, the worldview goals of the spiritual and moral development of future specialists in training are expressed in the categories of universal human morality.

Based on our research, each moral category can be expressed in the form of a "tree of goals", including components that characterize both its positive aspects and antipodes.

The substantive, educational and worldview goals of the university have an impact on professional ones, which are expressed in abilities (academic, didactic, constructive, communicative, organizational, etc.).

Under the Federal State Educational Standard for the direction 40.03.05 "Judicial and Prosecutorial Activity", a future specialist for the judicial system should hold a number of key competences.

Among them one should mention: social-personal; economic, organizational-managerial; general scientific; general technical; general professional; special.

In this context, the development of the above competencies in the field of professional training of specialists for the judicial system requires the following [3]: 1) shifting the emphasis from the subject-disciplinary and substantive side to the competencies and expected results of the educational process;

2) reflecting the dominant prospects in the main educational program to guide the training of graduates for effective activities in the future world;

3) use of modular organization of basic educational programs;

4) increasing the freedom of students in choosing individualized educational trajectories.

3. Results of the study and discussion

In the course of the study:

1) the problem of professional training of specialists for the judicial system has been considered;

2) the concept of professional readiness of specialists for the judicial system has been specified.

3)the key goals of university education have been identified;

4) the main components of simulation of training systems have been revealed.

Conclusion

The implementation of the professional component of these goals determines the development of the skill of the future specialist for the judicial system, based on moral and humanistic goals; the formation of high education, which provides a creative level of activity and professional readiness to model pedagogical systems for the harmonious development of students as subjects of educational and socio-cultural space.

References

1. Amelchenko, X. (2005) 'Professional competence of a future specialist: theoretical foundations': monograph / T. V. Amelchenko, Chita: Chita State University, 2005. 286 p.

2. Bashmakova, N. (2015) 'Monitoring of the formation of components of mediation and communication activity of a modern specialist in the humanities in the context of labor market requirements', World of Science, Culture, Education, 2 (51), pp. 22-24.

3. Bashmakova, N., Bondarev, V. (2021) 'Professional readiness of specialists for the judicial system: genesis and development of the content of the concept', Educational Bulletin "Consciousness", Vol. 23, 5. pp.34-41.

UDC 740

Zak A. Dynamics of actions of reasoning and ways of solving problems of fifth-graders

Zak Anatoly
Leading Researcher, Psychological Institute
of the Russian Academy of Education, Moscow

Abstract. *The article presents a study aimed at determining changes in the nature of reasoning actions and ways of solving problems during the period of children's education in the fifth grade of basic school. At the beginning and end of the academic year, group experiments were conducted on the material of two tasks of the author's methodology " Inference ", in which 106 fifth-graders participated. It was shown that in the course of teaching in the fifth grade, meaningful actions for performing reasoning are formed in schoolchildren more intensively than a general, meaningful way of solving problems.*

Keywords: *fifth-graders, meaningful actions of reasoning, the general way of solving problems, the " Inference " technique.*

DOI 10.54092/9781447871415_29

1. Introduction.

In accordance with the provisions of the Federal State Educational Standard [4], teaching children in the fifth grade should contribute not only to the achievement of subject educational results based on the assimilation of the content of programs of specific academic disciplines, but also to the improvement of logical thinking, associated, in particular, with drawing conclusions based on the proposed judgments, as well as mastering the actions of building effective ways to solve educational and search problems of non-educational content.

In understanding the effectiveness of ways to solve problems of a search nature, and in assessing the ability to build logical reasoning, inference and draw conclusions, we relied on the provisions on two types of cognitive activity developed in dialectical logic and implemented in the studies of V.V. Davydov [2] and the works his followers (see, for example, [1, 3]).

According to these provisions, a person who cognizes the surrounding reality can be aimed both at reflecting the internal connections and relations of objects and phenomena, thereby realizing theoretical, meaningful, reasonable knowledge, and at reflecting their external connections and relations, thus realizing way, empirical, formal, rational knowledge.

The first case is characterized by the effectiveness of cognitive activity, because its result is associated with the identification of the causes underlying the changes in the object being cognized, which is the basis for the development of the corresponding pattern. The second case is characterized by insufficient efficiency of cognitive activity, because its result is associated only with the description and classification of externally presented characteristics of changes in objects of knowledge. Such a result does not allow revealing the reasons for the change of a cognizable object and reliably characterizing the patterns of its existence in the past, present and future.

Based on the above provisions on the content and methods of different types of cognition, an understanding of the features of solving logical problems and methods for solving search problems was developed. In accordance with this understanding, the development of methods for solving problems in one case is associated with the allocation of significant data relationships contained in their conditions, in the other case, the disclosure of significant data relationships that are objectively contained in the conditions of the problems being solved does not occur.

The development of a solution method associated with the identification of significant relations is implemented as a meaningful action, the result of which is a general method of solving problems, and the development of a solution method not associated with the allocation of significant relations is implemented as a formal action, the result of which is a particular method of solving problems.

When developing criteria and indicators for the formation of skills in building logical reasoning and inference, the basis was the fact that in one case, deriving a conclusion from the proposed judgments is based on highlighting their true relationships, in the other case, deriving a conclusion from the proposed judgments is based on highlighting their false relationships. .

Highlighting the true relations of the proposed judgments creates favorable conditions for demonstrating a consistently realized inference, highlighting the false relations of judgments creates conditions for the emergence of contradictions in the execution of the conclusion. In the first case, the construction of reasoning is implemented as a meaningful action, in the second case, as a formal action.

2.Materials and methods.

The purpose of this study was to determine the features of improving logical thinking and mastering the actions of building effective ways to solve problems of educational and non-educational content when teaching in the fifth grade.

The study was based on the assumption, based on preliminary experiments (Zak, 2004), that the improvement of logical thinking and actions of constructing effective ways of solving problems occurs with different intensity: the ability to carry out a consistent derivation of a conclusion from the proposed judgments is mastered more intensively, actions are mastered less intensively. associated with the implementation of effective ways to solve problems of various content (educational and non-educational). .

2.1. Method " Inference "

A diagnostic group lesson with fifth grade students was conducted on the material of the "Inference" methodology, which included two tasks: "Reasoning" (task No. 1) and "Permutations" (task No. 2).

TASK 1

Training problems

1) Vera and Nadia studied in different classes: someone in the fifth grade, someone in the sixth grade. What grade was Vera in if Nadya was not in the fifth grade?

2) Misha, Igor and Oleg watched documentaries: someone about sports, someone about animals, someone about space. What did Igor watch if Oleg did not watch a film about animals, and Misha did not watch a film about space and animals?

Main problems

1. Two girls were in jackets, and one was in a coat. What was Nadia wearingif Masha and Katya and Katya and Nadia were dressed differently?

2. Two girls embroidered: one with red and green threads, the other with blue and yellow. What threads did Natasha have if Olga did not embroider with blue threads?

3. Four days in May there was different weather: 2, 4, 7 and 8. On one day it was cold and rainy, on the other it was warm and dry, on the third it was warm and rainy, on May 4 it snowed. On May 2 and 7 it was warm, on May 2 and 8 it was rainy. Which day was dry and warm?

4. Yura is stronger than Viti. Borya is weaker than Yura. Yura is weaker than Vasya. Who is the strongest?

TASK 2

Training problems

1) In the word "LADA" the consonants were reversed. What word came out?

2) In the word "BALE" the vowels were reversed. What word came out?

3) In the word "CULINAR" the third and fifth letters were swapped. What word came out?

Main problems

1. In the word "BALD" the letters were rearranged and the word "ABDL" was obtained. The same permutation was made in the word "GAIN". What word came out?

2. In the word "CANDY" the letters were rearranged and the word "ACDNY" was obtained. The same permutation was made in the word "FRONT". What word came out?

3. In the word "DEMAND" the letters were rearranged and the word "EDAMDN" was obtained. The same permutation was made in the word "GREEDY". What word came out?

4. In the word “FORBADE” the letters were rearranged and the word “OFBRDAE”. The same permutation was made in the word "JOURNAL". What word came out?

* * *

After handing out the worksheets with tasks and blank sheets for recording answers, the students were told: “Look at the task sheet. In the first task, you first need to solve two training problems, then four main ones. In the second task, you first need to solve three training problems, then four main ones.

Further, the children are recommended: “For the correct solution of any problem, you must first read it silently (“to yourself”) several times so as not to disturb your neighbors, then you need to think (also silently) and then, when the solution is clear, you should write the word "Task 1" at the very top. Next, under this heading, you need to write the numbers of training problems (1 and 2) and next to them the answers. Then also write the numbers of the main tasks with answers. After that, you need to write the word "Task 2" and then under this heading, as in task 1, you need to write the numbers of training problems with answers and the numbers of the main problems with answers.

Solve problems only mentally, “in your mind”, you cannot make any notes on the forms with tasks and on the sheets for recording answers. Act carefully and independently”.

In the “Inference” technique, each of the two tasks has a special meaning.

Task 1 is intended to determine the degree of mastering the logical actions of constructing reasoning when solving problems in a verbal-sign form. Children are offered four main tasks, made up of judgments of different types: in the first and third tasks, affirmative attributive judgments are used, in the second task, negative attributive judgments, in the fourth task, asymmetric relational judgments.

To determine the characteristics of improving logical thinking associated with deriving a conclusion from the proposed judgments, one must proceed from the following provisions.

If all the main problems are solved incorrectly, then there is a manifestation of the zero level of mastering the actions of logical thinking associated with the construction of reasoning when solving problems in a verbal-sign form; if any one task is correctly solved, then the manifestation of the first level takes place; if any two tasks, then the manifestation of the second level takes place; if any three tasks, then the manifestation of the third level takes place; if all four tasks, then the manifestation takes place fourth level.

It should be noted that the last level characterizes a meaningful approach to the construction of reasoning, and the first, second and third levels characterize, respectively, the first, second and third degree of formation of a formal approach to the construction of reasoning. The zero level indicates the absence of both a formal and, moreover, a meaningful approach to the construction of reasoning.

Task 2 is intended to determine the characteristics of actions related to the construction of an effective method for solving problems of a search nature when solving combinatorial problems "for permutation" in a verbal-sign form. The children had to solve four main tasks, which are built on a single principle.

If the child has solved all four tasks correctly, then in this case it is assumed that the decision is based on the identification of essential relationships that underlie the single principle of solution. This means that the solution was carried out in a general way. Therefore, we can conclude that the actions related to the construction of a method for solving problems of a search nature are relatively mastered. At the same time, a meaningful analysis of the conditions of the problems took place.

If the child did not solve all four problems correctly, but successfully coped with any three, two or one of the four problems, then in this case it is assumed that the decision is not based on the identification of essential relationships that underlie the single principle of solution. This means that the decision was carried out in a partial way. Therefore, we can conclude that the actions associated with the construction of a method for solving problems of a search nature are not sufficiently mastered. At the same time, a formal analysis of their conditions took place.

If the child solved all four tasks incorrectly, then in this case it is considered that there was no construction of a method for solving problems.

3.Results.

Group experiments were carried out on the material of the " Inference " method at the beginning of the academic year (September) and at the end (May). These experiments involved 106 fifth grade students.

3.1. Improving logical thinking

The results of the first task, designed to determine the characteristics of improving logical thinking associated with the actions of constructing reasoning when solving problems in verbal-sign form, are presented in table 1.

Table 1. Distribution among pupils of the fifth grade of children who showed the zero, first, second, third and fourth levels of mastering the actions of logical thinking during the first task (in %).

Table 1

Distribution among pupils of the fifth grade of children who showed the zero, first, second, third and fourth levels of mastering the actions of logical thinking during the first task (in %).

Period diagnostics	Levels of mastering the actions of logical thinking				
	Fourth твертый	Third	Second	First	Zero
September	18,9	19,8	33,9	17,9	9,5
May	34,9	32,1	19,8	8,5	4,7

The data given in Table 1 testify to a number of important characteristics of the improvement of logical thinking associated with the actions of constructing reasoning during the period of schoolchildren's education in the fifth grade.

Firstly, at the beginning of the school year, among the fifth graders, the most numerous group of children with the second level of mastering the actions of logical thinking is 33.9% of the entire contingent of children of this age participating in the study, which is 16.1% less than half of this contingent.

It is also important to note that the total number of three groups with significantly lower levels of mastering the actions of logical thinking (i.e. with the second, first and zero) is 61.3%, which exceeds the total number of children with the third (19.8%) and fourth (18.9%) levels – 38.7%.

Secondly, at the end of the academic year, compared to the beginning of the academic year, the ratio of the five groups changed. Thus, the most numerous was the group of children with the fourth level of mastering the actions of logical thinking – 34.9%. In this regard, the ratio of the total number of three groups with lower levels of mastering the actions of logical thinking (i.e., with the second, first and zero levels) and the total number of two groups of children with higher levels of mastering logical thinking (i.e. with the third and fourth levels), respectively: 33.0% and 67.0%.

It can be said, therefore, that teaching in the fifth grade made it possible to significantly increase the number of children with higher levels of mastering the actions of logical thinking: from 38.7% to 67.0% and, accordingly, reduce the number of children with lower levels of mastering the actions of logical thinking. thinking: from 61.3% to 33.0%.

It should be specially noted that the most noticeable changes occurred in the group of children with the highest (fourth) level of mastering the actions of logical thinking, which, unlike the other levels, is characterized by the performance of meaningful actions of logical thinking.

3.2. Mastering the actions of constructing methods for solving problems

The results of the second task, designed to determine, as noted, the characteristics of actions related to the construction of an effective method for solving problems of a search nature when solving combinatorial problems "for permutation" in a verbal-sign form, are presented in Table 2.

Table 2

Distribution among pupils of the fifth grade of children who solved problems in a general way, in a partial way and did not solve a single problem (in %)

Period diagnostics	Problem solving		
	General way	Partial way	Absence solutions
September	51,9	43,4	4,7
May	58,5	38,7	2,8

The data presented in Table 2 testify to a number of important characteristics of actions related to the construction of an effective method for solving search problems.

First, at the beginning of the school year, the most numerous group of fifth-graders consisted of children who solved problems in a general way. The number of this group is 51.9%. The rest of the "half" of the fifth graders participating in the experiments discussed were children who solved

problems in a partial way and children who did not solve the proposed problems – 48.1%. At the same time, the number of children who solved problems in a partial way (39.4%) was 68.5% of the number of children who solved problems in a general way.

Secondly, at the end of the school year, as compared to the beginning of the school year, the ratio of the number of the three groups of students under consideration changed. Thus, children who solved problems in a partial way and children who did not solve problems together made up not 48.1%, but 41.5%. Children who solved problems in a general way still (as in September) made up the largest group – 58.5%.

The above data indicate, in our opinion, that education in the fifth grade had the greatest impact on the increase in the number of children who solved problems in a general way, from 51.9% in September to 58.5% in May. At the same time, the number of children who solved problems partialy decreased by a smaller amount, from 43.4% in September to 38.7% in May. The number of children who did not solve problems decreased even less, from 4.7% in September to 2.8% in May.

3.3. Comparison of the dynamics of improving logical thinking and mastering the actions of constructing methods for solving problems

So, above we have considered the data characterizing at the beginning (September) and at the end (May) of teaching in the fifth grade the features of different levels of logical actions associated with deriving a conclusion from the proposed judgments, and different implementation of constructive actions related to the construction of methods for solving problems.

Now, firstly, only those data will be considered that reflect the number of schoolchildren who have shown the fourth level of formation of logical thinking actions, associated with mastering the ability to build logical reasoning and inference. Thus, we are talking about schoolchildren who, when solving the four main tasks proposed in the first task, carried out a meaningful logical action to perform a consistent conclusion from the proposed judgments of various types: attributive and relational (see Table 3).

Secondly, data will be considered that reflect the highest level of mastering the actions associated with the choice and implementation by schoolchildren of effective methods for solving problems of a search nature, educational and cognitive tasks. Thus, we are talking about schoolchildren who, when solving the four main tasks proposed in the second task, built a general (meaningful) method for solving them (see Table 3).

Table 3

Distribution of children who carried out a meaningful construction of reasoning and built a general method for solving search problems (in %).

Period diagnostics	Meaningful actions of logical thinking	General way of solution problems
Сентябрь	18,9**	51,9
Май	34,9**	58,5

Note: **p<0.01.

The data in the table shows the following characteristics improving logical thinking and mastering the actions of building ways to solve problems when teaching children in the fifth grade.

First, at the beginning of education in the fifth grade, the number of children who acted when solving the logical problems of task 1 in a meaningful way (18.0%) is less than the number of children who acted when solving problems of task 2 in a general way (51.9%).

Secondly, at the end of education in the fifth grade, the number of children who acted when solving the logical problems of task 1 meaningfully (34.9%), as well as (as at the beginning of training) is less than the number of children who acted when solving problems of task 2 in a general way. way (58.5%).

Comparison of the noted changes during the school year in the number of children who acted meaningfully when solving logical problems and solved problems in a general way allows us to conclude that teaching in the fifth grade provides children with a more intensive mastery of the meaningful actions of logical thinking compared to mastering actions related to construction of a general method for solving problems. Thus, the difference between 18.9% and 34.9% is statistically significant (at p<0.01), and the difference between 51.9% and 56.5% is statistically insignificant.

4. Conclusion.

The study, as noted, was aimed at determining the features of improving logical thinking and mastering the actions of building effective ways to solve problems of educational and non-educational content when teaching in the fifth grade.

The obtained results testify to the confirmation of the original hypothesis that mastering the actions of logical thinking associated with the implementation of consistent reasoning is characterized by more intense positive dynamics than mastering the actions associated with the construction of effective methods for solving problems.

The study showed for the first time that as a result of primary school education, the use of meaningful actions of logical thinking in solving logical problems takes place in a smaller number of

children than the use of constructive actions related to the construction of a general way of solving problems.

The discovered facts make it possible to more concretely imagine the nature of positive changes in mastering the meaningful actions of logical thinking and in mastering the constructive actions of constructing effective ways of solving problems during the period of children's education in the fifth grade of basic school.

The obtained data expand the ideas of developmental and educational psychology about the intellectual capabilities of children at the beginning of their education in secondary school (fifth grade).

In further research, it is planned to conduct group experiments with sixth grade students in order to characterize the dynamics of children's mastery of meaningful actions of logical thinking and their mastery of actions to build effective ways to solve problems.

References

1. Maksimov L.K. (1987). Formation of mathematical thinking in younger students. Moscow: MOPU. (In Russian).
2. Davydov V.V. (2005). Lectures on general psychology. Moscow: Academy, 2005.
3. Zak A. Z. (2007). Diagnostics of differences in the thinking of younger schoolchildren. Moscow: Genesis. (In Russian).
4. Federal State Educational Standard for Basic General Education. (2017). Moscow: Enlightenment. (In Russian).

Scientific edition

International Research Conference on Technology, Science, Engineering & Management (Seattle, USA)

Conference Proceedings

January 25th, 2023

Please address for questions and comments on the publications as well as suggestions for cooperation to e-mail address mail@scipro.ru

Edited according to the authors' original texts

Усл. печ. л. 2.0
Оформление электронного издания: НОО
Профессиональная наука, mail@scipro.ru

Lulu Press, Inc.
627 Davis Drive
Suite 300
Morrisville, NC 27560