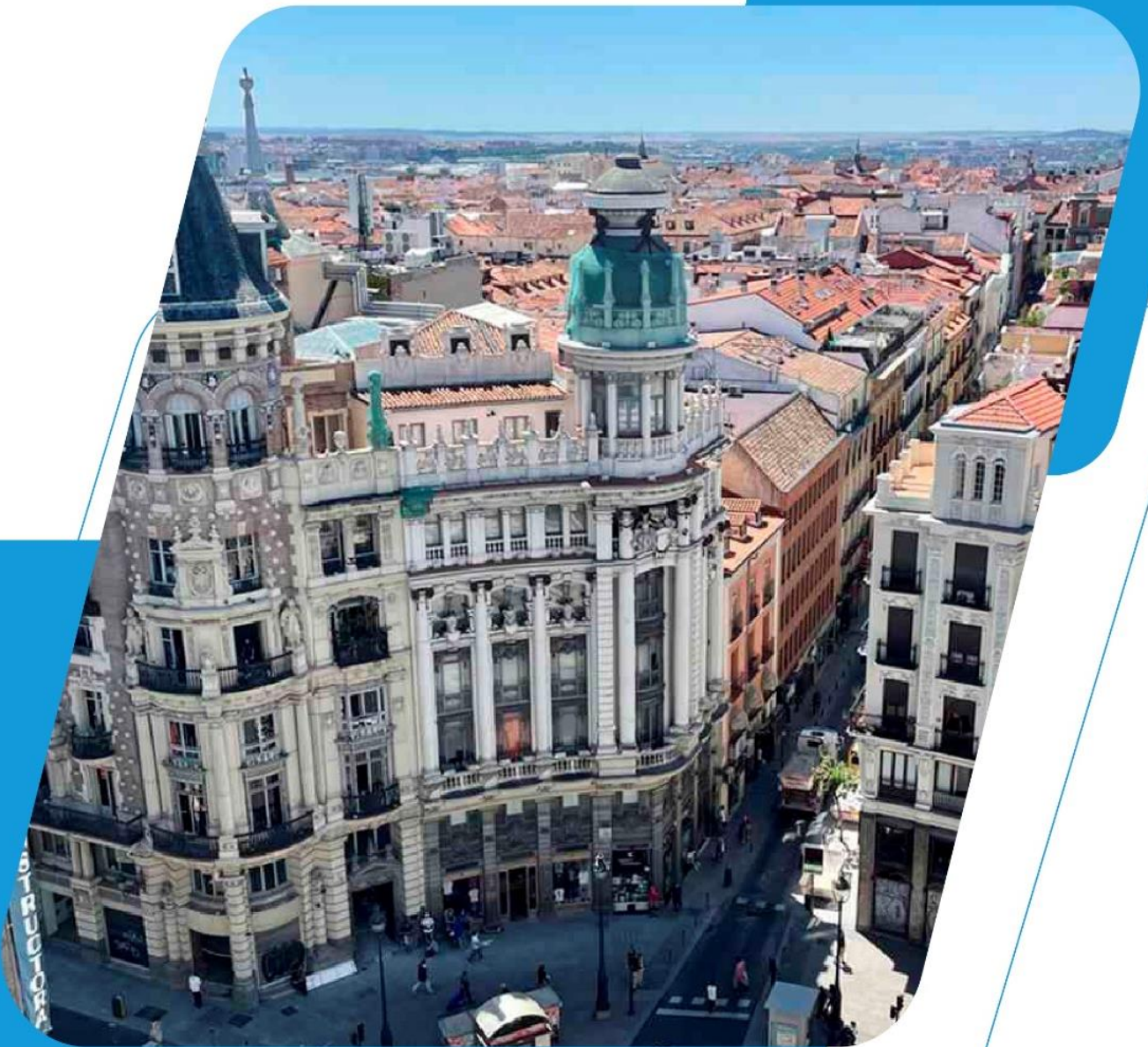




*VIII international scientific conference
Madrid, Spain
21-22.11.2023*

MODERN SCIENCE: THEORETICAL AND PRACTICAL VIEW

*Proceedings of the I International Scientific
and Practical Conference
21-22 November 2023*

MADRID. SPAIN
2023

**UDC 001.1
BBC 1**

VIII International Scientific and Practical Conference «Modern science: theoretical and practical view», November 21-22, 2023, Madrid. Spain. 98 p.

ISBN 978-91-65423-43-5

DOI <https://doi.org/10.5281/zenodo.10218395>

Publisher: «SC. Scientific conferences»

Main organization: 

Editor: Hans Muller

Layout: Ellen Schwimmer

The conference materials are in the public domain under the CC BY-NC 4.0 International license.

The publisher is not responsible for the materials published in the collection. All materials are provided in the author's edition and express the personal position of the participant of the conference.

All materials are published in the author's edition.

The conference organizers are not responsible for the content of the materials.

The sample of the citation for publication is Yusifov E.M., Niftaliyev V.R. CLUSTER AS A MODERN INSTRUMENT FOR INCREASING COMPETITIVENESS OF THE ECONOMY // VIII International Scientific and Practical Conference «Modern science: theoretical and practical view», November 21-22, 2023, Madrid. Spain. Pp.8-11, URL: <https://sconferences.com>

Contact information

Website: <https://sconferences.com>

E-mail: info@sconferences.com

Content

Agricultural sciences

- Mirzakhodjaev B.A., Mirzakhodjaev A., Akbarova F.M., Tajenova A.T., Radjabov I. B.** 4
THE EFFECT OF THE WILTING PROCESS ON THE FODDER QUALITIES OF MULBERRY LEAF (MORUS ALBA)

Cultural sciences

- Salimova A.T.** 8
CONCEPT OF WORLDVIEW STRUCTURE IN AZERBAIJANI ARCHITECTURE

Economic sciences

- Stakhov A.Y.** 14
MANAGEMENT OF THE EFFICIENCY OF ECONOMIC DEVELOPMENT IN THE MARITIME TRANSPORT INDUSTRY SYSTEM

Historical sciences

- Dragos Defta** 17
MORAL DISENGAGEMENT TECHNIQUES USED BY THE GERMAN ETHNIC GROUP IN ROMANIA. IDEOLOGICAL TRAINING PRIOR TO ASSIGNMENT TO WAFFEN-SS
- Mitru Alexandru** 24
FINANCIAL ASPECTS REGARDING THE ISSUE OF ACCESS TO EDUCATION IN ROMANIA DURING THE INTERWAR PERIOD

Jurisprudence

- Mykhailo Baimuratov, Boris Kofman** 32
CURRENT PROBLEMS OF THE FORMATION OF THE LEGAL ENTITY OF THE TERRITORIAL COMMUNITY IN UKRAINE IN THE CONTEXT OF BORROWING EUROPEAN EXPERIENCE MUNICIPAL DEMOCRACY

Medical sciences

- Vozniuk M.Y.** 42
AGE CHARACTERISTICS OF SATISFACTION OF GENERAL PRACTITIONERS WITH WORK IN PRIMARY HEALTH CARE CENTERS

Pedagogical sciences

- Abilda Sh.M., Aidarbayeva D.K.** 44
WAYS OF DEVELOPING COGNITIVE ACTIVITY OF STUDENTS IN BIOLOGY VIA GAME TECHNOLOGIES
- Abilkhanova N.M., Anessova Zh.A.** 47
WAYS OF CREATING AND IMPLEMENTING SPEECH SITUATION FOR SPEECH ACTIVIZATION IN SENIOR CLASSES
- Berdygali Gasyrbek Kuangaliuly, Bulatbayeva Kulzhanat Nurymzhanovna** 52
EFFICIENCY OF USING VIRTUAL REALITY CONTENT SELECTION FOR PROFESSIONAL ENGLISH LANGUAGE TEACHING FOR STUDENTS
- Esen L.B., Aidarbayeva D.K.** 56
WAYS OF DEVELOPING STUDENTS ' RESEARCH SKILLS IN PREPARATION FOR INTELLECTUAL –RESEARCH COMPETITIONS IN BIOLOGY
- Kateryna Kiryushina** 59
ETHICAL ADVANTAGES OF ENGLISH SLANG VOCABULARY DURING TEACHING OF STUDENTS OF PEDAGOGICAL SPECIALTIES
- Khalmatov Rustam Raufovich** 62
ADVANTAGES OF CREDIT-MODULAR TRAINING IN THE SYSTEM OF TRAINING ENGINEERS
- Kordabas Akniet Bazarbaikyzy, Zhumagulova Kalampyr Abzhapparkyzy** 64
EFFICIENCY OF USING DIFFERENTIATED LEARNING TECHNOLOGY FOR THE DEVELOPMENT OF STUDENTS' COGNITIVE INTERESTS IN BIOLOGY
- Letyagina Yana, Komleva Svetlana** 67
FEATURES OF INTERACTION BETWEEN THE COACHING STAFF OF A SPORTS SCHOOL AND PARENTS OF STUDENTS

Yermagambetov M.N., Zhaksybaev M.B. CURRENT STATE OF USING OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN TEACHING BIOLOGICAL DISCIPLINES AT THE UNIVERSITY	69
Oksikbaev B.K., Zhanbay D.N. WAYS OF IMPROVING THE METHODOLOGY FOR USING DIDACTIC MATERIALS IN THE PROCESS OF TEACHING BIOLOGY	72
Zhavlieva Aizira Tugelkyzy EFFECTIVENESS OF USING PROBLEM-BASED LEARNING IN TEACHING BIOLOGY	75

Philological sciences

Muslimova Ofelya Surkhay qizi NEW ERA ORGANIZATION OF AZERBAIJAN LITERATURE OF EMIGRATION	78
---	----

Physical education and sport

Stanislav Chernov, Vadym Refel THE DEVELOPMENT OF THE FOOTBALL IN 21 ST CENTURY	81
--	----

Technical sciences

Gasimov Ibrahim Yildirim, Huseynov Novruz Matlab, Mammadov Abulfaz Rafiq DDOS ATTACKS: TYPES OF ATTACKS AND LEVELS OF THE OSI MODEL	89
Maharramova Tamella Mustafa, Mammadli Arif Tofiq AUTOMATION OF THE PROCESS OF SEPARATION OF FUEL INTO FRACTIONS	93
Pavel Valeryevich Boikachev, Vladislav Leonovich Metelitsa, Maria Ramjedovna Sharipova MATCHING OF THE ANTENNA DEVICE OF THE CONTROL CHANNEL AND THE TRANSCEIVER MODULE OF AN UNMANNED AERIAL VEHICLE IN ICING CONDITIONS	96

Agricultural sciences

THE EFFECT OF THE WILTING PROCESS ON THE FODDER QUALITIES OF MULBERRY LEAF (MORUS ALBA)

Mirzakhodjaev B.A.

D.Sc., Scientific Secretary, Research Institute of Sericulture, Republic of Uzbekistan

Mirzakhodjaev A.

Ph. D, Head of the Laboratory of Mechanization, Research Institute of Sericulture

Akbarova F.M.

doctoral of Tashkent state agrarian university, Uzbekistan

Tajenova A.T.

doctoral of Research Institute of Sericulture

Radjabov I. B.

doctoral of Research Institute of Sericulture

ВЛИЯНИЕ ПРОЦЕССА УВЯДАНИЯ НА КОРМОВЫЕ КАЧЕСТВА ЛИСТА ШЕЛКОВИЦЫ (MORUS ALBA)

Мирзаходжаев Б. А.

д.т.н., ученый секретарь, Научно-исследовательского института шелководства, Узбекистан, Ташкент

Мирзаходжаев А.

к.т.н., зав. лабораторией

Научно-исследовательского института шелководства Узбекистан, Ташкент

Акбарова Ф.М.

докторант Ташкентского Государственного аграрного университета, Узбекистан

Тадженова А. Т.

докторант Научно-исследовательского института шелководства, Узбекистан, Ташкент

Раджабов И. Б.

докторант Научно-исследовательского института шелководства, Узбекистан, Ташкент

Введение

Влажность является одним из существенных экологических факторов, влияющих на жизнедеятельность насекомых. Недостаток воды уменьшает интенсивность процессов обмена и синтеза в молодом организме и тем самым резко снижает скорость роста или даже приостанавливает его. Тканевая вода имеет большое значение для процессов деления клеток. В сочетании с температурой влажность может оказывать непосредственное влияние на все стадии развития насекомого, начиная с яйца и кончая имаго. Шелководы отдают предпочтение сортам шелковицы, лист которых мало увядает при заготовке, перевозке и хранении.

Методика

Чтобы установить влияние увядания на кормовые качества листа шелковицы, мы проводили специальные опыты, задавая гусеницам листья двух сортов в свежем и увядшем состоянии. Выкормка проводилась в лаборатории механизации шелководства Научно-исследовательского института шелководства весной и осенью 2023г. Испытывали верхние молодые листья с ростовых побегов шелковицы распространённого сорта Хасак и нового сорта Джар-Арык 8 в двух вариантах:

1) свежим листом (контроль); лист заготавливали ежедневно утром, отвешивали суточную норму и хранили ее от первой до последней покормки (0—2 час.) в ящиках, накрытых влажной мешковиной.

2) увядшим листом; корм заготавливали и взвешивали, хранили 12 часов в ящиках, накрытых сухой мешковиной, и скармливали гусеницам в течение вторых суток (хранение 12-24 час.).

Один опыт провели весной с гусеницами V возраста породы Линия 28 в пятикратной повторности по 50 гусениц-самок в каждой при средней температуре воздуха в червоводне 25,1°С, влажности 71,2%; другой — осенью с гусеницами породы Линия 27 в трехкратной повторности по 100 гусениц (50 самок и 50 самцов). Температура 28,4°, влажность 61,5%.

Результаты исследования

Свежие листья шелковицы сорта Хасак содержали в среднем 72,2% воды весной и 64,2 — осенью; потеря воды при хранении составила у них в 1-м варианте в среднем соответственно 2,2 и 4,4%, а во 2-ом — 21,7—22,3. У листьев сорта Джар-Арык 8 было в свежем виде весной и осенью на 1,6% больше воды, и потери ее при хранении значительно меньше: в 1-ом варианте 1,4—1,6%, во 2-ом — 14,8—13,2.

Из таблицы 1 видно, что при скормливания гусеницам листа в свежем или слегка увядшем состоянии (1-й вариант) его кормовое достоинство для обоих сортов оказалось весной и осенью примерно одинаковым. Это обусловлено тем, что при заданной в опытах обильной норме кормления (примерно 2 кг листа на 100 гусениц) гусеницы поедали высокопитательный лист шелковицы сорта Джар-Арык в большем количестве, чем менее питательный лист сорта Хасак.

Таблица 1

Кормовое достоинство листа шелковицы при выкормке гусениц шелкопряда.

Показатель	Весенняя выкормка листом шелковицы				Осенняя выкормка листом шелковицы			
	свежим		увядшим		свежим		увядшим	
	сорт Хасак	сорт Джар-Арык 8	сорт Хасак	сорт Джар-Арык 8	сорт Хасак	сорт Джар-Арык 8	сорт Хасак	сорт Джар-Арык 8
Задано листа на 100 гусениц, г (в расчете на свежий лист)	2080	2080	2080	2080	2030	2000	2050	2000
Урожай шелка-сырца с 1 кг заданного листа, г	7,20	7,12	5,40	6,68	6,49	6,32	4,60	5,64
%	100,0	98,9	100,0	123,7	100,0	97,4	100,0	122,6
с 1 кг съеденного листа, г	11,56	10,37	9,42	10,10	12,90	10,15	11,30	10,13
%	100,0	89,7	100,0	107,2	100,0	78,7	100,0	89,6
Поедаемость листа, %	62,2	68,7	57,5	66,1	50,3	62,2	41,2	55,8
в % к контролю	100,0	110,5	100,0	114,9	100,0	123,7	100,0	135,4
Средний вес сырого кокона, г	1,70	1,56	1,48	1,49	1,38	1,32	1,20	1,19
Гибель гусениц, %	24,4	11,9	26,0	11,0	19,1	15,1	24,5	18,7
Количество коконов-брак, %	14,2	13,2	21,7	12,7	11,6	10,0	20,6	6,2
Выход шелка-сырца, %	13,59	12,40	13,12	12,00	13,34	12,55	13,06	12,42
Поступило в организм 100 гусениц сухого вещества, г	399	417	369	401	368	425	304	382
воды, г	859	987	649	828	626	793	429	638

При скормливания увядшего листа (2-й вариант) ухудшились отдельные показатели: жизнеспособность гусениц, средний вес кокона, процент коконов-брак, выход шелка-сырца, а также количество шелка-сырца с веса заданного и съеденного листа, процент поедания листа, характеризующие его кормовое достоинство — питательность и съедобность. Однако длительное хранение менее отразилось на кормовых качествах листа сорта Грузия, чем сорта Хасак. Урожай шелка-сырца с 1 кг заданного листа при кормлении увядшим листом сорта Джар-

Арык 8 снизился по сравнению с контролем весной на 6,8% и осенью на 10,3%, а при кормлении увядшим листом шелковицы сорта Хасак—соответственно на 26,0% и 29,1%, т. е. в 3—4 раза больше.

Съедобность листа сорта Джар-Арык 8 снизилась при неблагоприятных условиях хранения весной на 3,8% и осенью на 10,3%, а сорта Хасак — на 7,6% и 18,1%. Ценная особенность листа сорта Джар-Арык 8 — высокая съедобность его мякоти. Данные о поедаемости листа в процентах свидетельствуют о том, что мякоть листа этого сорта высоко съедобна даже после его длительного хранения. Следовательно, этот сорт обладает более благоприятными физическими свойствами и анатомическим строением, чем сорт Хасак.

Изменения влажность листа шелковицы изучаемых сортов от времени хранения приведена в таблице 2

Таблица 2

Влажность листа шелковицы изучаемых сортов

Части листа шелковицы	Свежий лист сорта		Увядший лист сорта	
	Хасак	Джар-Арык 8	Хасак	Джар-Арык 8
Мякоть	73,0	87,0	67,2	83,2
Жилки 1—2 мм	70,7	74,5	71,7	69,7
Жилки > 2 мм	—	42,0	—	50,8
Черешки	42,9	0,0	35,3	0,0
Итого	70,7	78,2	65,4	75,2

Значительной водоудерживающей способностью листа сорта Джар-Арык 8 обусловлено, по-видимому, и то, что его питательность при длительном хранении в неблагоприятных условиях почти не уменьшилась, тогда как у листа сорта Хасак при тех же условиях снизилась весной на 18,5% и осенью на 12,4%.

Уменьшение урожая шелка-сырца с веса съеденного листа, свидетельствующее о серьезном нарушении жизненных отправлений шелкопряда, могло быть обусловлено, помимо прочего, недостаточным поступлением воды в организм.

Выводы

В итоге лист сорта Джар-Арык 8 при длительном хранении превзошел лист сорта Хасак по кормовому достоинству весной на 23,7% и осенью на 22,6%, а по съедобности соответственно на 14,9 и 35,4. Даже по питательности он оказался весной на 7,2% лучше и лишь осенью уступил сорту Хасак на 10,6%.

Данные заставляют пересмотреть распространенное в научных кругах мнение о хороших кормовых качествах листа шелковицы сорта Хасак, у которого из-за плохих физических свойств наступает быстрое увядание и кормовые качества резко ухудшаются при заготовке, перевозке и хранении. Поэтому в практическом шелководстве более ценными являются сорта шелковицы с медленно увядающим листом.

Таким образом, оценка качества листа разных сортов шелковицы в большей мере зависит от условий испытания. Чтобы разная быстрота увядания отражалась на оценке сортов, необходимо хранить лист для кормоиспытательных выкормок в менее благоприятных или даже провокационных условиях.

Учитывая, что медленное увядание листа — весьма ценный хозяйственный признак шелковицы, следует при выведении новых сортов уделять этому признаку значительно больше внимания, чем это имело место до сих пор.

Литература

1. Mikhailov E.N., Sericulture, Selkhozgiz, M. 1960.
2. Gulamova L.M., The influence of the water content in the body of the silkworm; on the determination of its productivity, Abstract. cand. dis., Tashkent. 1954.
3. Nynome J. and Jawata J., Water-evaporation in Silkowrms (*Bombyx mori* L.), Buil. Fac. Text. Fibers Kyoto Univ. Industr. Arts and Text. Fibers, 1954—1955, 1, 2.
4. Wang Ju-len and Gong Li-quan, The effect of air humidity and the amount of moisture contained in the mulberry leaf on the physiology of the silkworm, . San si tong bao, 1958. vol. 4, No. 1.
5. Fraisse R., Etudes de quelques aspects de l'alimentation de la croissance et de le secretion de la sole chez *Bombyx mori* L. Variations des caracteres du cocoon et cu fii de sole, Bull. Inst. text. France, 1958, p.76.

6. Liaw, G, J, Hsieh, F, K and Chu Y-1 Effectiveness of artificial diets prepared from different varieties and maturity leaves on development of Silkworm *Bombyx mori* L., China J. Entomol. 1991; 11: 260-263.
7. Rajan, R.K. and Himantharaj, M. T. A Text Book on Silkworm Rearing Technology. 2005; Published by Central Silk Board.
8. Vage, M.N., and Ashoka, J. Effect of tender shoot feeding on silkworm technological parameters of silkworm, *Bombyx mori* L. Sericologia 2000 ;40: 79-89
9. Rahamathulla, V, K., Raj, T., Himanthraj, M, T., Vindya, G, S. and Geetha Devi, R, G. Effect of feeding different maturity leaves and intermixing of the leaves on the commercial characters of Bivoltine Hybrid Silkworm (*Bombyx mori* L.), International Journal of Industrial Entomology. 2003: 6 (1): 15-19.

Cultural sciences

CONCEPT OF WORLDVIEW STRUCTURE IN AZERBAIJANI ARCHITECTURE

Salimova A.T.
dosent AzUAC, PhD

ПРЕДСТАВЛЕНИЯ О СТРУКТУРЕ МИРОЗДАНИЯ В ЖИЛИЩЕ АЗЕРБАЙДЖАНА

Салимова А.Т.
PhD., доцент АЗАСУ

Abstract

Traditional types and forms of housing in Azerbaijan have evolved over the centuries. The first dwellings were determined not only by natural geographical conditions, but also corresponded to the concepts of the world order and were oriented towards the cosmologization of the surrounding world. Residential buildings, combining primitive ideas about the structure of the world and residential functions, initially served as unique fire sanctuaries and places of worship for ancestors. Subsequently, we see their expression in the compositional construction of buildings, and in folk legends and customs that have reached us.

Аннотация

Традиционные типы и формы жилища в Азербайджане складывались на протяжении веков. Первые жилища были обусловлены не только естественно-географическими условиями, но и соответствовали понятиям мироустройства, были ориентированы на космологизированность окружающего мира. Жилые постройки соединив в себе первобытные представления об устройстве мира и жилые функции, первоначально служили своеобразными святилищами огня и местом отправления культов предков. Впоследствии мы видим их выражение в композиционном построении сооружений, и дошедших до нас народных преданий и обычаев.

Keywords: home, Azerbaijan, structure of the world, hearth, horns, altar.

Ключевые слова: жилище, Азербайджан, устройство мира, очаг, рога, алтарь

Традиционные типы и формы поселения в Азербайджане складывались на протяжении веков. Первые жилища были обусловлены не только естественно-географическими условиями, но и соответствовали понятиям мироустройства, были ориентированы на космологизированность окружающего мира. Климат и богатая природа на территории Азербайджана создали благоприятные условия для обоснования на плодородной земле первобытных племен. Обнаружено большое количество обитаемых пещер - среди которых можно назвать Азых, Таглар, Гобустан, Газма, Авейдаг [3, с. 15]. Среди искусственных пещер можно назвать юго-восточное и северо-восточное подножия Большого и Малого Кавказа, Талышских гор (Губа, Шамахи, Губадлы, Зангилян, Кяльбаджар, Лачин, Лерик) и на территории Южного Азербайджана [3, с. 23].

Следы существования простейших наземных жилищ из ветвей, опирающихся на центральный столб, обнаружены уже в эпоху нижнего палеолита [11, с. 101]. В Азербайджане, Туркмении, Башкирии, на Северном Кавказе и Украине были распространены «човустаны» [15, с. 41] — каркасно-столбовые жилища, где «пространство между столбами подпорками закрывали плетенкой из особого вида камыша, называемого «гивир». В некоторых районах Азербайджана они носили название «тапанлы-човустан» [14, с. 53]. «Човустаны», овальных в плане сооружения. Здесь можно отметить зарождение идеи «древа жизни» - одного из элементов первобытных представлений о мире и его строении, зарождение идеи. Многоступенчатость Вселенной - мифологическая модель мира, где «мировое древо», универсальный символ жизни и мира, объединяющий все сферы мироздания, который символически воплощается в виде древа.

Особого внимания требует рассмотрение особенностей архитектуры поселений эпохи оседлого землевладельческо-скотоводческого общества, развивавшегося на протяжении с VI по I тысяч до н.э. (Кюль-тепе, V-IV тысяч до н.э., Нахичевань; Шому-тепе, VI-V тысяч до н.э.,

Казахский р-н). Циклопические сооружения представляли собой жилые и ритуальные, круглые в плане постройки с отверстием в купольном перекрытии и прямоугольные, надземного и полуземляночного типа с центральными опорными столбами, плоскошатровой или типа «дарбази» крыши [6, с.14]. Анализ и исследование культуры древних поселений выявили элементы культов, распространенных в этот период - огня, матери, охранявшей домашний очаг, бывшей символом изобилия и плодородия, луны и сил природы [6, с.146-147].

Археологические исследования на территории Азербайджана начались давно, и именно здесь, впервые во всем Восточном Закавказье были обнаружены основные памятники эпохи неолита и халколита (Кюльтепе, Шомутепе, Шулавер, Аликемектепеси и Лейлатепе). Древние поселения эпохи оседлого землевладельческо-скотоводческого общества, развивавшегося на протяжении с VI по I тыс. до н.э. на территории Азербайджана (Кюльтепе, V-IV тыс. до н.э., Нахичевань; Шому-тепе, VI-V тыс. до н.э., Казахский р-н) — напоминают изображения на петроглифах Гобустана и Гямыга.

Древнее поселение Кюльтепе I расположено недалеко от города Нахичевань, занимает площадь около 1,5 га. [1, с.82-83]. Здесь были выявлены 4 культурных слоя толщиной 22,2 м. [1, с. 9-13]: где самым низким культурным слоем является энеолитический (V-IV тыс. н.э.), над ним – слой ранней бронзы (III тыс. н. э), 3-й – слой середина и конец бронзового века (II тыс. н. э), последний – верхний слой представлен ранним железным веком (начало 1 тыс. до н.э) [4, с. 31].

В Кюльтепе I в круглых жилых постройках (диаметр от 3,5 м до 13 м) в центре обнаружены мангалы, врытые в пол или прямоугольные глиняные печи у стены [2, с.26].

Древние поселения в I-III строительных слоях, относящиеся к кура-аракской культуре были круглоплановые. Дом под №28, относящийся к III строительному слою, был круглоплановый (диам. 5,5 м), а северо-восточная часть была соединена со стеной прямоугольного дома. Расположенный в южной части очаг был куполообразной формы (дл. 1,34 м., шир. 0,78 м., выс. 0,18 м. [1, с.82-83]. На Кюльтепе I иногда к круглым домам были пристроены прямоугольные хозяйственные помещения обычно небольших размеров — от 9 до 20 кв. м [2, с.25]. Относящиеся к IV-IX слою строительные остатки были в основном в форме круга и в некоторых случаях соединялись с остатками прямоугольных стен. Внутри жилищ были обнаружены культовые подковообразные очаги [1, с.82-83]. В верхних XI-XIV строительных слоях, относящиеся к кура-аракской культуре, дома были круглоплановыми и прямоугольными. Диаметр дома №2 в XIII строительном слое Кюльтепе I (VII-I тыс. до н.э) составлял 13 м. (выс. 0,8-1,2 м), [1, с.82-83]. В центре жилища были обнаружены очаги круглой формы [1, с.82-83].

Рассматривая особенности жилища круглого плана, Х.А. Амирханов отмечает, что характерность этого типа характерна для «начальной стадии домостроения» древнейших культур Ближнего Востока [5, с. 106]: так жилища Натифийской культуры (Палестина, Ливан), 9551 г. до н.э., представляют собой дом с конической кровлей и центральным столбом; Зави Чами Шанидар (Загрос, Северный Ирак), 8900-9200 лет до н.э. — жилища с овальным или круглым планом.

Рассматривая особенности поселений эпохи оседлого землевладельческо-скотоводческого общества (Кюльтепе, V-IV тыс. до н.э., Нахичевань; Шому-тепе, VI-V тыс. до н.э., Казахский р-н) можно сделать следующие выводы: циклопические сооружения представляли собой жилые и ритуальные, круглые в плане постройки с отверстием в купольном перекрытии и прямоугольные, надземного и полуземляночного типа с центральными опорными столбами, плоскошатровой или типа «дарбази» крыши. Анализ и исследование древних поселений выявили элементы культов, распространенных в этот период - огня, матери, охранявшей домашний очаг, бывшей символом изобилия и плодородия, луны и сил природы [6, с. 146].

Можно говорить о едином эволюционном процессе жилища: развитии от круглопланового до прямоугольного. Этот процесс прослеживается на памятниках Азербайджана: где энеолитические памятники Шому-тепе (конец VI-V-IV тыс. до н.э.) представляют собой овальные постройки из кирпича-сырца, в поселении Кюльтепе в позднем энеолите наряду с постройками круглого плана — мы видим примыкающие к ним прямоугольные постройки, хотя и хозяйственного назначения, и, в поселениях принадлежащих к кура-аракской культуре в III тыс. до н.э. несмотря на явное преобладание построек круглого плана есть прямоугольные. На многослойном поселении Кюльтепе можно проследить все этапы развития жилищ, зарождение новой балочной конструкции перекрытия со светодымовым отверстием с опиранием на отдельно установленный внутренний столб.

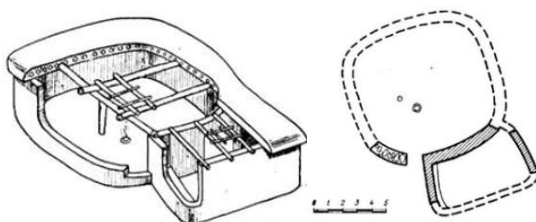
В планировке некоторых поселений наблюдается сочетание круглых и прямоугольных

построек, причем нередко последние выступают как подсобные сооружения, пристроенные к основным (жилым) — круглым постройкам. Кругло-плановые постройки из кирпича были выявлены на поселении Шомутепе (Астаринский р-н, VI-IV тыс. до н.э.), прямоугольные - в поселении Тойретепе (Казахский р-н), землянки в Баба-Дервиш (IV-III тыс. до н.э.). Прямоугольные с округленными углами жилища Мингечаурского поселения представляли собой большие вытянутые дома полуземляночного типа (дл. от 8 до 14 м, шир. от 4 до 8 м). Нижняя часть жилищ была углублена в землю. Стены поддерживались с помощью столбов.

Археологические исследования позволяют утверждать, что подобная эволюция жилища Азербайджана происходила в V-IV тыс. до н.э. параллельно с Месопотамией и Передней Азией [15, с.24]. Проблемы формирования и расселения оседлых земледельческо-скотоводческих культур на Ближнем Востоке, Кавказе и в Закавказье («неолитическая революция»), сегодня одно из актуальных научных направлений. Поселения (Кюльтепе II, Овчулартепеси, I Махта Кюльтепеси, Шомутепе, Мейнетепе, Каракёпектепе, Бабадервиш, Арапенгидже, Халадж, некрополей Дизе, Карабулаг, Пловдаг и Хорны и др.) наглядно иллюстрируют картину непрерывного процесса урбанизации с местными и постоянными признаками: **прослеживается семантическая связь обществ периода энеолита и раннего бронзового века (образцы керамики, архитектурные сооружения, украшения, орудия труда и религиозные убеждения)** [15, с.178]. Поселения Азербайджана эпохи мезолита, неолита и энеолита позволяют вплотную подойти к проблеме истоков производящего хозяйства и говорить о том, что территория входила в ближневосточный ареал первоначального становления и развития скотоводства.

Изучение древнейшей архитектуры в Закавказье и смежных областях показывает, что круглоплановое домостроительство прекращается здесь после эпохи ранней бронзы. На ряде поселений куро-аракской культуры можно наблюдать, как круглые дома (в нижних горизонтах) заменяются четырехугольными (в верхних слоях). Исследование показывает, что в V-IV тыс. до н.э. в Азербайджане уже существовали архаичные формы карадамов с деревянно-ступенчатым сводом без столбов или с одним внутренним.

Далее, при переходе к закругленному плану в V-IV тыс. до н.э. в структуре жилища появился центральный столб (смещение от центра 1,5) [там же]. Необходимость в такой опоре возникла при увеличении диаметра жилого дома. Так, в Кюль-Тепе разница в диаметре домов составляла от 3,5 до 13 м.



Карадам в Кюль-тепе. по Мехтиева [15]

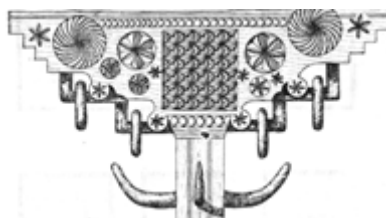
Можно предположить, что подобное жилище совмещало жилые и ритуальные функции, где очаг выступал в роли алтаря, свето-дымовое отверстие над очагом — как связь с Вселенной, а мировая ось фиксировалась центральной опорой. Впоследствии, необходимость увеличения жилого пространства привела к трансформации круглых построек в прямоугольные — так как при помощи сырцового купола невозможно было перекрыть помещение диаметром более 8м [15, с. 21]. В III тыс. до н.э. появляется карадам, где перекрытие опирается на четыре пристенных столба, а позднее, представлен карадамом с четырьмя столбами [15, с.30].

Опорный столб «карадамов-дарбази» представлял собой ствол дерева с развилкой, в которой устанавливался главный прогон [15, с. 53] — в Азербайджане этот столб назывался «ана дирек», что говорит о символической связи с воплощением обожествленного женского предка и огнепочитании. Архаическая модель Вселенной определяется мировым столбом, который в своей основе подобен «мировому дереву», но в отличие от него, имеет четкую вертикальную структуру. По вертикали модель Вселенной выглядит так: подземный мир - земной - небесный.

Центральный столб в мифологии считался таким же священным, как и очаг: столб и очаг маркировали центр, точку развертывания мира из жертвы - ведь согласно мифологии, мир был развернут из тела жертвы, так и дом “выводится” из тела жертвы или предка [19, с.83]. В этом содержится весь микрокосм жилища: очаг источник жизни, центральный столб - древо

жизни. Анализ мифологии дает обширный материал для этой темы и позволяет отметить, что обращение к образу древа не случайно, также ясно, что наиболее часто в этом комплексе символизируется женское божество с материнскими функциями. Семейно-родовые культы, характерные древнему населению Азербайджана, были распространены и у многих кавказских народов и в большинстве случаев выразились в почитании домашнего очага - символа семейной общности.

Очаг, занимая центральное место в доме, был аналогичен центру мира. Связь центрального столба с очагом не случайна – с глубокой древности, в архитектуре циклопических сооружений эти два компонента жилища слились в единый семантический комплекс: следы очагов раскрыты рядом со следами столбов. В этом содержится весь микрокосм жилища: очаг источник жизни, центральный столб - древо жизни. Можно утверждать, что устройство центрального очага представлялся как путь установления структурной связи с миром. Рассматривая связь домашнего очага с опорным столбом жилища и очагом древнего храма, можно говорить о совмещении семантики мирового древа, воплощенного в центральном столбе жилого дома, расположенного у очага и культа домашнего очага с жертвенным столбом.



сел. Юхары Тала. Закатальский р-н. Опорный столб жилища

Таким образом, в древний период при разнообразии форм выделяются общие тенденции сакрального отношения к жилищу, которые, зародившись ранее, претерпели определенные изменения, и смогли сохранить свою символическую значимость по сей день. Можно предположить, что жилой дом в прототипе представлял собой одновременно и своеобразный домашний храм, где главным ритуальным объектом был центральный столб, представлявший с очагом единый семантический комплекс, и связанный с представлениями об устройстве мира и огнепочитании. Прежде всего, отношение к очагу - соответствующее его расположение и оформление центральной деревянной опоры рядом с ним отражает особенности формирования модели дома в картине миропонимания.

Позже, в традициях многих народов мира представления о строении Вселенной воплотились в конструкции четырехугольного жилища с маркированным сакральным центром: четырем сторонам света соответствуют четыре священных дерева, поддерживающих небо, с четырьмя божествами-хранителями сторон света [11, с. 105]. В архитектуре Закавказья получили распространение жилые дома типа «дарбази-карадам» - жилища, где жилое помещение перекрыто деревянным ступенчато-балочным сводом, опирающимся на внутренние или пристенные столбы или стены, на квадратном основании с верхним свето-дымовым отверстием, очагом в центре помещения [15, с. 12-15]. Представляющие собой жилища купольные, квадратного и прямоугольного плана с центральным очагом — результат эволюции заглубленных в землю жилищ, к которым относятся круглоплановые и полусферические жилища, обнаруженные на территории Азербайджана в древних поселениях Кюльтепе, Шомутепе и Тойрепе VI-IV вв. до н.э. В Азербайджане карадам имеет свои локальные варианты: «эвдамы», «гышдамы» - Нахичевань, «эвдамы» - Кельбаджарский р-н, «дам» - Кубатлинский [15, с. 6], «гюмбезли эв» - Апшерон, Гянджа [15, с. 95].

В декоре опорного столба жилища Закатальского р-на (Азербайджан) прослеживается мотив рогов. Подобная символика была характерна для древнего населения Азербайджана и встречается в декоре алтарей храмов ходжалы-кедабекской культуры (XII-VIII вв. до н.э.), [6, с. 171-173]. В Ленкоранском, Кубинском, Кусарском районах Азербайджана капители на колоннах и сегодня называют «гочбаши» (голова барана) [23, с. 10-12]. Изображения рогов у очага свидетельствуют о слиянии образа рогов с символикой огня в период II тыс. до н.э. Образ Умай в искусстве часто переплетается с символикой Мирового древа, зачастую сливается с ним, иногда его заменяет. Мы видим процесс слияния образов Мирового древа и Умай – как воплощение жизненной силы и плодородия, и их воспроизведение в виде оленерогой богини [9, с. 73].

Были распространены передвижные очаги с внутренними выступами в виде массивных

подставок полукруглой и чаще подковообразной формы. Очаги имели изображения голов животного, использовались в при совершении культовых церемоний. Они представлены во всех почти регионах распространения куро-аракской культуры: в Нахичеванском Кюльтепе I, Юго-Осетии и Чечено-Ингушетии.

От открытого очага - простейшей формы обогрева жилища - прослеживаются разновидности форм и размеров переносных чашеобразных каминов «тапгал», с эпохи бронзы до начала XX века. Пристенные камины «вихаги» становятся обязательным элементом интерьера традиционного жилища XIX - начала XX века, а его декоративное оформление были признаками достатка и статуса хозяина дома.

Зарождение идей психологического восприятия сооружений, появилось в первобытную эпоху. Несмотря на то, что со временем многие представления о пространстве и мироздании претерпели сложные превращения, они в значительной степени сохранились. Жилые постройки, первоначально соотносились с первобытными представлениями об устройстве мира, о значимости культа огня, очага и матери, служили своеобразными святилищами огня и местом отправления культа предков. Прототипами для развития жилых домов типа «карадам» послужили купольные циклопические жилища круглого и прямоугольного плана из кирпича-сырца с дымоходным отверстием и очагом периода неолита-энеолита. Исследователи, занимающиеся генезисом жилищ типа дарбази-карадам в Закавказье, самой архаичной формой считают постройки из поселений Кюль-тепе, где можно проследить все этапы развития жилищ, зарождение новой балочной конструкции перекрытия со светодымовым отверстием с опиранием на отдельно установленный внутренний столб.

Жилые постройки, соединив в себе первобытные представления об устройстве мира и жилые функции, первоначально служили своеобразными святилищами огня и местом отправления культов предков. Впоследствии эти функции, утратив свое основное назначение, выразились в композиционном построении сооружений, и дошли до нас в виде народных преданий и обычаев, многие из которых почитаются и по сегодняшний день.

Список литературы

1. Абибуллаев, О.А. Археологические раскопки в Кюльтепе. - Баку.: Академия наук Азербайджанской ССР, 1959. -128 с. (на азерб. яз.)
2. Абибуллаев, О.А. Погребальные памятники из поселения Кюль-Тепе в Азербайджане // Археологические исследования в Азербайджане. - Баку, 1965. -с. 24-44.
3. Алекперов, А.К. Исследования по археологии и этнографии Азербайджана. -Баку: Академия наук Азербайджанской ССР, 1960. -с.23
4. Алиев, В. Алиев, В. по следам истории. –Баку: Гянджлик, 1975. -77с. (на азерб. яз.).
5. Амирханов, ХА. Чохское поселение. Человек и его культура в мезолите и неолите горного Дагестана. -М.: Наука, 1987. - 224 с.
6. Ахундов Д.А. Архитектура древнего и раннесредневекового Азербайджана. –Баку: Азернешр,, 1986. -311с.
7. Брунов Н.И. Очерки по истории архитектуры. Т.1. -М.-Л., 1937, т.1
8. Васильев, Л. История религий Востока. в 2-х тт., -М., 1998
9. Гаджиева, А. Т. Архаическая модель мироздания в материальной культуре Азербайджана. - Саарбрюккен, Publishing house: LAP LAMBERT Academic Publishing. 2016. - 164с.
10. Голан А. Миф и символ. -М.: Русслит, 1994. -374 с.
11. Денисова, И.М.Дерево-дом-храм в русском народном искусстве. –М.: Сов.Этнография, №3, 1990.
12. Ильина, М. Древнейшие типы жилищ Закавказья. -М.: Изд-во АА СССР, 1946. -48с.
13. Исмаилзаде , Г.С. Азербайджан в системе раннебронзовой культурной общности Кавказа. -Баку, Nafta Press, 2008, -304с.
14. Маггеррамов, С.С. Типы жилищ и обряды связанных со строительной культурой юго-восточных районов малого Кавказа XIX начала XX вв. // TURANSAM. — 2010. — № 6. -С. 52-55.
15. Мехтиева, А.М. Деревянное зодчество Азербайджана. –Баку: АН Азерб. ССР, 1987. -110с.
16. Мифы народов мира. Энциклопедия. [в 2-х томах]. -М., 1991
17. Раевский Д.С. Модель мира скифской культуры. -М.: ГРВЛ. 1985. 256 с.
18. Салимова, А.Т. Дом как архетип мироздания в культуре Азербайджана. // XV Баландинские чтения: сборник статей научных чтений памяти С.Н. Баландина. -Новосибирск: Новосиб. гос. ун-т архитектуры, дизайна и искусств, 2020. - Т. XV. - 496 с. –с.381-393

19. Семиотика и язык архитектуры. -М., 1991 ,с.83
20. Смолина Н.И. Традиции симметрии в архитектуре. -М.: Стройиздат, 1990. -344с.
21. Степанов А.В., Иванова И.И., Нечаев А.А. Архитектура и психология. -М.: Стройиздат, 1993. -295 с.
22. Токарев С.А. Религия в истории народов мира. -М.: изд. Политической литературы, 1976. -575 с.
23. Эфенди Р. Каменная пластика Азербайджана. - Баку: Ишыг, 1986. -108 с.

References

1. Abibullaev, O.A. Archaeological excavations in Kultepe. - Baku.: Academy of Sciences of the Azerbaijan SSR, 1959. -128 p. (in Azerb.)
2. Abibullaev, O.A. Funerary monuments from the Kul-Tepe settlement in Azerbaijan // Archaeological Research in Azerbaijan. - Baku, 1965. - p. 24-44.
3. Alekperov, A.K. Research on archeology and ethnography of Azerbaijan. -Baku: Academy of Sciences of the Azerbaijan SSR, 1960. -p.23
4. Aliev, V. Aliev, V. in the footsteps of history. -Baku: Ganjlik, 1975. -77 p. (in Azerb.).
5. Amirkhanov, HA. Chokh settlement. Man and his culture in the Mesolithic and Neolithic of mountainous Dagestan. -M.: Nauka, 1987. - 224 p.
6. Akhundov D.A. Architecture of ancient and early medieval Azerbaijan. -Baku: Azerneshr, 1986. -311s
7. Brunov N.I. Essays on the history of architecture. T.1. -M.-L., 1937, vol.1
8. Vasiliev, L. History of Eastern religions. in 2 vols., -M., 1998
9. Gadzhieva, A. T. Archaic model of the universe in the material culture of Azerbaijan. - Saarbrücken, Publishing house: LAP LAMBERT Academic Publishing. 2016. - 164s
10. Golan A. Myth and symbol. -M.: Russlit, 1994. -374 p.
11. Denisova, I.M. Tree-house-temple in Russian folk art. -M.: Soviet Ethnography, No. 3, 1990.
12. Ilyina, M. The most ancient types of dwellings in Transcaucasia. -M.: Publishing House of the AA USSR, 1946. -48 p.
13. Ismailzade, G.S. Azerbaijan in the system of the early bronze cultural community of the Caucasus. -Baku, Nafta Press, 2008, -304 p.
14. Maharramov, S.S. Types of dwellings and rituals associated with the building culture of the southeastern regions of the Lesser Caucasus in the 19th and early 20th centuries. // TURANSAM. - 2010. - No. 6. -S. 52-55.
15. Mehdiiev, A.M. Wooden architecture of Azerbaijan. -Baku: Azerbaijan Academy of Sciences. SSR, 1987. -110 p.
16. Myths of the peoples of the world. Encyclopedia. [in 2 volumes]. -M., 1991
17. Raevsky D.S. Model of the world of Scythian culture. -M.: GRVL. 1985. 256 p.
18. Salimova, A.T. House as an archetype of the universe in the culture of Azerbaijan. // XV Balandinsky readings: a collection of articles of scientific readings in memory of S.N. Balandina. - Novosibirsk: Novosibirsk. state University of Architecture, Design and Arts, 2020. - T. XV. - 496 s. -p.381-393
19. Semiotics and the language of architecture. -М., 1991
20. Smolina N.I. Traditions of symmetry in architecture. -М.: Stroyizdat, 1990. -344 p.
21. Stepanov A.V., Ivanova I.I., Nechaev A.A. Architecture and psychology. -М.: Stroyizdat, 1993. - 295 p.
22. Tokarev S.A. Religion in the history of the peoples of the world. -М.: ed. Political literature, 1976. -575 p.
23. Efendi R. Stone sculpture of Azerbaijan. - Baku: Ishig, 1986. -108 p.

Economic sciences

MANAGEMENT OF THE EFFICIENCY OF ECONOMIC DEVELOPMENT IN THE MARITIME TRANSPORT INDUSTRY SYSTEM

Stakhov A.Y.

graduate student of the Department of "Public Management and Administration", National University "Odesa Polytechnic", 65044, Ukraine, Odesa, Shevchenko Avenue, 1

The complexity of building a management system for the effective development of the country's maritime transport complex and the choice of state support in relation to national interests is predetermined by such factors as the active business activity. At the same time, it is necessary to take into account the limitation of illumination of the activity of individual regional subsystems. Annually, at the global level, there is an increase in the volume of transport work, except in the years of crisis, with a sharp fluctuation of tariffs, which does not provide the necessary increase in the income of transport enterprises due to investments.

At the same time, the complexity of the interaction of different markets should be taken into account: the freight market (as a market for goods in the form of services) and the shipping market as factors of production. Accordingly, the multifaceted nature of achieving balance in the maritime trade market system determines the limits of permissible risk and restrictions on investment programs, especially with a sharp deficit of own funds.

In the development management system, according to the criteria of sustainable efficiency, it is necessary to distinguish between current goals, conditions and assessment of the state during the calculation period, which is why the principle of discounting costs and results is used. One of the main, and probably the only, disadvantages of this method is the application of a constant level of the discount rate.

In particular, the components of the effect of the functioning and development of maritime transport enterprises operating on the basis of multimodal transport technologies should be taken into account. At the same time, the costs of maintaining the fleet during processing under cargo operations are reduced, and as a result, the need for financing additional shipping capacity of the fleet is also reduced. In transport nodes, the cost of work decreases and the productivity of labor and equipment increases. Cargo owners are optimizing the volume of circulating resources due to the reduction of transport debt.

This and other factors determined the strategy of restoring the role of the merchant fleet of active maritime states on the principles of cargo service of national enterprises by domestic transport companies without violating the free operator activity. However, it is necessary to take into account not only the principle of free movement of goods in international trade, but also the requirements for optimizing time and costs for the implementation of production and sales processes. It is the latter that becomes the main feature of competitiveness, which demonstrates the development of container technologies.

Ukraine, having chosen development on the basis of market relations and recognizing the priority of the private form of ownership, actually did not finally form economic and legal provisions on the adequacy of the development of industrial complexes on the basis of clear land relations. This significantly complicated the development and construction of private cargo terminals in ports and caused conflicting relations with state-owned ports.

At the same time, the principle of coordination of interests in the maritime transport system is quite effectively resolved in the USA. Port administrations and managers of the port potential perform other functions of managing the stability of the most important objects of the region (roads, bridges, airports, foreign trade zones, etc.).

The situation of organizing the work of the port economy on the basis of the law on the creation of AMPU (Administration of Maritime and River Ports of Ukraine) in the presence of enterprises of various forms of ownership, and in particular, enterprises of joint activity, remains controversial. It is enough to note that during the formation of the system of joint ventures, the Odesa port had revenues in the amount of 786 million hryvnias (Ukrainian national currency), and the Mariupol port, which was significantly inferior in terms of cargo turnover and does not use the PCD strategy, had revenues of 818.4 million hryvnias. Thus, the legality of alternative forms of ownership was not ensured.

However, a special place in world trade is occupied by grain cargo flows. In 2007, 2,316 million tons of grain were harvested. This figure has actually doubled by 2021. However, with stable demand, the risk of non-harvest periods remains, which is why it is important to clearly form reserve bases. For this purpose, individual exporters use hub ports for the timely appearance of appropriate value. In Ukraine, the rest of the freight capacities have been developed, which are extensively used in the period of low prices.

The nature of the development of grain cargo flows is influenced by the structure of their consumption. 48 percent of grain production belongs to the food group. 35 percent of the total production volume is used for animal husbandry. The share of cereals involved in the production of biofuel is expanding. In some years, 17 percent of grain collection is directed to these needs, but this is not reflected in the strategy for the development of stevedoring complexes, which causes loading problems.

Cargo flows are also affected by the unevenness of grain consumption per capita: in the USA - 1230 kg, in China - 325 kg, and in African countries - about 100 kg. The main thing in this case is the management of the level of return on capital investments and the temporary stability of their normalized use.

In this competitive case, one should take into account the steady trend of increasing grain prices, which significantly adjusts the dynamics and direction of cargo flows. The sharp increase in prices in certain periods up to 70 percent in the USA remains a problem. In Argentina, the price of wheat has doubled. The trend persisted in the post-crisis period of 2011-2021, despite a decrease in the level of price fluctuations.

Ukraine's pursuit of development based on market relations and a preference for private ownership has encountered significant challenges in establishing clear economic and legal provisions for industrial complex development, particularly in terms of land relations. This deficiency has hindered the growth of private cargo terminals within ports, leading to conflicts with state-owned ports.

In contrast, the United States showcases effective coordination within its maritime transport system. Port administrations and managers play crucial roles in managing the stability of regional infrastructure beyond ports, encompassing roads, bridges, airports, and foreign trade zones. This comprehensive approach ensures well-coordinated management of the entire transportation network.

The organizational structure of the port economy under the law creating the AMPU in Ukraine, inclusive of various forms of ownership like joint ventures, remains contentious. Revenue disparities between Odesa and Mariupol ports, despite differences in cargo turnover and strategy adoption, raise questions about the legality and effectiveness of alternative ownership structures.

Grain cargo flows emerge as a pivotal player in global trade, with production doubling from 2007 to 2021. However, the persistent risk of non-harvest periods emphasizes the need for establishing reserve bases. Ukrainian exporters strategically utilize hub ports to leverage freight capacities during periods of low prices.

The dynamics of grain cargo flows are influenced by consumption patterns, yet the strategy for developing stevedoring complexes has not adequately adapted to evolving needs, resulting in loading problems.

Global variations in grain consumption per capita further complicate cargo flows. Effective management of return on capital investments and ensuring the temporary stability of normalized use become critical considerations.

The competitive landscape is shaped by the steady trend of increasing grain prices, impacting the dynamics and direction of cargo flows. Sharp price increases pose ongoing challenges in the post-crisis period of 2011-2021.

Given these external conditions, adhering to the principle of strategic vision for forming an investment climate within the maritime complex is crucial. Careful consideration of the interplay between resources, results, and costs underscores the importance of employing a balanced system of indicators to navigate the complexities of the maritime transport industry successfully. In doing so, Ukraine can address existing challenges and position itself strategically in the ever-evolving global trade landscape.

Conclusions: addressing the challenges in the maritime transport industry requires a comprehensive approach that considers global trends, national strategies, effective management systems, and strategic vision. Balancing economic interests, fostering collaboration between private and state-owned entities, and adapting to changing external conditions are key elements in ensuring sustainable efficiency and development in the maritime transport sector.

References

1. Alan B. (2016). *Maritime economics: Management and Marketing*. 2nd Ed. 592p.
2. Derzhavna sluzhba statystyky Ukrayiny : Website. URL: <http://www.ukrstat.gov.ua> (Data zvernennya: 10.11.2023.). [in Ukrainian].
3. Review of maritime transport. UNCTAD. 2023. 175p. URL: https://unctad.org/system/files/official-document/rmt2022_en.pdf

Historical sciences

MORAL DISENGAGEMENT TECHNIQUES USED BY THE GERMAN ETHNIC GROUP IN ROMANIA. IDEOLOGICAL TRAINING PRIOR TO ASSIGNMENT TO WAFFEN-SS.

Dragos Defta

*Doctor, Academia Română, Institutul de Istorie „George Barițiu”, Cluj-Napoca, România,
Universitatea „Valahia”, Târgoviște, România*

Abstract

An outcome of the interplay between methodical ideological indoctrination and applied war-craft schooling, the final product of the GEG training system consisted of the Waffen-SS soldier. Fully motivated, dogmatically and assiduously qualified in war-techniques, the young Volksdeutsche recruit from Romania acted as an exuberant and impetuous fighter, ready to fulfil Hitler's orders and his Weltanschauung ideals. Considering the numbers hereafter provided by several well-known historians, the GEG in Romania was able to assemble a considerable army of recruits thoroughly prepared to perform as a politized fighting force in consonance with the Waffen-SS ethos, as it had been promoted by its ideologists and military professionals.

Keywords: *German Ethnic Group in Romania, Waffen-SS, National-Socialist ideology, The Third Reich.*

Für uns Deutsche außerhalb der Reichsgrenzen muß es in dieser Kriegsphase das selbstverständliche unseres Gebot unseres Blutes sein, nach genau den gleichen Gesetzen wie das Mutterland zur Entscheidungsschlacht anzutreten.¹

Volkgruppenführer Andreas Schmidt

General Overview

By the end of World War II, around 150,000 German ethnics² born outside the borders of the Third Reich will have served in the Waffen-SS. Among these, a great number of the Volksdeutsche recruits originated from Transylvania and Banat – the two Romanian provinces where German settlements had already existed for centuries; recent studies provide an estimate of around 63,000 of Siebenbürger Sachsen and Banater Schwaben recruits³ to Waffen-SS. If we take this estimation as a rigorous acquiescence, the outcome reveals that 42% of the entire Volksdeutsche recruits drafted to Waffen-SS from outside Nazi Germany came from Romania's German Ethnic Group (hereafter abbreviated as GEG) structures. Subsequently, we deal with the largest percentage of Waffen-SS soldiers that filled the ranks of the Waffen-SS were extracted from a single country except the Third Reich.

Between 1933 and 1940, the German minority in Romania had been meticulously updated with regard to the German Reich political development and also received a significant injection of National-Socialist ideology delivered through the medium of highly organised structures of GEG. Up until 1937 has the leadership of the German minority declared its unconditional loyalty towards Romanian authorities⁴. Prior to becoming the main pépinière for Waffen-SS from outside Germany, the GEG had to set out complex developments consisting of pre-military training schools and special camps where specific weaponry apprenticeship was provided alongside ideological schooling.

Apart from Volksdeutsche, tens of thousands of volunteers (Freiwilligen) had been allocated to Waffen-SS divisions from Denmark, Netherlands, Norway, Sweden and Finland⁵. The largest group of so-called Aryan Germanic volunteers originated from the Netherlands (an amount 23-25,000), Belgium (10,000 Flemings), Denmark (6,000) and Norway (5,000)⁶. These Nordic recruits were serving as foreign

¹ For us Germans outside the borders of the Reich, the natural commandment of our blood must take up the decisive battle in this phase of the war according to exactly the same laws as in the mother country.

² Jean-Luc Leleu, *La Waffen-SS. Soldats politiques en guerre*, (Perrin, Paris 2007), 188.

³ Paul Milata, *Între Hitler, Stalin și Antonescu. Germanii din România în Waffen-SS*, (Sibiu, Editura Schiller 2018), 9.

⁴ Jochen Böler & Robert Gerwarth, *The Waffen-SS: A European History*, (Oxford University Press 2017), 211.

⁵ Robert Koehl, *The SS: A History 1919-1945* (Stroud 2004), 214.

⁶ Christensen, Poulsen and Smith, *Dänen in der Waffen-SS 1940-1945. Ideologie, Integration und Kriegsverbrechen mit anderen „germanischen“ Soldaten* (Schulte, Lieb and Wegner (eds.), *Die Waffen-SS. Neue Forschungen* (Ferdinand Schöningh

nationals within the Waffen-SS, yet maintaining strict racial criteria. Following the Unternehmen Barbarossa, further foreign recruits were accepted from France, Spain and the Balkans⁷. If we agree on the downwards re-evaluation of the Waffen-SS from an elite fighting force to a 'quantitative over qualitative expansion' by 1943⁸, we can subsequently note that massive recruitments from Romania were coincidentally and synchronously conducted exactly in the same period; additional aspects should also be considered, such as a growing anti-Romanian frustration alongside rising enthusiasm for Germany⁹ manifested among the young Volksdeutsche from Romania. Towards the end of World War II, the Waffen-SS recruitment offices intensified their enlistment efforts by yielding some 20,000 soldiers from Ukraine and other thousands from Estonia and Latvia¹⁰.

Throughout this article, I do emphasise on certain similarities between military training programme conducted within units of the 12th SS Panzer Division "Hitlerjugend" and youth formations of the GEG in Romania, providing relevant examples of almost identical military and training schedules. The prominence of the Romanian Volksdeutsche for the Waffen-SS is furthermore illustrated by a series of conspicuous personages who touched the SS' infamous hall of fame: SS-Obergruppenführer Arthur Phleps, born in Biertan, near Mediasch (German appellation for Mediaș), SS-Obergruppenführer Stefan Hedrich from Bistriz (German appellation for Bistrița), SS-Standartenführer Albert Ludwig; not last, SS-Rottenführer Georg Fleps, born in Mächelsbärch (nowadays named Cisnădioara, near Sibiu) was one of the main actors in the obscure action developed during the first days of Unternehmen Wacht am Rhein, known as the "Malmedy Massacre"¹¹. All examples above prove the perfect integration of the Romanian Volksdeutsche within all ranks of the Waffen-SS.

Youth Organisation of the NSDAP in Germany. Its Leadership

A brief incursion into the "Father-Organisation" of the Third Reich is necessary in order to draw the appropriate analysis of the resemblance between the paramilitary formations that acted under GEG in Romania and those patented in Nazi Germany. Hitler Youth functioned as the youth organisation of the National-Socialist Workers' Party (Nationalsozialistische Deutsche Arbeitspartei) in Germany. Its early structures date back to the period between 1922 and 1926, when it was known under different appellations: Hitler Youth (Hitler Jugend) and the League of German Worker Youth (Bund deutscher Arbeitjugend), respectively. From the time Adolf Hitler became Chancellor of Germany in 1933 until the final surrender of the Third Reich in 1945, the Hitler Youth was the only partially para-militarised, youth organisation in Germany. The Hitler Youth consisted of two wings: German Youngsters in the Hitler Youth (Deutsches Jungvolk in der Hitler Jugend) which admitted young male members aged 10 to 14 and the League of German Girls (Bund Deutsche Mädel or BDM) which was open to young girls aged 14 to 18. In 1938, a new wing was attached to the League of German Girls: Faith and Beauty Society (BDM – Werk Glaube und Schönheit), which was open to volunteering girls aged 17 to 21.

Germany's main mobilization vector relied on Hitler Youth. Commencing March 1939, all children were conscripted into the Hitler Youth and its various organizations¹². All boys and girls from 10 to 14 had already been conscripted to the German Young People (Deutsches Jungvolk), while boys aged 14 to 18 belonged to Hitler Youth¹³. At the top of this massive organization was the Reich Youth Leadership (Reichsjugendführung, or RJF), whose local structures (branches) were represented by Bann, Gebiet, Stamm and Gefolgschaft offices¹⁴.

Since they were viewed as the future of the National-Socialist Germany, all members of the Hitler Youth were thoroughly indoctrinated in the Nazi ideology and mandated to participate to specific paramilitary programmes, ranging from camping and hiking to weapon instruction, assault and basic military tactics. The main objective of the Hitler Youth Organisation was to educate and motivate its members in order for them to become loyal and resilient soldiers prepared at any moment to fight and

2014), 197.

⁷ George H. Stein, *The Waffen-SS: Hitler's Elite Guard at War, 1939-1945*, (Cornell University Press 1984), 172.

⁸ Bernd Wegner, *Hitlers Politische Soldaten: Die Waffen-SS 1933-1945*, (Ferdinand Schöningh 2010), 313.

⁹ Paul Milata, 258-259.

¹⁰ Jochen Böler & Robert Gerwarth, 167.

¹¹ For further reading, see Danny Parker, *Fatal Crossroads: The Untold Story of the Malmedy Massacre at the Battle of the Bulge*, (Da Capo Press 2014), Michael Reynolds, *Massacre at Malmedy During the Battle of the Bulge* (World War II Magazine 2007), Hugh M. Cole, *The Ardennes. United States Army in World War II, The European Theater of Operations*, (Office of the Chief of Military History, Washington D.C. 1965) etc.

¹² Michael Buddrus, *Totale Erziehung für den totale Krieg*, (K.G. Sauer Verlag GmbH, München 2003), 270-289.

¹³ Armin Nolzen, *Germany and the Second World War. Edited for the Militärgeschichtliches Forschungsamt, Potsdam*, by Jörg Echternkamp, Volume IX/I. *German Wartime Society 1939-1945: Politization, Disintegration, and the Struggle for Survival*, (Clarendon Press, Oxford 2008), 133.

¹⁴ Arno Klönne, *Jugend im Dritten Reich. Die Hitlerjugend und ihre Gegner*, (Papyrossa Verlag 2008), 42-49.

give their life for Germany. Every Wednesday evening, a session of ideological training was held in every Hitler Youth section¹⁵, respectively every Saturday, the boys underwent military training, while the girls of BDM were taught courses of delivering first aid techniques, issues of housewares and child care lessons¹⁶. With the outbreak of World War II, Artur Axmann began to reform the Hitler Youth into an auxiliary organisation capable to perform war duties, such as assisting fire brigades and recover wounded and dead in the bombed German cities. Thus, the Hitler Youth sections became recruiting offices for the so-called "war auxiliary services". Beginning with February 1940, the Wehrmacht started to gradually recruit young auxiliaries through demanding the RJF, via OKW, the specific needs; furthermore, the RJG asked its subordinated Gebiets and Bann to immediately respond these demands¹⁷.

Organisational Structure of the German Ethnic Group

In Romania, the organisational structure of the GEG was inspired from the functional templates existing within Hitler Youth Organisation in Nazi Germany. Obviously, a brief and systematic approach to Hitler Youth structures appears indispensable in order to perceive and analyse the GEG's structures in Romania. On 27 September 1940, Andreas Schmidt, then aged 28 years, was appointed as Volksgruppenführer of all German ethnics living within national boundaries of the, then, Kingdom of Romania. He was to remain in this office until August 1944, when Red Army entered Bucharest in order to liberate it. As Günther Schödl noticed, in the entire 800 years-old history of the Germans in Transylvania it was for the first time when their leadership and inner governance were decided in Germany¹⁸. Soon after, the GEG became subject of systematic adaptation of organisational model in order to meet the specific political goals aimed by the National-Socialist leadership of the Third Reich. Andreas Schmidt's close friends were shortly appointed in key-positions within the GEG in Romania: Andreas Rührig took the Stabsamt, Walter May was given the responsibility with the Press and Propaganda Office, Willi Depner was appointed the leader of the Youth Organisation (Deutsche Jugend) and Fritz Cloos took the Frauenwerk (German Worker's Association in Romania)¹⁹. Further positions were allocated as follows: SS-Hauptsturmführer Erich Müller became commander of the Formationen (Formations), Frau Lydia Müller took the office of German Women's Association in Romania and Franz Kautmes was appointed leader of the German Peasant's Organisation.

The GEG in Romania had been legally established by Decree-Law 830/21st November 1940. The actual configuration of the GEG has, from the very beginning, followed those political frameworks acting in the Third Reich; the entire operation of setting up its structures had been finalised by end of 1941²⁰. Proceedings to setting up the organisational architecture of the paramilitary formations commenced with an elaborate selection of the future instructors who were shortly thereafter sent to Germany for further training with the SS-personnel²¹. On 6th November 1940, Karl Römer, the Commander of the GEG Mediaș Circumscription, wrote an official letter to the Prefect of Târnava-Mare Sighișoara County²², soliciting permission to organise festivities dedicated to the foundation of the NSDAP-GEG, an event where high-ranking SS officials had been invited. All youngsters from 18 to 21 years old had been subsequently recruited to SS units and would immediately be accepted to NSDAP. The Prefect was also informed about the fact that, along with the Romanian flags, all streets of Mediaș were about to be embellished with GEG flags containing swastika. The archives reveal an official answer from Prefect lieutenant-colonel Petre Angelian only two years later, on 31st March 1942, issuing "Ordonanța 1-1942", which suggests that all previous actions of the GEG were either tacitly accepted, or they were organised and conducted in a form of unauthorised manner. The "Ordonanța 1-1942" had strictly forbidden a series of actions and initiatives that were – in fact – flagrantly and commonly conducted by GEG, such as: organising any paramilitary formations; setting up police units or assembling any structures of this kind; wearing GEG structures uniforms outside legally allowed festivities and special premises; swearing an oath of legality other than those specifically allowed by the Romanian laws; any meetings set up and streets gatherings which had not previously got the official permission from the Romanian authorities; organising paramilitary and military training courses, performing military exercises and marches²³. The

¹⁵ For further reading, see *Führung und Verführung. Pädagogik des Nationalsozialismus*, (München 1990), 354-357.

¹⁶ Klönne, 55-66.

¹⁷ Nolzen, 135.

¹⁸ Günther Schödl, *Land an der Donau. Deutsche Geschichte im Osten Europas*, (München 1995), 591.

¹⁹ Paul Milata, *Între Hitler, Stalin și Antonescu. Germanii din România în Waffen-SS*, (Sibiu, Editura Schiller, 2018), 591.

²⁰ Johann Böhm, *Die Gleichhaltung der Deutschen Volksgruppe in Rumänien und das Dritte Reich 1941-1944*, (Frankfurt a.M. 2003), 55-75.

²¹ ANIC Sibiu, Fond GEG Mediaș, Dosar 5, f. 105.

²² ANIC Sibiu, Fond GEG Mediaș, Dosar 5, f. 113.

²³ ANIC Sibiu, Fond GEG Mediaș, Dosar 4, f. 132-133.

actual display of the GEG paramilitary formations and their subsequent activities prior to May 1943²⁴, reveal that GEG did actually act as a "Staat im Staate" (Deep State institution) supra-national organisation. Following a similar organisational chart as in Germany, all leaders of the Einsatz-Staffel, Deutsche Mannschaft, Deutsche Jugend and Deutsche Arbeitsdienst were demanded to report only to the GEG leader²⁵. The GEG in Romania was structurally organised on a similar pattern as any Reichsgau in Germany and consisted of Zellen (Cells), Blöcke (Blocks), Ortsgruppen (Local Groups), Kreisgruppen (District Groups) and Gebietsleitungen (Regional Leaderships). By 1943, GEG in Romania consisted of 502 local groups, 14 districts and 4 local leadership offices as follows: (1) Region Banat, (2) Region Banatul Montan, (3) Region Transylvania and (4) Region Old Romania. As one may notice above, the GEG in Romania followed closely all organisational patterns established in the Third Reich: (1) Leadership Office (Stabsamt), (2) Legal Issues Office (Rechtsamt), (3) Statistic and Population Office (Amt für Statistik und Bevölkerung), (4) Office for Economy (Amt für Volkswirtschaft), (5) Press and Propaganda Office (Amt für Presse und Propaganda) and (6) Office for Education (Schulamt)²⁶.

GEG Paramilitary Formations

On 15th October 1940, Andreas Schmidt issued an order for all German youths from age 10 to compulsory be conscripted to Deutsche Jugend structures in Romania. Consequently, as the *Jahrbuch der Deutschen Volksgruppe in Rumänien* noted in 1944, a so-called 'tremendous awakening' proved the success of the youth work after three years from commencing. Within this period of time, the Deutsche Jugend in Romania numbered some 74,000 members (boys and girls) from which 8000 were Youth Leaders. Yet another proof of their efficiency is supported by figures: in 1943 alone, 2,481 boys respectively 2,380 girls, aged between 14 and 18, had completed their duties, or 'land service' during holydays. In addition, 2,635 girls had come to help out on short notice²⁷.

The Office for the Press and Propaganda elaborated a specific ideological programme dictated by Propaganda Ministry of the Third Reich. A sample of such a course is hereby provided as a relevant example of ideological training within the Deutsche Jugend of the GEG Romania. Under title *The New Order in Europe under German Leadership*, the works of several National-Socialist ideologists were flawlessly been delivered: Karl-Richard Ganzer ["Das Reich als europäische Ordnungsamt", Hanseatische Verlagsanstalt Hamburg – *The Reich as a European Regulatory Power*], Paul Herre ["Deutschland und die europäische Ordnung", Deutsche Verlag Berlin – *Germany and the European Order*], Karl-Richard Ganzer [*Das Werden des Reiches/Karten zur Geschichte der Reichsgestalt*, Lehmanns Verlag München-Berlin], Gehl ["Deutsche Geschichte in Stichwort", Hirts Stichwort Bücher, 1940] etc²⁸. The final conclusions of each of these ideological courses were designed to fully embrace the official version of the history in the making according to German propagandists: the German people defeated Russians today. No other people have been able to achieve this, not even the brave Finns. The brave allies – whose dead must be honoured – fought under German guidance. German history proves that the German people have always acted as a revolutionary and orderly manner at the same time. The liberation of Western Europe from the Moors was a German achievement. The battle of the Charlemagne against the Slavs and Avars was of no lesser importance²⁹.

The same Archives reveal an exceptional sample of festivity-event organised for the Deutsche Jugend under a similar format as they were held, for instance, in the 12th SS Panzer Division "Hitlerjugend". The event referred to was named "Happy Community Evening" [Heiteren Gemeinschaftsabend] and commenced with a series of military, traditional marches (led by a professional military band of Deutsche Jugend) and lieds such as *Der Schwarzwälder Kirsch*, *Die Allmacht Gottes*, *Wenn wir marschieren*, *Gruss an König, Führer und Vaterland* etc. Every musical episode was then followed by a secondary presentation made by well-trained ideological trainers. A session of several lieds/marches and subsequent presentations was followed by a break where jokes and proactive atmosphere were encouraged³⁰.

²⁴ On 12 May 1943 was issued and signed the Accord between Romania and the Third Reich regarding enrollment of the German ethnics of Romanian citizenship into Wehrmacht and Waffen-SS units (Abkommen zwischen der Reichsregierung und der Rumänischen Regierung hinsichtlich der Einreihung rumänischer Staatsbürger volksdeutscher Zugehörigkeit in die deutsche Wehrmacht-SS). This official document provided GEG with practically unlimited jurisdiction over the German ethnics of Romanian citizenship.

²⁵ ANIC Sibiu, Fond GEG Mediaș, Dosar 5, f. 529.

²⁶ Ibid.

²⁷ *Jahrbuch der Deutschen Volksgruppe in Rumänien 1944*, (Hermanstadt, Kraft & Drottlet A.G), 92.

²⁸ ANIC Sibiu, Fond GEG Mediaș, Dosar 80, f. 8.

²⁹ ANIC Sibiu, Fond GEG Mediaș, Dosar 80, f. 9.

³⁰ ANIC Sibiu, Fond GEG Mediaș, Dosar 80, f. 155-160.

Each event organized under "Happy Community Evening" programme focused a specific theme, such as "Eastwards We All Want to Ride", hereafter provided. As usually, the event started with a military march followed by a lied performed by the military band. Thereafter, the first instructor introduced the main topic, being completed by the second instructor who read a short meaningful text: the German blood has been flowing for over 2000 years to make East Europe German. German blood flowed in streams and soaked the soil of the East. Forgery history in the aim of justifying the "German Right" over the Eastern lands was carried out by instructors who entered the stage successively. This charade consisted of a series of theatrical dialogues in which the main speaker delivered his statement: but German Kings, German knights and German peasants took up the fight against the Slavic empire, and then the second speaker asked the appropriate questions which facilitated the advance into the thematic ideological scheme: who were these kings, knights and peasants? His question was furthermore answered by several speakers seconded by choir: Heinrich der Löwe, the Duke of Sachsen, Knight Hermann von Salsa, and the German peasants were the German colonists in Transylvania, the German colonists in Banat, the German colonists in Bessarabia, on Volga, on the Black Sea and in the Caucasus mountains³¹. The entire structure/model of such an event was inspired from ideological events held at the training camps of some Waffen-SS divisions displaced on the Western front³², where soldiers were delivered exactly the same thematic structured-dialogues intercalated by lieds and marches.

All these events were also completed by periodical reports delivered in order to upgrade the frontline information, especially – as the specific case of GEG is concerned – East front reports, the Japanese involvements³³ and relative American Navy responses, as well as briefs regarding German domestic policies etc. Such a political report [Politischer Lagebericht] was issued in January 1944 by the Amt für Presse und Propaganda, in which Churchill was portrayed as an exponent of the international Judaism alongside with Roosevelt, their subsequent attitude against Germany being argued on that premises. As far as the war in the Far East was concerned, propaganda again replaced the real evolutions, stating that Japan's victory against British and American fleets brought their dominance in East-Asia to an end³⁴.

Corporate activities intended to foster the National-Socialist spirit among the young Romanian Volksdeutsche were organised by the Amt für Presse und Propaganda in the form of a "rally wave" (Kundgebungswelle), under the motto: "for our German School in the entire Land"³⁵. The GEG Department for Ideological Instruction (Abteilung Weltanschauliche-Schulung) in Kronstadt (German appellation for Braşov) issued a telegram³⁶ addressed to several regional leaders of Deutsche Jugend sections from Transylvania and Banat urging an immediate establishment of ideological training consisting of courses held in all major German cities of the two provinces named above: on 4th September in Kronstadt, at Honterusschule (hosting the young Volksdeutsche from Bucharest too) and Schässburg (German appellation for Sighişoara), at Bischof-Teutsch Schule; on 5th September in Mediasch, at Stephan Ludwig-Roth Schule and in Hermannstadt (German appellation for Sibiu), at Bruckenthalschule; on 6th September in Lugosch (German appellation for Lugoj), at Deutsche Mittelschule; on 8th September in Temeschburg (German appellation for Timişoara), at Prinz Eugen Schule; on 9th September in Arad, at Adam Müller Guttenbrunnsschule. The pattern of delivering Weltanschauung (ideological instruction) was rigorously reproduced after Sommerlager (summer camp) agenda in Germany, where such themes used to be declaimed weekly by specially trained Hitler Youth leaders who recourse Schulungsbrieft (educational paragraphs)³⁷. The final purpose encompassed flawless memorisation of National-Socialist phraseological constructions by all those participants³⁸ attending these courses.

Responsible with the physical education of the youth in Germany was Oberbannführer Dr. Ernst Schündler who had been serving as Amtsleiter of the Amt für Körperliche Schulung in Reichsjugendführung since 1935³⁹. Holding a doctorate in physical education, Schündler's first initiative consisted of changing the Office of Physical Fitness into the Office for Pre-military Training; his next

³¹ ANIC Sibiu, Fond GEG Medias, Dosar 80, f. 167.

³² NARA, Washington: Microcopy T.354 Roll 156 Frame 3800042. For further readings, see Samuel Koehne, *The Racial Yardstick: 'Ethnotheism' and Official Nazi Views on Religion*, (German Studies Review 37/3 2014).

³³ ANIC Sibiu, Fond GEG Medias, Dosar 80, f. 285.

³⁴ ANIC Sibiu, Fond GEG Medias, Dosar 80, f. 331.

³⁵ See Telegram nr. 13, Kronstadt, am 18. August 1942: ANIC Sibiu, Fond GEG Medias, Dosar 110, f. 726.

³⁶ See Telegram nr. 15, Kronstadt, am 27. August 1942: ANIC Sibiu, Fond GEG Medias, Dosar 110, f. 725.

³⁷ Artur Axmann, *Das modernste nationalsozialistische Erziehungsmittel*, (DJD 36 1940), 248-275.

³⁸ Christian Zentner & Friedemann Bedürftig, *The Encyclopaedia of the Third Reich*, (Macmillan Publishing 1991), 433-436.

³⁹ Heinz Schreckenberger, *Erziehung, Lebenswelt und Kriegseinsatz der deutschen Jugend unter Hitler: Anmerkungen zur Literatur*, (Münster, LIT Verlag 2001), *passim*.

move was to persuade Artur Axmann to replace all Wehrmacht trainers who had been overseeing the military training in the Hitler Youth with new Waffen-SS veteran instructors. In conjunction with the professionals from the Waffen-SS, Oberbannführer Schündler was able to create the famous 21-day psychological and combat programme that would be carried out in the so-called Wehrtüchtigungslager der Hitler Jugend (abbreviated as WEL). The new training concept released by WEL instructors – most of which holding a notable battlefield experience – fostered those values that were more appropriate to the age of the trainees, alongside concepts such as combat readiness and combat capacity.⁴⁰ Furthermore, Dr. Schündler introduced a new approach known as content willingness to make decisions, a concept intended to balance the spirit of free initiative – only encouraged and allowed as a fast-management measure necessary under battlefield circumstances – with the unquestionable discipline⁴¹ required by Heinrich Himmler and his entire chain-of-command of the Waffen-SS. Precise follow-ups and accurate implementation of these new learning methods are to be observed within the training process of the Romanian Volksdeutsche during their military preparations. The concept of military proficiency achieved through ideological training consisted of a series of political and dogmatic beliefs delivered in reciprocity to building a strong combative mentality and war-craft techniques. The schooling programme nurtured by GEG in Romania incorporated a full range of National-Socialistic precepts interwoven with Hitler's own convictions on social Darwinism, all of which being further strengthened by the youthful élan and combative ethos specific to the Hitler Youth Organisation in Germany, and as well outside Reich's borders.

The entire effort was to prepare the young candidate to fulfil his final and ultimate goal: becoming a tough, professional soldier of the Waffen-SS, in the service of the Führer and the Vaterland. The combination between ideological-physical-military trainings had been designed by Paul Hausser and Felix Steiner since 1934⁴², (within the Inspectorate of the Waffen-SS) and fully transferred to all paramilitary formations of the GEG in Romania. The statement above is fully exemplified by the Folder 120 of the GEG Archives in Sibiu which details a manual for designing physical tests needed to classify the physical performance: 100 metres sprint, long jump, shot put (metal ball throwing), hand grenade throwing and 3000 metres run. Each group-age was allocated different scoring. The second stage of the physical training introduced the participants to an actual military instruction programme consisting of a combination of exercises and tasks: marching with complete gear including gas-mask, and carrying a 12,5 kg backpack⁴³. The trainees had to complete multiple pitches of march on open field, roads and forest paths, all intercalated with firing sessions. Firing exercises with light weapons were also part of the training. A special attention was paid on long-distance run across heavy terrain wearing gas-mask; inside this type of exercise, a series of obstacles were targeted, such as jump over fences carrying all marching gear, crossing a balancing-beam 4 metres in length and 25 cm wide and swimming in both flowing water and swimming pools⁴⁴. Similar training programme can be identified in the instruction schedule delivered to the 25th Panzer Grenadier Regiment belonging to the 12th SS Panzer Division "Hitlerjugend" on 13th December 1943, while all divisional units were discharged in Beverloo camp, Belgium. The preparations for battle included firing light and medium weapons, cleaning and loading a gun, entering a mission, assault techniques, configuration of the troops on a battlefield, securing zones around the camp and military ceremonies⁴⁵. Obviously, the cross-country training was of special importance especially for those trainees who were mostly recruited to infantry and motorised-infantry units of the Waffen-SS. The Manual of the Training Regulations⁴⁶ [Ausbildungsvorschrift für das Leistungsabzeichen/Geländesport] provide a deep insight of all matters which needed to be acquired during the training programme: cartography and map-reading, orienteering, navigation using compass, Sun and stars, vision exercises, identifying forest trees, practicing river-crossing techniques, negotiating different types of terrain etc.

Drafting very young recruits into the Waffen-SS met a certain degree of reluctance initially, since

⁴⁰ Ibid., 137.

⁴¹ For further analysis, see the SS-Manual: Obedience must be unconditional. It corresponds to the conviction that National Socialist ideology must reign supreme and every SS man, therefore, is prepared to carry out any order issued by the Führer or a superior on his behalf, without any hesitation and regardless of the sacrifice involved. [Carl Hammer, *The Gestapo and SS Manual*, (Palatin Press 1996)].

⁴² Bastian Hein, *Himmlers Orden. Das Auslese – und Beitrittsverfahren der Allgemeinen SS*, in: *Vierteljahrshefte für Zeitgeschichte* 59 (2011), 267.

⁴³ ANIC Sibiu, Fond GEG Mediaş, Dosar 120, f. 135.

⁴⁴ ANIC Sibiu, Fond GEG Mediaş, Dosar 120, f. 137.

⁴⁵ NARA, Washington: Microcopy T.354 Roll 154 Frame 3797335.

⁴⁶ ANIC Sibiu, Fond GEG Mediaş, Dosar 120, f. 66.

Hitler himself had objected to the idea of creating the 12th SS Panzer Division "Hitlerjugend", early in 1943. SS-Sturmbannführer Hubert Mayer and SS-Brigadeführer Fritz Kraemer – two of the former divisional commanders of the "Hitlerjugend" Division – regarded the insertion of young troops in the Waffen-SS and Wehrmacht as a desperate and counterproductive measure⁴⁷. It was not until after the catastrophe at Stalingrad when, facing the realities of a genuine total war, the young recruits of German origin would be accepted as a symbol of the German youth ethos and spirit of sacrifice. It was the true milestone that marked the beginning of a massive injection of Volksdeutsche – including the Romanian ones – into the Waffen-SS units engaged in the European theatre of operations. This devised strategy was rather straightforward and the Hitler youths would from now on complete a specific training programme prior to drafting into the Waffen-SS⁴⁸.

Conclusions

Perhaps the most condensed review with regard to the mission assigned to all young Germans incorporated to Hitler Youth Organisation was produced by Baldur von Schirach as early as 1936, with a speech dedicated to the "Year of Training": The Hitler Youth is a community of ideological education. Whoever marches in the Hitler Youth is not a number among millions, but the soldier of an idea. An individual member's value to the whole is determined by the degree with which he is infused with the idea. The best Hitler Youth, irrespective of rank and office, is he who completely surrenders himself to the National Socialist Weltanschauung⁴⁹. Everything in the organisation and ideological training provided by GEG in Romania as well as corresponding institutions in Nazi Germany commended that the Hitler Youth individual was being skilled for one purpose and one target only: the undertaking of soldier.

The impact of the complex, meticulously applied learning methods enabled all candidates who had been through the GEG schooling system to acquire a significant knowledge on warcraft techniques, solid ideological expertise and exceptional physical performance to an unparalleled level among most of the modern armies of the Allied forces united against Nazi Germany. According to different sources, the total number of the German ethnics from Romania, who were drafted to Waffen-SS divisions directly from the paramilitary organisations of GEG, varies from 54,000⁵⁰ to 60,000, or even 70,000⁵¹. In January 1944, SS-FHA⁵² issued yet another figure of 56,000 German ethnics from Romania who had been incorporated to Waffen-SS⁵³. The combat performance of these German-Romanian soldiers has not been yet significantly analysed, even though historians like Paul Milata initiated some research focused on decorations, appointments to higher military ranks and other related indicatives which can provide relevant conclusions. It appears like there is still plenty of unexplored historiographic opportunities for further research in this investigative direction. Besides their initial military training and ideological instruction, the new recruits of the Waffen-SS extracted from GEG paramilitary structures, their combat motivation and subsequent fluctuation has to be analysed considering side-circumstances that might have affected their initial enthusiasm. Several evolvments such as disappointments caused by worsening situation at home, lack of payments to the families in Romania, inappropriate treatment from SS bureaucrats or even army superiors, along with other war adverse evolutions have all brought the soldier's commitment to the cause of Hitler into a dramatic fall of combat motivation. All these considerations taken, as well as several historians' evaluations provide us the conclusion that the overall combative value of the SS warriors drafted from GEG Romania was of an average level rather than exceptional. Taking everything into account, Waffen-SS leadership seems to have failed to maximise and make the best use of the military and ideological training which had been inflicted to the German ethnic recruits originated from Romania.

Acknowledgement: This work is supported by project POCU 153770 entitled: "Accessibility of advanced research for sustainable economic development – AKADEMIKA", co-financed by the European Social Fund under the Human Capital Operational Programme 2014-2020.

⁴⁷ LAC, Ottawa: 12 SS and Panzer Lehr Div.: Panzer Operations 6-8 Jun 44 – Questions answered by Kraemer and Beyerlein, 28 Apr 48, Ref. No: RG24-G-3-1-a, Vol./Box number 20529, File No: 981SOM (D272).

⁴⁸ Idem.

⁴⁹ Hansjoachim Wolfgang Koch, *The Hitler Youth. Origins and Development 1922–1945*, (New York: Cooper Square Press 2000), 104.

⁵⁰ Nuremberg Military Tribunal NO-2015, *Der Reichsleiterdienst*, 28.12.1943, 2.

⁵¹ Milata, 280.

⁵² SS-Führungshauptamt (SS Main Leadership Office).

⁵³ Milata, 283.

FINANCIAL ASPECTS REGARDING THE ISSUE OF ACCESS TO EDUCATION IN ROMANIA DURING THE INTERWAR PERIOD

Mitru Alexandru

Valahia University of Târgoviște, România

Abstract

The role played in the Romanian society by the pre-university education system, within the new socio-political realities existing in the interwar period, was continuously in the attention of the political class. After the First World War, Romania encountered numerous difficulties regarding the financing of pre-university education. One of the main problems was the limitation of the budget for education, influenced by the poor economic conditions and the political priorities of each ruling party.

The governmental financing policy of pre-university school units must also be analyzed from the perspective of the difference between the number of children reviewed and the number of those enrolled in various forms of education or who attended classes regularly, in close connection with the declared goal to eliminate illiteracy. The magnitude of the problem represented by illiteracy among school-aged children (5-18 years) is also highlighted by the comparative analysis of the statistical data recorded in the interwar period regarding the number of children reviewed and the number of children enrolled in primary and secondary schools.

Beyond the divergences caused by the different visions expressed by the political forces and the different way of organizing the national education system itself, almost all politicians agreed on the fact of focusing pre-university education around the idea of the homeland.

Keywords: the interwar period, pre-university education, budget allocations, access to education

After the First World War, Romania encountered numerous difficulties regarding the financing of pre-university education. One of the main problems was the limitation of the budget for education, influenced by the poor economic conditions and the political priorities of each ruling party. This has led to limited resources for education, to difficulties in covering salary and construction costs for schools, but also those necessary to equip school units with didactic materials.

In the period 1920-1921, large budget deficits were recorded and, although budget revenues increased 13 times compared to the pre-war period, expenses increased 18 times. In the years 1921-1923, the percentage of the general state budget allocated to education was 9.5%. This percentage later increased, reaching 17.8% in 1939 [11, p. 68].

For the period 1921-1932, the average percentage of the general budget allocated to the Ministry of Education and Religion was 12.5%. This percentage was much lower than the budgetary allocations for education in other European states. If we look at the expenses made for education in 1932, we notice that Romania allocated 17% of the state budget without the autonomous governments, while countries like the Netherlands or Denmark allocated more than 20% of the total state budget [18, p. 9]. This aspect also results from the gross domestic product per inhabitant, calculated in the interwar period in international dollars. Countries that have shifted their economies towards industry and services have generally experienced significant growth in gross domestic product. Denmark made an increase from 4,598 in 1926 to 5,762 in 1938, while Greece progressed from 2,180 in 1926 to 2,677 in 1938. On the other hand, countries where agriculture remained the main economic branch had a weaker economic performance, with a modest increase in gross domestic product. Thus, in Yugoslavia the gross domestic product per inhabitant increased from 1,263 in 1926 to 1,356 in 1938, while in Romania it decreased from 1,258 in 1926 to 1,242 in 1938 [1, p. 478].

The gap recorded between the Romanian economy and the economy of other European countries is also highlighted in terms of comparisons regarding another economic indicator: the national income per inhabitant. It was mainly used in the interwar period, but the data is sufficient to make a relevant comparison with the other European countries only for the end of this period.

As for Romania, for the year 1938 the value of the national income showed a rather important fluctuation, depending on the opinions of several researchers, ranging from 65-70 dollars to 110 dollars. But the value argued by critical analysis and divergent estimates of the national income per inhabitant

was accepted by specialists at 76 dollars [12, p. 216-127]. In comparison, in Denmark this indicator reached the value of 318 dollars in 1938, in Poland the value of 104 dollars, and in Greece 80 dollars [16, p. 138].

The economic difficulties recorded after 1929 were directly reflected in the dynamics of budget expenditures allocated to education. During the economic crisis of 1929-1933, the budget of the Ministry of Education and Religion was significantly reduced in real terms from 38,350,000,000 lei in 1928 to 20,452,000,000 lei in 1934/1935 [10, p. 663]. Unfortunately, the economic recovery from 1934-1938 did not lead, in real terms, to the recovery of the level of budget allocations from 1928. Although there was an increase in the share of the budget allocated to the Ministry of National Education in the state budget expenditures, in 1938 that indicator represented only 97.3% of the level reached in 1928 [15, p. 6]. This aspect shows the fact that, at least in the second decade of the interwar period, the activity carried out by the Ministry of National Education was based on budgetary austerity.

The budget of the Ministry of Education and Cults was made on two expenditure groups: personnel and material, each group being divided by education category. The ministry's expenditure on personnel comprised the following categories: primary school, normal school, secondary school, trade school, trade school, vocational school and higher education. The expenses for the material domain included the same categories, to which two others were added: dormitories and canteens, as well as university scholarships. The Ministry allocated to the first category the largest expenditures for primary education, while to the second category the largest expenditures were made for the support of normal schools, with the maintenance of students. Staff costs for primary education increased steadily in the interwar period, closely related to the efforts of the governors to reduce the phenomenon of illiteracy and increase access to education for all social categories.

If in the school year 1921-1922 the ministry spent for primary schools the amount of 272,926,165 lei, in 1931 the amount spent reached 2,754,204,410, following that in the school year 1933-1934 these expenses were reduced to the amount of 1,750,187,256 lei. The expenses made for secondary schools followed the same fluctuation, from 107,998,522 lei allocated in the school year 1921-1922 to the most important budget allocation in 1930, in the amount of 749,143,300 lei, because in the school year 1933-1934 this amount to decrease to 362,877,658 lei [18, p. 12 - 13].

At the same time, the expenditures made by the ministry for the material category, allocated to primary education, decreased in a significant proportion, because the material maintenance of school units was, from a legal standpoint, the responsibility of the communes. In this context, the amount allocated by the ministry for the material support of primary schools decreased constantly from 22,599,620 thousand lei in the school year 1921-1922, reaching the amount of 1,779,990 thousand lei in 1929.

The ministry's policy towards supporting access to education for all social categories is also highlighted by the material expenses incurred for the operation of school dormitories and canteens. If in 1921-1922 the sum of 6,722,800 lei was allocated for this purpose, in 1929, the sums allocated increased to 51,596,900 lei, so that in 1933-1934 the sum allocated for the maintenance of canteens and dormitories would decrease significantly, at 7,337,423 lei [18, p. 11]. This oscillating evolution was influenced both by the economic crisis that imposed certain budgetary constraints, and by the policy the political parties that came to power had towards normal and secondary education.

However, this aspect does not reflect the evolution of government policy regarding the construction of new premises for primary education. In the school year 1920-1921, in the educational network of the Ministry of Education and Religion, there were 6,508 primary schools (6,047 in rural areas and 461 in urban areas), 44 high schools, 17 gymnasiums, 10 seminaries, 53 normal schools (33 for boys and 20 for girls), 18 secondary schools for girls and 145 commercial, agricultural or vocational schools. In comparison, in the school year 1937-1938, in the public system, there were 2,151 kindergartens for children; 15,663 primary schools; 726 secondary schools; 23 seminaries and 73 agricultural schools. We can affirm that this concern regarding the construction of new school units remained constant in the policy of the ministry, if we take into account the fact that in 1921-1922 there were 8,739 primary schools, of which 5,341 had their own premises, and in 1932-1933 14,753 primary schools were operating, of which 11,235 have their own premises [18, p. 19].

Relevant in this direction was also the concern of the ministry to support the development of primary education in rural areas. Of the 5,341 primary schools with their own premises that operated in 1921-1922, 4,924 units were in rural areas and 417 in urban areas, and in 1928-1929, out of the 11,551 primary schools with their own premises, 10,695 were in rural areas and 856 in urban areas.

Thus, the ministry's policy to increase access to education for students from all social categories

also emerges from the interpretation of statistical data on the increase in the number of primary schools, depending on the area of origin. Thus, if in 1922-1923 out of a total of 12,431 primary schools, 1,004 operated in the urban environment and 11,427 in the rural areas [4, p. 426-429], in 1928-1929 out of a total of 14,780 primary schools, 1,040 operated in the urban areas and 13,740 in the rural areas [5, p. 328-332]. From this point of view, the evolution is ascending, registering, in the school year 1937-1938, a total number of 15,663 primary schools, of which 1,272 operated in the urban area and 14,391 operated in the rural area [10, p. 252].

The ascending evolution of the number of pre-university school units must also be analyzed in the context of the demographic growth recorded after the Union of 1918 [20, p.67]. The number of children reviewed and enrolled in primary schools has increased constantly. In 1921-1922, 1,435,845 students were enrolled in state primary schools (1,245,914 in rural schools and 189,931 students in urban schools) [18, p. 22-23], and in 1931-1932 the number of enrolled students increased to 2,054,283 (1,795,037 students in rural schools and 259,246 students in urban schools) [7, p. 320-322]. The increase was constant throughout the interwar period, the number of students enrolled in public primary education reaching 2,358,059 in the school year 1937-1938 (2,074,039 students in rural areas and 284,020 students in urban areas) [10, p. 252].

A fluctuating development has been registered with regard to secondary education. The statistical data show the inability of the ministry to support the development of secondary education in the rural environment, so that the statements regarding the reduction of inequities between the urban secondary school and the rural secondary school remained mere political actions. The number of students enrolled in rural secondary schools increased from 63,340 students in the school year 1921-1922 to 99,332 students in the school year 1927-1928. However, with the outbreak of the economic crisis, the number of students enrolled in rural secondary schools registered a constant decrease, reaching 55,568 students in the school year 1931-1932. For urban secondary schools, the statistical data show the same oscillating development, influenced by the economic crisis. In the year 1921-1922, 63,069 students were enrolled in urban secondary schools (with 271 students less than in rural secondary schools), so that in the year 1927-1928 they reached 107,255 students enrolled (with 7,923 students more than in rural secondary schools). After 1928, the evolution was also downward in this case and in the school year 1931-1932 it reached 88,754 enrolled students (33,186 students more than in rural secondary schools) [18, p. 52-53].

The governmental financing policy of pre-university school units must also be analyzed from the perspective of the difference between the number of children reviewed and the number of those enrolled in various forms of education or who attended classes regularly, in close connection with the declared action to eliminate illiteracy [14, p. 27]. Thus, immediately after the war, in the school year 1920-1921, a number of 1,516,198 students were enrolled in public primary schools, to which were added 26,973 students enrolled in private primary schools. According to the statistical data, only 1,169,790 out of the 1,516,198 students enrolled in the public system attended primary classes regularly. Thus, in this school year alone, 346,408 children from those enrolled in primary schools remained outside the educational system [3, p. 235-237].

The issue of including all school-age children in the compulsory primary cycle seemed intractable for the governing political parties. Despite the declarations regarding the interest in combating illiteracy, the need to ensure equal opportunities, offered by the Constitution of 1923 to all children of school age, did not register a significant positive evolution in the interwar period. According to statistics, in the school year 1927-1928, 1,673,882 students were enrolled in primary schools, of which only 1,302,814 students attended classes regularly [4, p. 420-425]. Compared to the school year 1920-1921, the number of children who remained out of primary school was higher, registering a total of 371,068 students who did not attend classes regularly in the school year 1927-1928. This gap increased significantly during the economic crisis, when out of the 1,973,949 children enrolled in the school year 1930-1931 in primary schools, only 1,451,800 students attended classes regularly [6, p. 344-350]. The number of those who did not regularly attend school thus increased to 522,149 children in that school year. The difference also increased in the school year 1932-1933, when out of the 2,171,196 children enrolled in the state's primary schools, only 1,493,294 students attended classes regularly, while the remaining 677,902 children attended school classes sporadically [8, p. 404-411].

The magnitude of the problem represented by illiteracy among school-aged children (5-18 years) is also highlighted by the comparative analysis of the statistical data recorded in the interwar period regarding the number of children reviewed and the number of children enrolled in primary and secondary schools. In this context, for the school year 1930-1931, 3,854,623 children were reviewed [18, p. 24], of which 1,973,949 children were enrolled in public primary schools, 136,849 children were enrolled in

private primary schools, 2,319 children were homeschooled, 153,239 students were enrolled in public secondary schools, 27,820 students were enrolled in private secondary schools, while 15,030 children were home-schooled [9, p. 210-249].

For the school year 1937-1938, 4,460,586 children were reviewed, of which 2,358,059 students were enrolled in public primary schools, 133,184 students were enrolled in private primary schools, 2,319 children were homeschooled, 171,065 students had been enrolled in public secondary schools, 35,922 students were enrolled in private secondary schools and 11,760 children were homeschooled. The difference recorded between the two indicators grew alarmingly in real terms (although it decreased in percentage by 0.9%), for the period between the school years 1930-1931 and 1937-1938, from 1,545,417 children (40.1%) who were not included in the education system, in 1,748,277 children (39.2%). When we refer to these two indicators, in order to analyze the problem of illiteracy, we must take into account the fact that the data collected by the Ministry of National Education for the number of children of school age reviewed (by age categories: 5-7 years; 7-16 years and 16-18 years) [10, p. 241-287], does not distinguish between those who have attended primary school and those who have not (given that primary school is usually completed at the age of 12-14). For this reason, the resulting difference between the reviewed children and the number of enrolled students did not represent the number of illiterates. However, this analysis highlights the way in which the Ministry of Education and Cults has really managed the problem of including school-aged students in a form of education, which would contribute to the achievement of the goal of reducing / eliminating illiteracy.

There was a close relationship between the number of children enrolled in public schools and the number of teachers registered in state primary and secondary schools. In the interwar period, the issue of providing qualified personnel to school units in the pre-university system was managed with great difficulty. In the school year 1920-1921, a number of 25,744 teachers were registered in public primary schools, who looked after 1,516,198 students. An analysis by historical provinces highlights the fact that the situation of teachers was as follows: in the Old Kingdom there were 11,731 teachers in the rural area, with an average of 61 students per class, and 1,945 teachers in the urban area, with an average of 57 students in class; in Basarabia, 2,422 teachers worked in the rural environment, with an average of 49 students per class, and 516 teachers in the urban area, with an average of 33 students per class; in Bucovina, 2,056 teachers worked in rural and urban schools, with an average of 51 students per class; 7,074 teachers worked in Transilvania, with an average of 62 students per class [2, p. 231-234].

Considering the policy of combating illiteracy promoted by the government authorities through the development of the primary school, the situation of the teaching staff improved in general, to an important extent, in terms of the average number of students they had to work with in the classroom. In the school year 1927-1928, in public schools, a number of 1,673,882 students were registered (1,474,708 students in the rural areas and 199,174 students in the urban areas), for which the state ensured the financing of 37,338 positions (31,929 in rural areas and 5,409 in urban areas). With an increase in the number of students enrolled in primary schools of 157,684 students, there was an increase in the number of teaching posts by 11,594 teachers. The situation regarding the number of students a teacher was required to work with, on average, improved in all provinces: in the Old Kingdom, 16,951 teachers worked in rural area, with an average of 46 students per class, compared to 61 students, the average of the school year 1920–1921, and 3,019 teachers in the urban area, with an average of 37 students per class, compared to the previous one of 57 students; in Basarabia, 5,680 teachers worked in rural schools, with an average of 45 students per class, compared to the average of 49, and 860 teachers in urban schools, with an average of 39 students per class, compared to the previous one of 33; In Bucovina, 1,956 teachers worked in the rural areas, with an average of 40 students per class, and 562 teachers in the urban areas, with an average of 28 students per class (the urban/rural ratio is 37.5 students per class, against the average of 51 students); in Transilvania, 7,342 teachers worked in rural schools, with an average of 47 students per class, and 968 teachers in urban schools with an average of 38 students per class (the rural/urban ratio is 46.3 students per class, against the average of 62 students) [4, p. 420-429].

Budget constraints during the economic crisis of 1929-1933 severely affected government policies regarding the development of primary education. One of the ministry's actions was to increase the number of students in a class, in order to save on staff costs. Thus, in the school year 1930-1931 the situation was so difficult that all the achievements made in relation with optimizing the number of students in a class, which had aimed to ensure a quality instructional-educational process, were cancelled. In this school year, 1,973,949 students were enrolled in public primary schools (1,730,115 students in rural areas and 243,834 students in urban areas), for which the state financed only 34,754

teacher positions (29,326 in rural areas and 5,428 in urban area). Compared to the school year 1927-1928, 300,067 more students were enrolled in public primary school. However, in the school year 1930-1931, 2,584 fewer positions were funded than in the school year 1927-1928. This policy of reducing the number of posts in the primary school had the effect of returning to the large number of students that a teacher had in the classroom. In the Old Kingdom there were 14,094 teachers in rural schools, with an average of 63 pupils per class (compared to 46 pupils in the school year 1927-1928 and 61 pupils in the school year 1920-1921), and 3,030 teachers in schools urban, with an average of 46 students per class (compared to 37 students in the school year 1927-1928 and 57 students in the school year 1920-1921). And in the other provinces, the situation was similar: in Basarabia, 5,402 teachers worked in the countryside, with an average of 55 students per class (compared to 45 students in the school year 1927-1928 and 49 students in the school year 1920-1921), respectively 759 teachers in the urban environment, with an average of 44 students per class (compared to 39 students in the school year 1927-1928 and 33 students in the school year 1920-1921); in Bucovina, 1,939 teachers worked in rural schools, with an average of 46 students per class, compared to 40 students in the school year 1927-1928, and 587 teachers in urban schools, with an average of 32 students per class, compared to of 28 students in the school year 1927-1928 (compared to the rural/urban average recorded in the school year 1920-1921 of 51 students and 37.5 students in the school year 1927-1928, in the school year 1930-1931 it was recorded an average of 42.7 students per class); in Transylvania, 7,891 teachers worked in the rural environment, with an average of 58 students per class, compared to 47 students in the school year 1927-1928 and 1,052 teachers in the urban area, with an average of 47 students per class, against 38 students in the school year 1927-1928 (compared to the rural/urban average recorded in the school year 1920-1921 of 62 students and 46.3 students in the school year 1927-1928, in the school year 1930-1931 of an average of 56.5 students per class was recorded) [6, p. 344-352].

Overcoming the economic crisis has determined a positive evolution of the problems related to the large number of existing students in a class of public primary education. This evolution was different from province to province and was not the result of a coherent policy for the development of primary education and the regulation of existing discrepancies between the regions of the country. In the school year 1935-1936, a number of 2,339,892 students were enrolled in the public primary school (2,061,002 students in the rural areas and 278,890 in the urban areas), for which 43,181 teaching positions were financed (36,656 in rural areas and 6,525 in urban areas) [10, p. 252]. The situation of the existing teaching staff in each province was as follows: in the Old Kingdom, 19,605 teachers worked in the rural areas, with an average of 55.4 students per class, and 3,930 teachers in the urban areas, with an average of 43.2 of students in class; in Basarabia, 6,026 teachers worked in the rural areas, with an average of 51.7 students per class, and 809 teachers in the urban areas, with an average of 39.3 students per class; in Bucovina, 2,071 teachers were registered in the rural areas, with an average of 53.2 students per class, and 545 teachers in the urban areas, with an average of 39.3 students per class; in Transylvania, 8,954 teachers worked in the rural areas, with an average of 61.7 students per class, and 1,241 teachers in the urban areas, with an average of 47.4 students per class [9, p. 210-211].

The positive evolution continued in the school year 1936-1937, the last year to which we can refer to the historical provinces (in the school year 1937-1938 the statistical data are reported in accordance with the new administrative organization of the country, respectively by lands). Although the number of students enrolled in public primary schools decreased by 1,041 in the school year 1936-1937, compared to the school year 1935-1936, the number of teaching staff in primary education increased by 1,979 teachers (from 43,181 to 45,160). Thus, in the Old Kingdom, 20,167 teachers worked in rural schools, with an average of 54.2 students per class, and 3,913 teachers in urban schools, with an average of 41.7 students per class. In Basarabia, 6,271 teachers worked in the rural environment, with an average of 50 students per class, and 802 teachers in the urban environment, with an average of 38.6 students per class. In Bucovina, 2,173 teachers worked in rural schools, with an average of 51.2 students per class, and 574 teachers in urban schools, with an average of 37 students per class. In Transylvania, 9,850 teachers worked in rural areas, with an average of 55.2 students per class, and 1,410 teachers in urban areas, with an average of 42.8 students per class [17, p. 210-211]. In the school year 1937-1938, 2,358,059 students were registered (2,074,039 in the rural areas and 284,020 in the urban areas), with 19,208 students more than in the school year 1936-1937. In this situation, however, the number of teaching staff increased by only 609 teachers (from 45,160 to 45,769). At the level of the 10 provinces, in 1937-1938, 38,759 teachers worked in the rural area, with an average of 53.5 students per class, and 7,010 teachers worked in the urban area, with an average of 40.5 of students in class [10, p. 252-253].

After the economic crisis, the government policy regarding this issue failed to substantially reduce

the differences recorded between rural and urban schools. According to the analysis of the statistical data, the situation continued to be quite difficult for teachers to manage, given that the average number of children in a class at the end of the interwar period was very high, at even higher values than those before the great economic crisis.

Compared to the school year 1930-1931, in the school year 1937-1938 the number of registered students was higher by 365,943 students, and the number of teaching staff increased by 11,015 teachers. In this context, the average number of students in a class decreased in rural areas from 59 students to 53.5 students, and in urban areas from 45 students to 40.5 students. However, comparing the data recorded in the school year 1927-1928 with those recorded in the school year 1937-1938, it results that in the primary school, in the rural areas, the average number of students in a class increased from 46.2 students to 53.5 students, and in the urban area the average number of students per class increased from 36.8 students to 40.5 students.

The presented percentages rather give the picture of a failure of the educational policies supported by the government authorities in terms of reducing illiteracy among the school-age population and increasing the quality of the educational process, as well as in terms of reducing the existing gaps between the provinces of the country and the discrepancies recorded between the primary school in the urban area and the rural primary school, respectively ensuring equal opportunities for the young generation.

Conclusions

The role played in the Romanian society by the pre-university education system, within the new socio-political realities existing in the interwar period, was continuously in the attention of the political class. The Romanian school was considered the foundation on which the project of building national identity and consciousness had to be built. This aspect determined the appreciation of the Romanian School as an essential institution of national morality. The national character of education and the aspirations of interwar education were transposed in the Constitution of 1923 and respectively in the education laws adopted during this period. Starting from these limitations, with all the effort made by the Ministry of Public Instruction, it is important to state that in 1930, the share of illiteracy among the population that had passed the age of entry into the educational system was 43% (or 54.3% of the whole population) [12, p. 310].

The Romanian state granted a significant budget to the Ministry of Public Instruction in relation to the state budget. The percentage of 17%, granted in 1932, was above what neighboring states allocated to Romania: Bulgaria 15%, Poland 14.3% and Hungary 14.2% [18, p. 9-10]. For a correct analysis of budget expenditures, it is important to state that after 1930 the budget allocated to the Ministry of Public Instruction was reported to the state budget, without the budgets of autonomous state companies. If reporting were done to the general state budget, the percentage allocated to the Ministry of Public Instruction would have a lower value. This would represent the budgetary allocation at a percentage closer to the real value with which the state supported the education system. In order to have an image as close as possible to reality, in this case, we must also take into account two other, very important aspects. The first refers to the fact that after the administrative organization of 1924, the material maintenance of primary schools was entrusted to the local authorities. The second aspect refers to the fact that, regarding the organization of professional and technical education, there were many school units financed from the budgets of other ministries. In 1926, for agricultural education, out of the 192 pre-university education units in this field, 93 schools were financed by the Ministry of Public Instruction, 94 schools were financed by the Ministry of Agriculture and Fields and 5 school units were financed by other ministries [4, p. 456-457].

In the interwar period, the role of the school was to prepare the individual for integration into the social community, to build social solidarity and to achieve "national soul unification and bringing back to the nation those alienated from it" [19, p. 8]. Beyond the divergences caused by the different visions expressed by the political forces and the different way of organizing the national education system itself, almost all politicians agreed on the fact of focusing pre-university education around the idea of the homeland. This aspect did not mean the deviation of the education system "from its natural path of instruction but the association of a national goal, a target" [13, p. 10]. Considering this constant in the expression of educational policies and the data on budget allocations compared to the financial effort made by other European states, it can be stated that, unfortunately, in Romania, the reform of the interwar pre-university education system was supported more at the declarative level and less financially. After comparing the data provided by the allocation of expenses to the education system for the year 1931-1932, as we have shown in this chapter, we note that Romania allocated 17% of the

general budget for the Ministry of Education, while Denmark allocated 21%, and Netherlands 25% of the general budget [18, p. 9-10]. This situation is quite relevant in terms of the government's interest in the successful implementation of educational reforms, taking into account the fact that the illiteracy rate for the school-age population in Romania was 43% in 1930, while in Denmark the phenomenon had been almost eliminated in the beginning of the 20th century (in 1901 the percentage was about 4%) [12, p. 310].

This aspect had a negative role in the implementation of reform projects, regardless of the political color of the government or the pedagogical vision of the initiator of the educational reform, contributing essentially to the failure of the objectives proposed in the electoral programs regarding educational policies. Despite the efforts made, the structure of the national income in the interwar period did not undergo important changes related to the two main fields of activity. Thus, if in the years 1920-1924 agriculture represented 38.9% of the national income, in the years 1935-1939 the percentage experienced a slight increase reaching 39.4% (while in Denmark, in the years 1920-1924 agriculture represented 25% of the gross domestic product, in the years 1935-1939, the percentage registered a significant decrease to 18%). Industry represented a 30.7% share in Romania's national income in the years 1920-1924, registering an increase of almost 4 percent in the years 1935-1939, thus reaching 34.5% (while in Denmark the increase is much more significant: from 24% in the years 1920-1924, to 32% in the years 1935-1939). Regarding the increase in labor productivity in agriculture, Romania's situation was equally poor, in 1938 it reached a level of 80 dollars/person employed in agriculture, while in Bulgaria the value was 110 dollars, in Czechoslovakia \$200, and in Denmark \$440/person employed in agriculture [12, p. 241-283].

After analyzing the official data on the financing of Romanian pre-university education, we can conclude that, compared to the general situation at the beginning of the 20th century, in the interwar period significant progress was recorded in several significant areas such as the number of school units, the number of students per class, the number of teachers or the number of students enrolled in the primary cycle. However, if we refer to the objectives set by the educational policies and the existing financial situation in other European countries, we observe an increase in the gap recorded between the performances of the Romanian pre-university educational system and the educational systems implemented in the respective countries.

The list of references

1. Angus Maddison *The World Economy. Volume 2: Historical Statistics*, OECD Publishing, Paris, 2006.
2. *Anuarul Statistic al României 1923*, Tipografia Curții Regale, București, 1924.
3. *Anuarul Statistic al României 1924*, Tipografia Curții Regale, București, 1925.
4. *Anuarul Statistic al României 1928*, Institutul de Arte Grafice Eminescu, București, 1929.
5. *Anuarul Statistic al României 1930*, Imprimeria Națională, București, 1932.
6. *Anuarul Statistic al României 1931-1932*, Imprimeria Națională, București, 1933.
7. *Anuarul Statistic al României 1933*, Imprimeria Națională, București, 1934.
8. *Anuarul Statistic al României 1934*, Tipografia Curții Regale, București, 1935.
9. *Anuarul Statistic al României 1937 și 1938*, București, 1939.
10. *Anuarul Statistic al României 1939 și 1940*, Imprimeria Națională, București, 1940.
11. Aurel Pițurcă, *Istoria Economiei Naționale. Suport de curs*, Editura Universității din Craiova, Craiova.
12. Bogdan Murgescu, *România și Europa. Acumularea decalajelor economice (1500-2010)*, Editura Polirom, Iași, 2010.
13. Constantin Kirițescu, *Apărarea națională și școala. Conferință ținută la Universitatea Liberă*, Editura Casei Școalelor, București, 1927.
14. *Constituția României*, in *The Official Monitor of Romania*, No. 289 din 29 martie 1923.
15. Florin Marius Pavelescu, *Învățământul din România în perioada 1919-2017*, București, 2018.
16. Gheorghe Dobre (coord.), *Economia României în context european-1938*, Editura Fundației Științifice „Memoria Oeconomica”, București, 1996.
17. Iosif I. Gabrea, *Din problemele școlii românești*, Editura Cultura Românească, București, 1937.
18. Iosif I. Gabrea, *Școala românească. Structura și politica ei. 1921-1932*, Editura Bucovina, București, 1933.
19. Iosif Gabrea, *Mișcarea pedagogică din România între anii 1920-1940: Extras din Revista de Pedagogie*, vol X/1940, Tipografia Bucovina, București, 1940.

20. Victor Axenciuc, *Produsul intern brut al României. 1862-2000. Serii statistice seculare și argumente metodologice*, vol. II, Editura Economică, București, 2000.

Jurisprudence

CURRENT PROBLEMS OF THE FORMATION OF THE LEGAL ENTITY OF THE TERRITORIAL COMMUNITY IN UKRAINE IN THE CONTEXT OF BORROWING EUROPEAN EXPERIENCE MUNICIPAL DEMOCRACY

Mykhailo Baimuratov

*Doctor of Law Habilitat, Professor,
Honored Worker of Science and Technology of Ukraine,
academician of the Ukrainian Academy of Sciences,
Professor of the Department of Political Sciences and Law
South Ukrainian National Pedagogical School University named after K.D. Ushinsky,
Ukraine*

Boris Kofman

*Doctor of Law Habilitat, Senior Researcher,
Honored Lawyer of Ukraine,
Professor of the Department of Law
A. Nobel University,
Ukraine*

АКТУАЛЬНІ ПРОБЛЕМИ ФОРМУВАННЯ ПРАВОСУБ'ЄКТНОСТІ ТЕРИТОРІАЛЬНОЇ ГРОМАДИ В УКРАЇНІ В КОЕНТЕКСТІ ЗАПОЗИЧЕННЯ ЄВРОПЕЙСЬКОГО ДОСВІДУ МУНІЦИПАЛЬНОЇ ДЕМОКРАТІЇ

Баймуратов Михайло Олександрович

*доктор юридичних наук, професор,
Заслужений діяч науки і техніки України,
академік Української академії наук,
професор кафедри політичних наук та права
Південноукраїнського національного педагогічного університету ім. К.Д. Ушинського,
Україна*

Кофман Борис Якович

*доктор юридичних наук, старший дослідник,
Заслужений юрист України,
професор кафедри права
Університету імені А. Нобеля,
Україна*

Abstract

The article is devoted to the study of the actual problems of the formation of the legal personality of the territorial community in Ukraine in the context of borrowing the European experience of municipal democracy. The architecture is studied and a systematic analysis of the project Concept of the community as a legal entity under public law is provided. It is proven that the development of the project shows a change in the paradigm of the formation of the legal personality of the territorial community in Ukraine (from its complete rejection to a conscious understanding of the necessity), which is directly facilitated by the requirements of the European Union in the process of starting negotiations of our country regarding membership in this interstate association. The objectification, awareness and understanding of this issue, its importance for the further development of local self-government in the state, is also observed at the doctrinal and project level in the scientific and expert environment of our country, the result of which is the development of the project Concept of the community as a legal entity under public law. It is noted that granting the territorial community the legal status of a legal entity under public law is certainly a powerful and effective means of forming their proper and sufficient legal personality.

Анотація

Стаття присвячена дослідженню актуальних проблем формування правосуб'єктності територіальної громади в Україні в контексті запозичення європейського досвіду муніципальної демократії. Досліджується архітектоніка та надається системний аналіз проєкту Концепції громади як юридичної особи публічного права. Доводиться, що розробка проєкту свідчить про зміну парадигми формування правосуб'єктності територіальної громади в Україні (від її повного несприйняття до усвідомленого розуміння необхідності), чому напряду сприяють вимоги Європейського Союзу в процесі початку переговорів нашої держави щодо членства в цьому міждержавному об'єднанні. Об'єктивація, усвідомлення і розуміння цієї проблематики, її значення для подальшого розвитку місцевого самоврядування в державі, спостерігається й на доктринально-проєктному рівні в науковому і експертному середовищі нашої держави, результатом чого й є розробка проєкту Концепції громади як юридичної особи публічного права. Констатується, що надання територіальній громаді правового статусу юридичної особи публічного права, безумовно, є могутнім та ефективним засобом формування їх належної та достатньої правосуб'єктності.

Keywords: local self-government, legal personality of territorial community, legal entity under public law, European Charter of Local Self-Government, international standards of local self-government.

Ключові слова: місцеве самоврядування, правосуб'єктність територіальної громади, юридична особа публічного права, Європейська хартія місцевого самоврядування, міжнародні стандарти місцевого самоврядування.

Вступ

Становлення в Україні системи місцевого самоврядування, як політико-правового інституту, що володіє конституційним статусом (див. ст. 5, 7, 92, розд. XI Конституції України [1]), є неможливим без вирішення питання формування належної та реальної правосуб'єктності територіальної громади (далі – ТГ), що виступає первинним суб'єктом МСВ (ст. 140 Конституції України) та його «альфою і омегою», бо вся структурна організація системи локальної демократії скерована на задоволення інтересів та потреб ТГ, її жителів-членів громади, а сформовані самою ТГ органи місцевого самоврядування (далі – ОМСВ), виступають і діють від її імені та в її інтересах.

Системний аналіз конституційних правоположень, а також профільного Закону України «Про місцеве самоврядування в Україні» від 21 травня 1997 року [2], дає можливість зробити однозначний висновок про те, що правосуб'єктність (далі – ПС) ТГ має неповний, частковий, фрагментарний характер, та може бути охарактеризованою як формальна або, ще більш конкретніше, як декларативна. Яскравим свідоцтвом цього виступає наявність прав ТГ тільки у сферах оновлення публічної влади на її різних рівнях (виборчий процес) через формування центральних та місцевих представницьких органів, участь у формах безпосередньої демократії (референдуми, сходи жителів по місцю проживання, місцеві ініціативи, участь в органах самоорганізації населення тощо), та повна відсутність прав ТГ у інших сферах соціального життя, враховуючи, що всі питання місцевого життя та розвитку надано фактично виконавчим ОМСВ, на формування яких жителі-члени ТГ фактично не впливають, або впливають опосередковано через механізм демократичних призначень.

Більш того, будуючи в Україні МСВ європейського зразку, відповідно до настанов Європейської хартії місцевого самоврядування 1985 року [3] (далі – ЄХМС), що підписана Україною в 6 листопада 1996 року [4] та ратифікована нею в 1997 році [5], нашою державою не враховується наявний досвід європейських держав-членів Ради Європи та Європейського Союзу щодо визначення правового статусу ТГ як юридичної особи публічного права, що надало б додаткові можливості для формування повноцінної ПС таких колективних суб'єктів права та посилює загальнодемократичні тенденції в суспільному та державному житті.

Треба зазначити, що всі спроби представників муніципально-правової доктрини щодо внесення відповідних пропозицій щодо цього при обговоренні змін і доповнень до Конституції України у складі робочої групи з конституційного права Комісії з правової реформи при Президентові України, стикались не тільки з небажанням представників діючої влади

погодитись на їх врахування, а й з їх прямим тиском проти ініціаторів таких пропозицій та спробами їх відвертого нівелювання – «не на часі», «це зруйнує унітарну державу», «це призведе до параді локальних суверенітетів» тощо.

Але такий стан справ різко змінився з набуттям Україною статусу кандидата у члени Європейського Союзу, коли треба було виконувати відповідну низку умов організаційного та законодавчого характеру для початку процесу переговорів щодо членства нашої держави в ЄС. Більш того, Європейська комісія в своєму листі з цього приводу прямо вказала на виконання Україною відповідних заходів щодо надання її ТГ статусу юридичної особи публічного права [6].

Треба зазначити, що ще до цього Центр політико-правових реформ за допомогою Програми «U-LEAD з Європою» (це програма співпраці між українським урядом, Європейським Союзом та його державами-членами Німеччиною, Швецією, Польщею, Данією та Словенією у створенні багаторівневої системи управління, яка є прозорою, підзвітною та відповідає на потреби громадян України [7]) створили робочу групу для розробки проєкту Концепції громади як юридичної особи публічного права [8] (далі – проєкт), до якої увійшли знані фахівці-правознавці з теорії права і держави, конституційного, адміністративного, цивільного, фінансового права А.П. Заєць, О.М. Бориславська, І.Б. Коліушко, Р.А. Майданик, О.В. Ільницький. Членами робочої групи була проведена велика робота, підсумком якої й став проєкт.

Проєкт Концепції громади як юридичної особи публічного права: архітектоніка та системний аналіз

У контексті архітектоніки проєкт складається: А) з 10 розділів та Б) 17 підрозділів / (розділи 4 (4 підр.), 5 (5 підр.), 6 (5 підр.), 8 (3 підр.) / та В) 10 підпунктів, що містяться у підрозділі 8 / 8.3 (4 підп./; 8.4 (6 підп.) /.

У розділі 1. «Характеристика проблеми, яка потребує розв'язання» констатується, що наділення не власне ТГ, а ОМСВ (рад та їх виконавчих органів) статусом юридичних осіб, є одним із рудиментів радянської авторитарної моделі. Це цілкомитово вкладалося в існуючу раніше модель організації публічної влади, оскільки всі місцеві ради були органами державної (а не самоврядної) влади та складали єдину ієрархічну систему, що функціонувала без будь-яких ознак підзвітності громадам. Отже, на фіксацію такого стану була спрямована уся державна політика, відлуння якої відчувається до сьогодні. Громада, попри конституційну декларацію її самостійності, так і не стала повноцінним суб'єктом публічного права, визнаного державою. Це простежується також у підході до тлумачення і офіційного перекладу українською мовою права на МСВ, закріпленого у статті 3 ЄХМС. Зазначено, про що говорив давно вітчизняний дослідник С. Панасюк [9], у офіційному українському перекладі Хартії це право віднесено до ОМСВ, замість віднесення його до місцевого самоврядування чи громад, що підтверджується перекладом англійською і французькою мовами («local authorities» англійською і «collectivités locales» французькою). Тому у подальшому в проєкті використовується переклад, що більшою мірою відповідає природі місцевої влади.

Також відмічається, що обмеження ПС ТГ негативно позначається на її здатності активно реалізовувати повноваження для ефективного забезпечення прав та потреб її жителів. Ба більше, наявність в ОМСВ значної частини делегованих повноважень із відповідним державним фінансуванням та адміністративним контролем призводить до значної централізації управління місцевими справами, а також негативно позначається на економічній самостійності ТГ. Крім того, об'єкти власності ТГ перебувають на балансі різних юридичних осіб, а відтак є поза контролем з боку громад. Це суперечить європейському досвіду функціонування МСВ, а також практиці імплементації ЄХМС в європейських державах, що функціонують на засадах демократії й верховенства права. Тому на відміну від радянської авторитарної моделі, організація публічної влади відповідно до західної традиції права передбачає партнерські (а не ієрархічні) відносини між державою та МСВ. За цією традицією, саме ТГ (муніципалітети, комуни), які є власниками комунального майна, фінансових ресурсів, земель тощо, є суб'єктами із повною правосуб'єктністю та володіють статусом юридичної особи. Відтак, надання ТГ статусу юридичної особи є передумовою досягнення справжньої їх незалежності, впорядкування комунальної власності та бюджетних відносин.

Реалізація в Україні європейської моделі МСВ потребує послідовної реалізації принципу публічно-правової автономії (самостійності) МСВ, визнання ТГ повноцінним суб'єктом правових відносин у формі юридичної особи публічного права, дотримання принципів субсидіарності при визначенні компетенції ТГ та впорядкування адміністративно-територіального устрою.

Розділ 2 проєкту «Мета концепції» містить відповідні телеологічні домінанти щодо

легалізації та легітимації ТГ як юридичних осіб публічного права. При цьому основною з них виступає реалізація реформи ПС ТГ шляхом надання їй статусу юридичної особи публічного права, а саме: а) обґрунтування потреби гарантування публічно-правової автономії (самостійності) ТГ та надання їй статусу юридичної особи публічного права; б) розкриття ознак ТГ як юридичної особи у сфері публічно-правових і приватно-правових відносин; в) загальна характеристика необхідних змін до Конституції України і чинного законодавства (цивільного, фінансового, бюджетного та податкового законодавства) для закріплення статусу ТГ як юридичної особи публічного права.

Розділ 3 проєкту «Європейські стандарти місцевого самоврядування і ПС громад» містить посилання на відповідні положення ЄХМС, що скеровані на реалізацію засад МСВ, а сама Хартія, що ратифікована Україною у 1997 р. та, відповідно до ч. 1 ст. 9 Конституції України, є частиною національного законодавства. Так, у Преамбулі ЄХМС наголошується на необхідності «існування МСВ, що має створені на демократичній основі органи, уповноважені приймати рішення, і широку автономію щодо своїх повноважень, шляхи і засоби здійснення цих повноважень, а також ресурси, необхідні для їх виконання», а стаття 3 визначає, що «МСВ означає право і спроможність громад у межах закону здійснювати регулювання та управління суттєвою часткою публічних справ, під власну відповідальність, в інтересах місцевого населення». Крім того є посилання на фундаментальні принципи МСВ, відповідно до Хартії: організаційна та фінансова самостійність МСВ; повнота та виключність повноважень МСВ; субсидіарність як спосіб розмежування повноважень. Зазначається, що системна реалізація цих засад потребує національних гарантій публічно-правової автономії (самостійності) МСВ, найважливішою з яких є публічно-правова суб'єктність ТГ. Тому відмічається, що відповідно до європейських стандартів МСВ, остання реалізується у формі надання ТГ статусу юридичної особи публічного права. Так, у резолюції від 11 лютого 2021 р. щодо імплементації Договору про асоціацію з Україною (2019/2202(INI)) Європейський парламент прямо закликав «...державну владу поважати автономію місцевого самоврядування та підтримувати адміністративну спроможність муніципалітетів і міст; закликає до запровадження поняття територіально-громадського утворення як юридичної особи, що є усталеною практикою в Європейському Союзі та визнано в Європейській хартії місцевого самоврядування...» (п. 19) [10]. Отже, можна констатувати, що наведені положення не тільки витікають з міжнародно-правових зобов'язань України з ратифікованої ЄХМС, а й повинні бути відображені у її національному законодавстві про МСВ у вигляді сформованої належної та повної, достатньої та ефективної ПС ТГ, в межах якої правовий статус її як юридичної особи публічного права займає центральне місце.

Розділ 4 проєкту «Публічно-правова автономія і публічно-правова суб'єктність громад» включає відповідні підрозділи щодо змістовного визначення публічно-правової автономії (самостійності) МСВ (4.1.); обґрунтування необхідності та позитивних наслідків визнання громади юридичною особою публічного права (4.2.); а також щодо суттєвого розширення тлумачення ТГ через необхідність визнання громади не лише первинною ланкою МСВ, а й первинною ланкою адміністративно-територіального устрою держави (4.3.); і визначення конституційної основи і меж ПС громад (4.4.) з метою нівелювання відцентрових тенденцій.

Отже, автори проєкту, по-перше, визначають зміст публічно-правової автономії (самостійності) відповідно до європейських стандартів і на основі децентралізації публічної влади; по-друге, це передбачає передачу частини публічної влади місцевим громадам, які є автономними (незалежними) від держави суб'єктами, що діють на основі самоврядування; по-третє, оскільки ТГ здійснюють значну частину публічної влади на основі принципу децентралізації (управління місцевими справами, що становлять публічний інтерес спільноти, колективом жителів певної частини території держави), вони наділяються відповідною публічно-правовою автономією (самостійністю).

При цьому зазначається, що публічно-правова автономія (самостійність) МСВ включає: а) відсутність ієрархічного підпорядкування ТГ та їх органів органам державної влади (фактор десубординації – авт.); б) наявність у ТГ власних публічних завдань і власних публічних інтересів (фактор загальної самостійності – авт.); в) фінансову самостійність, тобто здійснення фінансового управління під свою власну відповідальність (фактор фінансової самостійності в управлінні – авт.); г) закріплення відповідних доходів (фактор наявності власних доходів – авт.); г') право самостійно визначати напрями використання бюджетних коштів (фактор самостійності у бюджетному розпорядженні – авт.); д) самостійно і незалежно від держави затверджувати місцеві бюджети (фактор самостійності в затвердженні напрямів

бюджетування – авт.); е) право встановлювати місцеві податки і збори, змінювати розмір їх ставок, встановлювати об'єкти оподаткування та порядок справляння чи надання податкових пільг (фактор самостійності податкового регулювання – авт.); є) майнову незалежність, тобто здійснення права власності відповідно до публічно-правових завдань і публічних інтересів (фактор незалежності майнового регулювання – авт.). Отже, можна констатувати, що проєкт містить основоположні положення щодо управлінської, фінансово-правової та майнової самостійності ТГ, які від її імені сьогодні здійснюють представницькі та виконавчі ОМСВ.

Запропонована в проєкті модель реалізації публічно-правової автономії (самостійності) МСВ: по-перше, базується на визнанні ТГ повноцінним суб'єктом правовідносин для реалізації власних інтересів, здійснення ефективної співпраці з іншими суб'єктами; по-друге, звідси потребує наділення ТГ правосуб'єктністю, яка дозволяла б їй належним чином реалізовувати: а) своє призначення, б) уособлювати місцеву спільноту, в) здійснювати завдання, г) виконувати функції і повноваження; по-третє, оптимальною в цьому контексті виступає правова конструкція (модель) юридичної особи публічного права, в якій ТГ виступає як носієм публічних прав і обов'язків (суб'єктом владних повноважень), так і суб'єктом майнових та особистих немайнових прав з метою виконання покладених на неї Конституцією і законами завдань.

Отже, ПС ТГ у формі юридичної особи публічного права є суттєвим елементом її статусу, без якого неможлива послідовна реалізація принципів ЄХМС, включаючи: а) принцип автономії (самостійності) і б) її судовий захист, зокрема незалежна реалізація власних повноважень та використання власних ресурсів, забезпечення належного нагляду за дотриманням місцевим самоврядуванням Конституції і закону.

Стратегічною особливістю характеру публічно-правової самостійності ТГ виступає надання саме громадам, а не їх органам (радам, меру, виконавчим комітетам, окремим підрозділам) суб'єктного статусу у вигляді юридичної особи публічного права. Це слушно аргументовано тим, що ОМСВ ТГ не мають власного інтересу, створюються в офіційний спосіб для виконання конкретних повноважень, володіють спеціальним статусом виконавчих або представницьких органів, мають діяти від імені ТГ та в інтересах її мешканців. Отже, вони не можуть мати статусу юридичних осіб, оскільки не є первинним суб'єктом владних повноважень і не здійснюють політично владну діяльність від власного імені. Тому їхні повноваження (компетенція) обмежені статусом громади і чинним законодавством та підлягають контролю з боку громади.

Проєкт також передбачає передумови і наслідки запровадження ПС громади у формі юридичної особи публічного права. Його автори підтверджують положення, що неодноразово зазначались й авторами цієї статті [11]: хоча за ст. 142 Конституції України саме ТГ є власником майна, коштів, землі, природних ресурсів, а також об'єктів спільної власності, що перебувають в управлінні районних і обласних рад, а ст. 143 передбачає право ТГ безпосередньо або через утворені ними органами, управляти майном, що є у комунальній власності, проте профільний Закон України про МСВ не визначив ТГ як юридичну особу публічного права, підмінивши її, як первинного суб'єкта МСВ на ОМСВ, яких, по суті антиконституційно й наділив статусом юридичної особи. Крім того, у бюджетно-фінансовому законодавстві ТГ, як первинний суб'єкт МСВ, була також цілком проігнорована та навіть не згадана серед учасників фінансових правовідносин. Своєю чергою, Цивільний Кодекс України [12] вмістив досить суперечливе за змістом імперативне положення, що «ТГ набувають і здійснюють цивільні права та обов'язки через ОМСВ у межах їхньої компетенції, встановленої законом» (ст. 172).

Отже, надання ТГ профільного статусу означатиме не тільки: а) завершення перебудови взаємовідносин між державою та МСВ в Україні; б) досягнення незалежності МСВ; в) гарантування його спроможності ефективно забезпечувати базові потреби населення, надавати комплекс адміністративних та комунальних послуг належної якості, а й г) логічне і оптимальне формування власної компетенції МСВ, його органів та суб'єктів, насамперед, ТГ. А це, своєю чергою, створить передумови для впорядкування економічної бази громад, відкритості переліку об'єктів комунальної власності жителям, що сприятиме посиленню громадського контролю за діяльністю ОМСВ; чіткому визначенню суб'єкта, що діє від імені ТГ в тих чи інших правовідносинах і створить передумови для персоналізації юридичної відповідальності, бо ТГ стане деліктоздатним суб'єктом, а посадова особа чи ОМСВ, що уповноважені діяти від імені ТГ при здійсненні власних повноважень, нести будуть відповідальність за завдання шкоди громаді чи діяльність всупереч її інтересам. Крім того, це буде сприятиме повноправній участі ТГ у цивільних відносинах (на рівних правах з іншими учасниками цих відносин), можливості створення

ними юридичних осіб публічного та приватного права, реалізації права на судовий захист.

Автори проєкту також зазначають, що такий крок слугуватиме також відновленню усталеної української історичної традиції у сфері міського самоврядування, яка діяла упродовж століть за магдебурзьким правом – визнання міст суб'єктами правовідносин з наданням конкретних прав.

Проєкт містить і відповідні положення щодо інтеграційного визначення ТГ не лише первинною ланкою МСВ, а й первинною ланкою адміністративно-територіального устрою. Треба зазначити, що така пропозиція суперечить ст. 133 Конституції України, що визначає систему адміністративно-територіального устрою України, яку складають: Автономна Республіка Крим, області, райони, міста, райони в містах, селища і села. Автори вірно зазначають, що саме тут еkleктично поєднано адміністративно-територіальні одиниці (АРК, області, райони), населені пункти (міста, селища, села), які навіть за радянських часів ніколи не були всі визнані за адміністративно-територіальні одиниці, а нерідко входили лише як частина адміністративно-територіальної одиниці, а також частини міст – райони в містах, які є елементом організації внутрішнього управління міста і не є адміністративно-територіальною одиницею.

Необхідно наголосити на тому, що така система адміністративно-територіального устрою, отримана у спадок з радянських часів, вона не тільки не відповідає сучасним потребам управління, оскільки вказівка у Конституції України лише на одну ознаку громади, а саме – як об'єднання жителів, а й фактично відриває владу громади від її територіально-просторової основи, породжуючи складність у сприйнятті ТГ як суб'єкта публічного права. І це відбувається, незважаючи на те, що в ході реформи 2014-2020 років відбулося укрупнення ТГ, і вони перетворилися на об'єднані ТГ, але все ж вони також не мають конституційно-правового статусу адміністративно-територіальних одиниць. Внаслідок такого стану, в ТГ в 2017 і наступних роках обираються де-юре не голови громад, а сільські, селищні, міські голови.

Відмічається, що на відміну від такого підходу, в державах західної демократії базовою ланкою територіального устрою є громада (муніципалітет, комуна, гміна), що дає можливість уніфікувати систему адміністративно-територіальних одиниць базового рівня, створити передумови та однакові (рівні) підходи для їхнього функціонування й розвитку, й, своєю чергою, забезпечення ними потреб населення. Крім того, ТГ як триєдність: а) території, б) населення, що на ній проживає, і в) влади, що здійснюється ОМСВ (а в деяких випадках і самим населенням) стає повноцінним суб'єктом публічно-владних відносин. Вона є свого роду публічною корпорацією з власними інтересами, що захищаються в судовому порядку, проте функціонує виключно в рамках закону і під наглядом держави (її органів).

Саме тому, виходячи із зазначеного, автори проєкту слушно пропонують, щоб громада має бути визнана не лише первинною самоврядною одиницею МСВ, яка складається з мешканців громади, а й також первинною одиницею адміністративно-територіального устрою.

Позитивною частиною проєкту Концепції виступають пропозиції авторів відносно визначення меж ПС ТГ. Воно здійснюється на основі конституційної основи МСВ. Так, вказується, що, по-перше, Українська держава має конституційний обов'язок визнавати і гарантувати МСВ (ст. 7 Конституції України), що означає необхідність визнання їх в якості суб'єктів права. По-друге, функціонування МСВ, реалізація права громад у сфері публічної влади, а саме самостійно вирішувати питання місцевого значення (ст. 140 Конституції України) означає наявність і реальні можливості здійснення ТГ владних повноважень, а також відповідальність за свою політично-владну діяльність, що вимагає визнання публічно-правової суб'єктності громад і рівного ставлення до них у публічно-правовій сфері.

Разом з тим, необхідно враховувати й той факт, що в процесі виконання ТГ публічних завдань, вони мають користуватися практично тими ж самими управлінсько-технологічними та нормативно-правовими інструментами, що й держава при здійсненні своїх повноважень (засоби управлінської діяльності, адміністративні і нормотворчі повноваження, засоби контролю за дотриманням вимог нормативних і розпорядчих актів тощо). В той же час феномен ПС громади визначається тільки правовим устроєм, що формується державою, а це означає, що ПС можлива лише в рамках Конституції і закону. Отже, виходячи з положень ст. 19 Конституції України про те, що «Органи державної влади та ОМСВ, їх посадові особи зобов'язані діяти лише на підставі, в межах повноважень та у спосіб, що передбачені Конституцією та законами України», ТГ, як одиниці МСВ, повинні діяти та діють в умовах конституційного принципу унітарності держави, тому вони не можуть його ніяким чином порушувати, а саме – не можуть

мати і не мають жодних атрибутів чи характеру державності чи права виходу із держави або ж власних необмежених повноважень.

Такому підходу співзвучні й положення ст. 4 ЄХМС, що встановлює таке: а) головні повноваження і функції МСВ визначаються конституцією або законом (ч.1), б) МСВ в межах закону має повне право вільно вирішувати будь-яке питання, яке не вилучене зі сфери їхньої компетенції і вирішення якого не доручене жодному іншому органу (ч.2), в) повноваження, якими наділяється МСВ, як правило, мають бути повними і виключними, вони не можуть скасовуватися чи обмежуватися іншим, центральним або регіональним органом, якщо це не передбачене законом (ч. 4). Ба більше, поєднання змісту цих положень із вимогами Конституції України, за якими МСВ – це право громади (ч.1 ст. 140), яке здійснюється «громадою як безпосередньо, так і через ОМСВ» (ч.3 ст. 140) означає, що більшість повноважень, які здійснюються громадами на основі закону, є власними, а не делегованими державою (хоча у законодавчій практиці спостерігається протилежний стан – на кожне власне (самоврядне) повноваження МСВ випадають три делегованих МСВ повноважень виконавчої влади – авт.).

Хоча ч. 5 ст. 4 ЄХМС й визнає можливість делегування державою окремих повноважень ОМСВ, існує вимога, що у такому разі ОМСВ у міру можливості мають право пристосовувати свою діяльність до місцевих умов. При цьому, посилення статусу ТГ, забезпечення її самостійності має супроводжуватися створенням дієвого механізму державного нагляду за законністю діяльності громад і їхніх органів, що має бути ефективним запобіжником зловживань та порушень Конституції і законів.

Розділ 5 проєкту Концепції «Ознаки правосуб'єктності громади у сфері публічно-правових відносин» по своїй структурній організації може бути поділений на дві частини: перша – загальна, де чітко визначаються засади наявності чітко визначених цілей, завдань, функцій і компетенції ТГ як юридичної особи публічного права (підр. 5.1); друга частина – особлива, де ідентифікуються основні ознаки ПС ТГ як юридичної особи публічного права, до якої авторами включено наступні права: а) право громад брати участь у публічних доходах (підр. 5.2); б) право встановлювати розмір місцевих податків і зборів (підр. 5.3); в) право на судовий захист самостійності (підр. 5.4); г) право формувати власні нормотворчі та виконавчі органи, право створювати організаційні підрозділи, право визначати їхню внутрішню систему (з визначенням юридичної природи цих органів та меж їх компетенції) (підр. 5.5).

Формулюючи та пропонуючи наведені вище ознаки ПС ТГ, автори проєкту виходили з того, що, по-перше, загальноприйнятою європейською практикою є включення до сфери відання МСВ усього кола питань, що є предметом «публічного інтересу на місцевому рівні». А, по-друге, вони виходили з того, що наявність у ТГ статусу юридичної особи дає можливість створити відповідну охоронну систему, що базується на точному законодавчому врегулюванні як її компетенції, так й упередженні з її боку будь-яких свавільних дій, а також можливості створення контрольних і наглядових механізмів за дотриманням нею Конституції та законів України.

Розділ 6 проєкту присвячений фіксуванню ознак громади у сфері цивільно-правових відносин, що фактично й складають сферу існування та діяльності юридичної особи публічного права. Тут закріплюється низка положень, що дійсно демонструють цивільну ПС ТГ як: а) рівноправного учасника цивільно-правових відносин; б) її організаційну єдність; в) право на власне майно та право укладати договори, інші правочини; г) самостійну відповідальність ТГ за своїми зобов'язаннями; г') право бути позивачем і відповідачем у суді у цивільно-правових відносинах.

Розділ 7 проєкту присвячено регламентації порядку надання громаді статусу юридичної особи публічного права. Він містить відповідні процесуально-процедурні норми відносно такого порядку. Так, вважається, що:

А) усі існуючі ТГ мають отримати статус юридичної особи публічного права безпосередньо на основі закону про встановлення такого статусу за громадами в Україні;

Б) норми такого закону є підставою для внесення відповідних відомостей про кожну громаду як адміністративно-територіальну одиницю і як первинного суб'єкта МСВ зі статусом юридичної особи публічного права Міністерством фінансів, Міністерством юстиції, Державною казначейською службою, органами статистики та іншими органами державної влади;

В) нові громади утворюватимуться в порядку визначеному законом для змін адміністративно-територіального устрою. Він має передбачати участь жителів відповідних територій у прийнятті рішення щодо утворення нової громади, об'єднання кількох існуючих громад або виділення громади із існуючої.

Г) на його підставі має ухвалюватися рішення відповідного уповноваженого органу

державної влади (Кабінету Міністрів України чи Верховної Ради України), яке вносить зміну в адміністративно-територіальний устрій, затверджує назву та географічні межі новоутвореної громади в порядку, визначеному законом;

Г) здійснення ПС (правоздатності та дієздатності) новоутвореної громади як юридичної особи має відповідати принципу правової визначеності, тому статус юридичної особи публічного права новоутворена громада має отримувати безпосередньо з моменту набрання чинності актом уповноваженого органу державної влади про її утворення.

Викликає підвищений науковий та практичний інтерес розділ 8 проєкту, присвячений засобам формування законодавчої моделі впровадження статусу громади як юридичної особи публічного права. Так, автори проєкту пропонують реалізовувати таке завдання через: а) внесення змін до Конституції України і загальних законів; б) змін до фінансового, бюджетного і податкового законодавства у сфері регулювання фінансових правовідносин (посилення суб'єктності громади як учасника фінансово-правових відносин; впровадження принципу субсидіарності при розподілі бюджетних повноважень між рівнями публічного управління; забезпечення зростання фіскальної достатності доходів бюджетів МСВ; посилення інституційної спроможності громад щодо забезпечення управління бюджетними коштами); в) змін до цивільного і трудового законодавства (через визначення цивільної правоздатності і цивільної дієздатності громади; визначення засад і правових форм участі громад у цивільних відносинах; встановлення відповідальності за зобов'язаннями громад; фінансове оздоровлення громади; врегулювання трудової ПС громади та ОМСВ; посилення обліку і звітності громади, ОМСВ.

Розділ 9 передбачає три етапи реалізації концепції з урахуванням поточної ситуації з запровадженням воєнним станом:

1-й етап (за умови продовження дії правового режиму воєнного стану):

1. Прийняття закону «Про адміністративно-територіальний устрій України» (потребуватиме оновлення після внесення змін до Конституції України);

2. Прийняття нового Закону України «Про громади» (або внесення змін до діючого закону «Про місцеве самоврядування в Україні»).

3. Внесення змін до Цивільного кодексу України.

4. Внесення змін до Бюджетного кодексу України.

5. Внесення змін до Податкового кодексу України.

6. Внесення змін до Виборчого кодексу України.

7. Перегляд офіційного перекладу Європейської хартії місцевого самоврядування.

2-й етап. Внесення змін до підзаконних нормативних актів Кабінету Міністрів України, нормативних актів міністерств та інших органів виконавчої влади з метою імплементації нових законодавчих положень, прийнятих в межах 1-го етапу, та реалізація на практиці передбачених змінами до законодавчих актів статусу громад як юридичних осіб публічного права.

3-й етап (після завершення воєнного стану). Внесення змін до Конституції України, які передбачають реформування МСВ відповідно до ЄХМС, а саме реалізації принципів повноти, повсюдності, організаційної, фінансової і кадрової самостійності МСВ, визнання громади первинною одиницею МСВ і первинною одиницею адміністративно-територіального устрою, закріплення статусу громади як юридичної особи публічного права, а також запровадження на районному (повітовому) рівні посади префекта з наглядовими повноваженнями стосовно МСВ.

Пропонується, в разі скасування воєнного стану до початку реалізації Концепції, її варто розпочати з одночасного напрацювання й внесення змін до Конституції та законів України.

Отже, можна констатувати, що проєкт носить не тільки методологічний, а й системний характер, бо він детермінує необхідність, по-перше, внесення в Конституцію України та чинне законодавство України відповідних змін відносно профільних законодавчих актів, а також, по-друге, нового перекладу ЄХМС відповідно до настанов Ради Європи та практики тлумачення цього документу в державах-членах, і, по-третє, також врахування відповідних темпорально-статусних умов (режим воєнного стану, скасування режиму воєнного стану, період завершення воєнного стану тощо).

У розділі 10 проєкту «Очікувані результати» прогнозується, що реалізація Концепції дозволить створити законодавчу основу для реалізації статусу громад як юридичних осіб публічного права, сприятиме послідовному впровадженню принципів організації МСВ, зокрема повноти, повсюдності, правової, організаційної, фінансової, бюджетної самостійності з

дотриманням положень ЄХМС.

Треба наголосити на тому, що попри всі позитивні моменти, що викликає розробка проєкту, він містить відповідні недоліки, що носять переважно термінологічний та організаційно-правовий характер.

Насамперед, треба вказати, що авторам проєкту не вдалось вирішити проблему застосування конституційно-правової термінологічної зв'язки «територіальна громада», що є змістовно-семантично зафіксованою у ст. 140 Конституції України. Більш того, проєкт використовує тільки термін «громада», пропонуючи його застосовувати у бінарному розумінні – тобто, а) як сукупність жителів; б) як первинну територіально-просторову одиницю – первинну ланку адміністративно-територіального устрою держави.

На наш погляд, треба враховувати, що подальше використання такої термінології, всупереч конституційному формулюванню, може призвести до виникнення колізійності цих понять та стати у майбутньому причиною конституційно-правових конфліктів.

Викликає відповідне зауваження використання в проєкті формулювання «юридична особа публічного права» у вигляді термінологічної системи. Ми розуміємо, що такий підхід є відображенням відповідних сучасних настанов щодо класифікації юридичних осіб у цивільному законодавстві України. Але, на нашу думку, тут треба враховувати факт унікальності ТГ як суб'єкта права, що приймає активну участь у регламентації як публічно-правових, так й приватно-правових відносин, бо безпосередньо виступає центральною фігурою системи комунікаційної взаємодії жителів, що є членами громади, фактично детермінує її виникнення та будує її функціонування, виходячи з того, що ТГ діє від імені її членів, в їх інтересах та від їх імені. Тому, закріплюючи за ТГ статус «юридична особа публічного права», треба відобразити й її можливості діяти й у сфері приватно-правових відносин.

На наш погляд, виходячи з наробок членів робочої групи відносно окремих положень проєкту Концепції, найбільш вдалим видається розробка відповідного проєкту Закону України «Про правосуб'єктність територіальної громади» та його наступне прийняття, де б були зафіксовані наведені пропозиції щодо ПС ТГ, а також вирішені спірні питання, що виникають в процесі систематичного та термінологічного аналізу положень профільної Концепції.

Резюмуючи, можна дійти відповідних висновків:

- спостерігається зміна парадигми формування правосуб'єктності ТГ в Україні (від її повного несприйняття до усвідомленого розуміння необхідності), чому на пряму сприяють вимоги Європейського Союзу в процесі початку переговорів нашої держави щодо членства в цьому міждержавному об'єднанні;

- об'єктивація, усвідомлення і розуміння цієї проблематики, її значення для подальшого розвитку місцевого самоврядування в державі, спостерігається й на доктринально-проєктному рівні в науковому і експертному середовищі нашої держави, результатом чого й є розробка проєкту Концепції громади як юридичної особи публічного права;

- надання ТГ правового статусу юридичної особи публічного права, безумовно, є могутнім та ефективним засобом формування їх належної та достатньої правосуб'єктності;

- це, своєю чергою, веде до реалізації конституційно-правового статусу та управлінської парадигми відносно ролі і значення ТГ в місцевому самоврядуванні як дійсно його первинного суб'єкта;

- визначення ТГ як юридичної особи публічного права сприятиме формуванню в Україні європейської системи локальної демократії.

Використані джерела

1. Конституція України: прийнята на п'ятій сесії Верховної Ради України 28 червня 1996 року. Відомості Верховної Ради України. 1996. № 30. Ст. 141.
2. Про місцеве самоврядування в Україні: Закон України від 21 травня 1997 року. Відомості Верховної Ради України. 1997. № 24. Ст. 170.
3. Європейська хартія місцевого самоврядування. Офіційний вісник України. офіційне видання від 03.04.2015 – 2015 р., № 24, / № 39, 2013, ст. 1418 /, стор. 450.
4. Україна підписала Європейську хартію місцевого самоврядування. REGION. 1997, листопад, №325.
5. Про ратифікацію Європейської хартії місцевого самоврядування: Закон України від 15 липня 1997 року. Відомості Верховної Ради України. 1997. № 38. Ст. 24.
6. Єврокомісія оприлюднила ключові висновки щодо України та рекомендувала розпочати

переговори про вступ до ЄС. URL: <https://suspilne.media/612913-evrokomisia-opriludnila-klucovi-visnovki-sodo-ukraini-ta-rekomenduvala-rozpocati-peregovori-pro-vstup-do-es/>

7. Програма для України з розширення прав і можливостей на місцевому рівні, підзвітності та розвитку «U-LEAD з Європою». URL: <https://decentralization.gov.ua/donors/u-lead#:~:text=%D0%9F...>

8. Концепція громади як юридичної особи публічного права (проект від 7 листопада 2023 року). Київ, 2023. 27 с. URL: https://fileview.fwdcdn.com/?url=https://mail.ukr.net/api/public/file_view/list%3Ftoken%3DtRU_6C0bVB2vI9migTFP2ZiuTDVvCf8PQwA4XTC1OSqSh3lEJyU8GLXtO2_qwKkV9R18jINNNbSQX8ke5rhO0qydJEVroCW8yHSP8VI:sk3XsGKXtkTd-eLa%26r%3D1699956224237&default_mode=view&lang=ru#start=0

9. Панасюк С. Європейська хартія місцевого самоврядування: питання національної імплементації в Україні. Український часопис міжнародного права. 2014. № 3. С. 157-164.

10. Association Agreement with Ukraine European Parliament resolution of 11 February 2021 on the implementation of the EU Association Agreement with Ukraine (2019/2202(INI)) P9_TA(2021)0050 EU. URL: https://www.europarl.europa.eu/doceo/document/TA-9-2021-0050_EN.pdf

Medical sciences

AGE CHARACTERISTICS OF SATISFACTION OF GENERAL PRACTITIONERS WITH WORK IN PRIMARY HEALTH CARE CENTERS

Vozniuk M.Y.

Bogomolets National Medical University

Introduction. General practitioners carry out a huge amount of work on daily basis and have many responsibilities. They are in charge of providing a complete package of health services to people of all age groups in society, from newborns to the elderly.

Health workers' job satisfaction affects the quality of medical care. Dissatisfaction of doctors can lead to a decrease in the quality of medical care. In addition, the patients' satisfaction with the quality of medical care reliably depends on the satisfaction of doctors with their work. It's well known, that physicians' job satisfaction leads to better results in providing medical care. Globally there is a trend towards an increase in the share of older doctors, which causes a shift in the age structure of healthcare workers. The question of researching the age-specific features of the formation of satisfaction of general practitioners with their work becomes relevant.

The purpose of the study was to study the age-related characteristics of the satisfaction of general practitioners with their work in primary health care centers in Ukraine.

Materials and methods.

A survey of 89 general practitioners (GPs) was conducted using a questionnaire to determine job satisfaction in the primary health care center, which was developed at the Department of healthcare management of the Bogomolets National Medical University. The questionnaire contained 18 questions about the feeling of pride in work, about satisfaction with the management attitude, colleagues, fellow doctors, patients, about the influence of the manager's support on the job quality, about the team spirit, about the opportunities and needs for qualification improvements, about the work schedule and working conditions, satisfaction with wages, regarding the influence of compensation on the job quality. Respondents had the opportunity to evaluate each question of the questionnaire on a Likert scale, in which doctors rated their degree of agreement or disagreement with each statement from "completely agree" to "completely disagree" on a 5-point scale. Job satisfaction was assessed at 4 and 5 points, dissatisfaction at 1-3 points.

The response to the survey was 91.3% of all surveyed doctors (81 people). The age distribution was as follows: 15 people - under 30 years old, 13 people - aged 31-40 years, 16 people - aged 41-50 years, 15 people - aged 51-60 years, 22 people – older than 60 years old.

The Kruskal-Wallis method was used to compare the results of evaluations of answers to questionnaire questions. The analysis of the research results was carried out using the license package the statistical analysis package MedCalc v.19.4.1 (MedCalc Software Inc, Broekstraat, Belgium, 1993–2020).

Results and discussion.

The analysis of the obtained results indicates, that the structure of respondents' answers according to the Kruskal-Wallis criterion to the questions of the questionnaire about job satisfaction in different age groups shows no reliable differences ($p > 0.05$). The share of satisfied people in different age groups ranged from 64.3% (age group <30) to 94.1% (age group >60). In the 31-40 age group, the indicated indicator was 66.7%, in the 41-50 age group - 73.3%, in the 51-60 age group - 76.9%.

In addition, no significant difference was noted ranging by the age groups of the respondents. In questions about improving the quality of work in the case of support from the manager, about the comfort and team spirit at the workplace, about the presence of support and respect from colleagues, about the feeling of gratitude and respect from patients, about the opportunities and need for professional development, regarding satisfaction with wages, regarding the compliance of wages with efforts applied, regarding the influence of additional compensation on the quality of medical care, regarding satisfaction with the work schedule, regarding satisfaction with working conditions, no correlation with the GPs age was found as well ($p > 0.05$).

At the same time, reliable differences were determined in different age groups regarding the presence of a sense of pride in the chosen physician profession, regarding satisfaction with management's attitude towards oneself, regarding the presence of comfortable work relations with

fellow GPs, regarding comfortable work relations with consultants, regarding the desire to change one's specialty and planning to engage in medical practice abroad ($p<0.05$).

We established that in 51-60 and older than 60 y.o. age groups, the share of people proud of their chosen specialty was significantly higher ($p=0.009$). The largest share of respondents satisfied with management's attitude towards themselves was determined in the groups of doctors aged older than 60 y.o. and in the younger (<30) group ($p=0.028$).

The share of respondents satisfied with the comfort of work relations with fellow GPs was reliably the largest in the 51-60 age group and in the older than 60 y.o. age group (100%). The share of satisfied respondents with the lowest score was determined in the group of doctors younger than 30 years old (85.7%). The structures of answers to the specified question differed significantly between groups of respondents ($p=0.017$).

When comparing the results of the answers regarding the assessment of the comfort of work relations with fellow GPs, we established that the largest share of those satisfied with the specified relations was determined in the group of respondents aged older than 60 y.o. (76.4%). Among respondents aging <30 , the share of those satisfied with the specified relationship was only 35.7%, in 31-40 age group - 24.9%, in 41-50 age group - 20% ($p=0.01$).

The question about the desire to change the specialty was answered by the vast majority of respondents that they did not want to change the specialty. The smallest share of those wishing to change their specialty was in the 31-40 age group (58.3%). The structure of answers to the specified question differed significantly between groups of respondents ($p=0.029$).

The largest share of those willing to work abroad was identified in the 31-40 age group (41.7%) ($p<0.05$). At the same time, in other age groups, this indicator ranged from 0 (respondents older than 60 years old) to 15.4% (respondents aged 51-60 years).

Therefore, GPs' sense of satisfaction with their work increases with age. The most potentially dissatisfied group of doctors with their work is the group aged 31-40, among which the largest share of people willing to change specialties and migrate to work abroad.

Conclusions.

In order to form an effective system of motivation in the personnel management system of primary health care centers, managers need to take into account the age-related characteristics of GPs' satisfaction with their work.

Pedagogical sciences

WAYS OF DEVELOPING COGNITIVE ACTIVITY OF STUDENTS IN BIOLOGY VIA GAME TECHNOLOGIES

Abilda Sh.M.

*1st year Master's degree student of
Abay Kazakh National Pedagogical University,
Almaty, Kazakhstan*

Aidarbayeva D.K.

*PhD, Doctor of Biological Sciences,
Abay Kazakh National Pedagogical University,
Almaty, Kazakhstan*

Abstract

This article highlights the role of game technologies in teaching biology and the problem of the formation of cognitive activity of students. One of the tasks of a modern school is to increase the diversity of types and forms of organization of educational activities of students. Game technologies integrated with the pedagogical system of organizing educational activities can significantly increase the educational opportunities of schoolchildren, even to choose and implement an individual trajectory in an open educational space.

In this regard, it examines the definitions of the concept of "cognitive activity" of various scientists, methodologists, gives their own vision of this phenomenon, and also examines the components of game technologies. Research activity, project activity in particular, is considered as one of the methods of effective formation of cognitive activity in Biology lessons.

Keywords: *Game technologies, cognitive activity, observation, laboratory, traditions, research activity.*

Introduction

Due to the expansion of international contacts, the development of society and education, the need for communication between students is increasing

Currently, there is no doubt about the relevance and relevance of the integration of the Internet in the learning process. The main subject of discussion in this case is not the question of what, but how to apply modern computer technologies in the learning process. The use of the Internet would greatly expand the range of real communicative situations, would increase the motivation of students, would allow them to apply the acquired knowledge, formed skills, speech skills to solve real communicative tasks[1].

Peculiarities of using game technologies in educational activities

The use of Internet technologies by the teacher in their lessons will inevitably lead the general education lesson beyond the scope of both the lesson and the subject itself.

By connecting to the game technologies, schools satisfy their needs in the search, collection and processing of material, which in turn expands the possibilities of implementing educational goals and objectives. The task of a modern school is the successful development of a student's personality, changing and improving his personal data, which is an important condition for the development and formation of a student, as he becomes a full-fledged user of the world information space. The frequent use of Internet technologies and telecommunication means by schools in the educational process shows us how we implement and how we work with the use of innovative means, with the help of which modifications of a diverse plan are made: they change the goals and objectives of the lesson, the curriculum, forms and methods of teaching students[2]

Teachers prefer to find educational material on the Internet in electronic form, as it allows:

Table 1.

Opportunities and the possibilities of game technologies for creating a modern lesson

	<i>Opportunities of using game technologies for teachers</i>	<i>The possibilities of game technologies for creating a modern lesson</i>
1	<i>improving their knowledge through distance learning;</i>	<i>A teacher can replenish his or her methodological base</i>
2	<i>finding educational material on the Internet for the preparation and conducting lessons;</i>	<i>study the experience of other teachers and use their recommendations and developments in own lessons;</i>
3	<i>getting information about the latest pedagogical findings</i>	<i>print their personal lesson plans, articles, and innovative ideas on Internet sites</i>
4	<i>sending their methodological developments;</i>	<i>allows teachers to make lessons more interesting and dynamic, includes in the process of perception not only vision, but also hearing, emotions, imagination,</i>
5	<i>teaching children and work both in the classroom and outside the classroom individually and in groups, in pairs</i>	<i>facilitates the process of memorizing the material being studied by students</i>

[a table is created by an author]

Formation of cognitive activities in teaching biology

At the same time, the observations and experience of teachers show that students, having a certain vocabulary and the ability to use grammar knowledge in practice, overcoming the language barrier, do not always understand each other. The interlocutors use phrases, necessary replicas to exchange information, but mutual understanding is not achieved as a result[3].

Consideration of this problem requires the study of the concept of "cognitive activity", which was studied by such methodologists as N. D. Galskova, N. I. Gez, L. I. Korneeva, E. N. Solovova, etc.

There are many methodologists who have studied this phenomenon. Having studied different opinions and analyzed the points of view of some methodologists, we note that cognitive activity is interpreted in different ways. Some methodologists assume that this is the ability of people to live in one society without disagreements; others believe that this is the ability to take part in a foreign culture; others think that these are rules and examples of behavior based on the concepts of diversity of thinking and recognition of cultural processes.

In the context of the discussed problem, it should be noted that N. D. Galskova, N. I. Gez believe that "cognitive activity is a skill that enables a person to develop himself within the socio-cultural environment. The development of this skill takes place through the interrelation of studies of the foreign language code and the improvement of the cultural experience of the individual" [4].

L. I. Korneeva believes that "socio-cultural competence is awareness, respect for the factors that determine culture and influence the perception, thinking, evaluation and actions of their own and those around them. This is reflected in the intercultural understanding, in the communicative and behavioral adaptation to the behavior of representatives of another culture, which are based on the values and laws of different cultures" [5].

According to Gray, P. and Thomas, D.J., "cognitive activity is a means of the development of an internationally oriented person implies the study by students of social skills, traditions, their interaction, as well as the ability by which a person copes with his own fear and distrust of foreign cultures" [6].

Currently, the school provides students and teachers with the opportunity to use in the educational process:

- participation in teleconferences where problems of a scientific and professional nature are discussed;
- access to open file servers on the Internet to obtain freely distributed software;
- remote access to databases, library catalogs and electronic library files in the preparation of educational materials on subjects;
- receiving electronic periodicals on selected topics;
- participation in online Internet teleconferences;
- independent and control testing.

Conclusion

Internet resources can also be used by teachers to improve their skills (network methodological associations and virtual pedagogical councils, distance learning, participation in network projects, etc.).

Thus, cognitive activity presupposes readiness and ability to live and interact in the modern multicultural world. The lack of cognitive activity skills significantly complicates communication and understanding with representatives of foreign cultures. And project activity is a tool of education and training that promotes respect, understanding of the culture, traditions, language of another people, as one's own, and also helps to overcome fear and distrust in relation to another culture.

References

1. Zakharova I.G. *Game technologies in education* - M.: Academy, 2018. – p.27.
2. Kurgan G.S. *System of differentiated education via the game technologies* – Irkutsk: IGU, 2020. – p.70 .
3. Volkov V. *Modern multimedia* – M.: Computer INFO, 2001. – 44 p.
4. Passov E. I. *Biology lesson in secondary school* // *International collection of scientific papers*. 2015. pp. 37-48.
5. Rogova G. V. *Methods of teaching Biology at the initial stage in secondary school*. Moscow: Prosveshchenie, 2000. p.232 .
6. Gray, P. and Thomas, D.J. *Critical reflections on culture in nursing*. *Journal of Cultural Diversity*, 13(2), 2021.

WAYS OF CREATING AND IMPLEMENTING SPEECH SITUATION FOR SPEECH ACTIVIZATION IN SENIOR CLASSES

Abilkhanova N.M.

2nd year Master degree student of K. Zhubanov Aktoberegional University, Aktobe, Kazakhstan

Anessova Zh.A.

Associate professor, NJSC "Toraighyrov University, Pavlodar, Kazakhstan

Abstract

The article analyzes the ways of activating creation and usage of speech situation for speech activization in senior classes. Communicative teaching methods and conditions for the consolidation of language skills and speech skills in solving specific methodological tasks aimed at the active practical use of vocabulary and the assimilation of grammatical models that contribute to the reproduction and transformation of utterance are proposed. The author believes that a clear organization of language material will allow foreign students to correctly apply communication skills in specific language situations. The formation of any speech skills is carried out taking into account the stages and a certain sequence, subject to specific requirements. The leading principle of the organization of grammatical material is the principle of semantic grouping, and as a unit of selection of speech acts – the speaker's speech intention, determining his intention to express a communicatively significant meaning by means of speech.

Keywords: *speech activity, communicative need, methodological expediency, organization of grammatical phenomena, the principle of semantic grouping, types of exercises*

Introduction

To activate the speech activity of a foreign student at the initial stage of learning is one of the main tasks of a teacher of English as a foreign language. It is possible to increase the creative activity of the student, to support his success in the process of learning a foreign language in the process of acquiring knowledge, which, of course, is associated with the development of skills in the use of grammatical phenomena. At the same time, it is important to clearly organize the language and speech material intended for teaching, which will allow foreign students to realize the real opportunity to use the language correctly in accordance with the communicative needs in the presented communication situations.

The level of mastery of the English language should provide students with the necessary basis for successful communication "with native speakers in the socio-household, socio-cultural and partly official business spheres" in the language environment [1, p. 5]. The specific choice of methodological methods of teaching, in our opinion, should be based not only on methodological expediency (depending on the tasks and conditions of training), but also on the teacher's clear idea of the specifics of the subject being studied a fact, about its place in the system of linguistic relations. The conditions for the consolidation of language skills and speech skills of foreign students presuppose the solution of specific tasks aimed at the active practical use of vocabulary and the assimilation of grammatical models:

- 1) awareness and assimilation of the systemic properties of the structure of the studied sentence as a support for the further development of knowledge, skills and abilities;*
- 2) the development of skills to isolate the syntactic units studied from the text;*
- 3) the inclusion of syntactic units for writing a story on the proposed topic.*

The process of mastering speech activity "it includes a chain of speech-thinking tactics, which are mechanisms of comprehension, memorization and registration of the ability to reproduce and transform statements, synthesize them with others, generate new speech units based on and by analogy with those already learned.

When teaching foreign students complex sentences with subordinate explanatory clauses, we teach them not only structuring and grammatically correct formatting, but also the possibilities of using this type of sentence in certain communication situations. Thus, already "at the initial stage, a stable positive attitude to the language being studied and to the process of learning it should be formed, which is associated with a sense of progress in mastering the language. All types of speech skills are formed in

parallel and interconnected and on a single lexical-grammatical, thematic and textual basis", therefore, they serve as the basis for proper speech activity, which is formed at all levels of language proficiency [3, p. 33].

From among the main methodological tasks in teaching foreign students complex sentences with subordinate explanatory clauses, we single out the following:

1) organize grammatical material in such a way that the learner is armed with "a variety of means to express a particular communicative idea" [4, p. 8];

2) to build work on the formation of speech skills on the basis of the studied grammatical unit based on various types of speech activity (listening, speaking, reading, writing).

The formation of any speech skills is carried out in stages, taking into account the functioning of grammatical structures in speech. Presenters Russian methodologists (N.I. Gez, M.V. Lyakhovitsky, G.V. Rogova, K.I. Solomatov, S.F. Shatilov, etc.) distinguish three main stages:

Table 1

Stages of formation of speech skills

1	The stage of familiarization and formation of grammatical knowledge and primary skills of using grammatical phenomena.
2	Stage formation of skills of using this grammatical phenomenon.
3	The stage of improving the speech grammatical skill

There are various ways to develop speech activation of students.

I present to your attention several strategies to achieve this [1, p. 15].

1. Lexical games

They are situational-variable exercises in which it is possible to repeatedly repeat a speech sample in conditions close to real speech communication with its inherent characteristics – emotionality, spontaneity and purposefulness of impact. Lexical games focus students' attention on lexical material, aim to help them acquire and expand vocabulary, illustrate and practice the use of words in communication situations. Lexically directed exercises in the form of a game contribute to the development of students' attention, their cognitive interest, and help create a favorable psychological climate in the classroom.

Memory game: The teacher writes words or phrases on the blackboard that need to be fixed. The teacher asks you to turn away or close your eyes and erases one line. Students should guess which LU is missing and write it correctly on the blackboard [2, p. 45].

Snowball game: Starting the game, the teacher calls the first word. Each subsequent student must name all the previous words in the order in which they were included in the game, and say a new word. If someone has forgotten a word or messed up the order, he is out of the game.

Team game: students are divided into two teams, a student from the first team calls a word in English, students from the other team should call this word in English as soon as possible and get a score for it. The game is played for 5 minutes. The team with the highest score wins. To support multiple simultaneous conversations, mentors can create groups for each of their classes. Each group is assigned its own unique law, which the mentors distribute to all members of the class. Groups are isolated from each other, so those who do not have access will not be able to view conversations unless the teacher assigns them to be public. An additional advantage of Edmodo is that scientists can also create their own groups. Participants can decide on admission to publications via their mobile phones, email, Twitter posted on the course homepage [3, p. 13].

2. Forbidden words

"Forbidden words" are just words that students are not allowed to use in their works. Make your list of "forbidden" words — these are simple words that your students use over and over again when they could use more complex vocabulary (for example, like, interesting, boring, good, nice, bad, big, run, etc.)

However, take a minute to discuss the "allowed" synonyms for each of these words, to discuss the nuances of meanings. A great idea would be to make a poster with the "forbidden" word and its alternatives. For example: Interesting: amusing, enjoyable, entertaining, fascinating, gripping, absorbing, newsworthy, arresting, captivating, exceptional, magnetic, etc. Don't forget to discuss the stylistic features of synonyms [4, p. 95].

3. "Dictionary family"

Imagine that you have a choice: your students can learn 1 word or 5 at once. What would you prefer? Naturally, we want our students to learn as much as possible when it comes to vocabulary. One way to achieve this is to introduce vocabulary through related words or "dictionary families". Instead of

a single verb depend, your students will be familiar with dependency, dependent, independence, independent. At the same time, we will get acquainted with the ways of word formation[5, p.110].

4. Graphic organizer

Draw an A4 sheet into four rectangles. At the intersection of these lines, write a word or phrase that you need to remember. Sign each rectangle starting from the top left clockwise:

Description: Define the term using your own words.

Characteristics: Give at least 3 interesting characteristics of the term.

Synonym: What is it like?

Antonym: What is it not like?

Students, using their vocabulary, fill in rectangles. Supplement them with drawings or diagrams.

The method of memorization "Graphic Organizer" helps students to learn new words. If you define new lexical units in your own words, give examples from familiar situations and visual images, then any word will be imprinted in your memory for a long time[6, p.45].

How to work with a graphic organizer in the classroom:

Preparation. Define a list of words to study within a specific topic. Working with a group of 3-4 students, give each group a task to learn one word.

Mini-demonstration. Explain to the class what a graphic organizer is and tell them how to fill in the graphs.

Group work. Make it easier for students to work on new words by discussing the word given to them with each group. Use leading questions to push the group to think in the direction you need.

Discussion in the lesson. Give a task to one student from the group to present his word. Allow members of different teams to communicate with each other and get acquainted with other words. This will take 2-3 minutes, so as not to interrupt the rhythm of the lesson [7, p.80]

5. Using dictionaries

Learning a new LE always starts with a dictionary. Currently, it is more convenient to use electronic dictionaries to work with new words, because they not only significantly exceed the volume of books, but also find the desired word or phrase in a few seconds, electronic dictionaries contain a greater number of neologisms, since language is a reflection of people's real life, their culture. All new vocabulary cannot be adequately reflected in "paper" dictionaries for the simple reason that they take too long to develop. In fact, many dictionaries that were formed in the linguistic atmosphere of the middle of the century are very outdated. They do not specify the modern meanings of old words, and many new words are simply missing. This has become especially evident in connection with the development of the Internet: most of the Web pages consist of English texts written in a lively modern language using colloquial vocabulary and slang. Only the use of electronic dictionaries can solve this problem. Mass software products, such as electronic dictionaries, are characterized by frequent changes of versions and the presence of constant feedback from thousands of users[8, p.62].

Electronic dictionaries contain not only transcription, but can also pronounce words.

The most common are ABBY Lingvo, Multiplex, Multitran, Cambridge Dictionaries Online. I want to introduce you to the following site <http://wordsteps.com>, allows you to perform work similar to working with your dictionary (Vocabulary). Click on the "create a new dictionary" button, give it a name, type words and translations into special fields, and the program creates exercises. There are several types of exercises, for example, multiple choice, collect a word from letters, and performance statistics. You can use thematic dictionaries already compiled by other people. There are restrictions on words in the free version[9,p.78].

6. The "wall of words"

The effectiveness of learning depends on the effectiveness of the learning environment, and the study room, as part of such an environment, plays an important role. Invite your students to become active participants in the vocabulary expansion process with the help of the "Wall of Words". Ask students to write down new words for them that they will meet in extracurricular life. The word must be written on a small

on the card, and on the reverse side — a definition and an example, and the card should be placed on the "Wall of Words". Every student can get acquainted with the words. After some time, you can ask students to come up with and spend games with these words with classmates (Crosswords, a Deaf phone, a Field of Miracles, etc.). Students usually like that they "put their hand in", and such words are remembered better.

7. Flash cards

The cards should be easy to use. It is necessary to choose the right size for cards that will fit

comfortably in the palm of your hand, which will be easy to shift.

Thick paper or cardboard is used for the cards, you can laminate the cards for a longer period of use.

A word in a foreign language is placed on the front side of the card, it is possible to add a transcription and an example of the use of the word in a sentence. On the reverse side there is a picture or translation indicating the lexical meaning of the word.

8. Memory cards

The Mind Map memory card acts as an alternative to traditional methods of processing and transmitting information (notes, short notes, diagrams, etc.) This alternative is more productive, since it has a natural psychological basis, and most importantly turns the student into an active creator of his own knowledge.

The psychological basis of the memory card method is associative thinking. The memory card itself, from the point of view of its creators, is a model of how our brain works.

It is enough to reproduce in memory one object of this information map, and it will pull dozens of interrelated facts, events, sensations in a chain. This is how multidimensional associative thinking arises, which allows you to see not just an object of the surrounding world by itself, but in connection with other objects.

This is the principle of operation of the memory card.

There are certain rules for creating memory cards, developed by Tony Buzen, which are described in detail in his book "How to Mind Map", namely:

The main idea, problem or word is located in the center. Buzen attaches almost the main importance to the allocation of the key word of the associative chain

To depict the central idea, you can use drawings, pictures.

Each main branch has its own color.

To create maps, only colored pencils, markers, etc. are used

. The main branches are connected to the central idea, and the branches of the second, third, etc. order are connected to the main branches.

The branches should be curved, not straight (like the branches of a tree).

Only one keyword is written above each branch line [10, p.75].

For better memorization and assimilation, it is advisable to use drawings, pictures, associations about each word.

The result of the work is an individual product of one person or one group. Expresses individual capabilities, creates a space for the manifestation of creative abilities.

Conclusion

In the domestic and foreign methodological literature, one of the main problems at present is the work on vocabulary.

Insufficient vocabulary causes students to feel insecure and unwillingness to speak a foreign language. Thus, one of the main tasks in the lesson is to expand the vocabulary of students. In order to expand the potential vocabulary of students, it is necessary to work regularly, starting from the initial stage, on the formation of independent semantics skills. Students should be introduced to the basic word-formation models, while it is advisable to use game techniques.

Thus, the work on the presentation and activation of vocabulary is extremely important not only for working on vocabulary in general, but also for increasing the motivation and interest in the subject of students

References

1. Backlund, P. & Hendrix, M. (2013), p.48. *Speech activity– Are They Worth The Effort?*- 150 p.
2. Bim I.L. *Metodika obucheniya inostrannykh yazykam kak nauka i problemy shkolnogo uchebnika* - M.:Rus.yaz., 1977- p.78-86 .
3. *Information and Communications Technology (ICT) in the Primary School Curriculum, Guidelines for Teachers*, NCCA, p.86
4. *Information and Communications Technology (ICT) in the Primary School Curriculum, Guidelines for Teachers*, NCCA, p.86
5. Kunanbayeva S.S. *Theory and practice of modern foreign language education.*- Almaty, 2010. – p.25
6. *Modernization of Foreign Education: Linguo-cultural approach*, S.S Kunanbayeva .Hertfordshire press. 2013, p.12

7. Robert I.V. *Teoriya i metodika informatizatsii obrazovaniya (psikhologo-pedagogicheskiy i tekhnologicheskiy aspekty)* BINOM. Laboratoriya znaniy. 2014. –p .43.
8. Radovel M.R. *Problems of inter-ethnic communication in the context of the theory of dialog relations.-Russia, 2004. - p.153-159*
9. Reinders, Hayo. ed. *Digital Games in Language Learning and Teaching*. Hampshire and New York: Palgrave Macmillan, 2012, p.25.
10. Schukin A. N. *Teaching foreign languages. Theory and practice: a training manual for teachers and students*. M: Omega-L [et al.], 2010. -p.475

EFFICIENCY OF USING VIRTUAL REALITY CONTENT SELECTION FOR PROFESSIONAL ENGLISH LANGUAGE TEACHING FOR STUDENTS

Berdygali Gasyrbek Kuangaliuly

*2nd year Master's degree student of K. Zhubanov Aktobe Regional University,
Aktobe, Kazakhstan*

Bulatbayeva Kulzhanat Nurymzhanovna

Candidate of Pedagogical Sciences, Professor, L.N. Gumilyov Eurasian National University

Abstract

This article is devoted to the study of the principles of virtual reality technology teaching in the process of learning a foreign language for special purposes and its advantages in comparison with traditional forms of education. The potential possibilities of virtual reality as an ideal educational environment are indicated, on the basis of which the principles were formulated facilitation, autonomy, interactivity, professional orientation, multimodal presentation of educational information, independent educational activity. When implementing the above-mentioned principles of learning with the help of virtual reality, it is possible to create educational conditions that meet the needs of the time, which will contribute to improving the effectiveness of teaching not only a foreign language, but also other disciplines and form specialists with professional qualities that ensure successful implementation specific functions related to future professional activity, and therefore in demand in the modern labor market.

Keywords: *virtual reality, learning principles, facilitation, multimodality of information, professional orientation of training, autonomous educational activity, simulation of real conditions*

Introduction

The current stage of development of society is characterized by information saturation and the tendency to form new ways of using computer technologies, which become an integral part of various professional fields of activity and, in turn, create the best conditions for maximum self-realization of each person[1].

Such a desire for modernization makes us turn to the issue of creating a developed information and educational environment in universities for the formation and development of the required professional qualities and skills. Professional interaction of representatives of various international communities against the background of global globalization processes raises the question of the need for practical knowledge of foreign languages. The introduction of computer technologies into the educational process is relevant in teaching not only natural and mathematical, but also humanitarian disciplines. With regard to the study of foreign languages, various means of multimedia technologies expand the capabilities of the teacher, optimize the process of foreign language communication, motivate students to overcome the language barrier[2].

The main requirement for graduates of higher education institutions is the possession of specific skills in specific professional situations. Simulation of such

conditions in the educational process is possible with the use of virtual reality technologies, which are studied by many researchers. It has two main properties: the multimodality of the interface – the ability to simultaneously affect several

sensory organs; the formation of experience – the ability to contact with the environment. In pedagogy, "virtual reality" is mainly used as a special information space where a student can receive certain information, make contacts, elements

of scientific, educational and project activities [5]. The success and effectiveness of the educational process are determined by the regularity of learning, which expresses the existing links between the conditions of the process and its result. In turn, the learning outcomes directly depend on the specifics of the interaction of students with the surrounding reality, which in our study is represented by virtual reality. The orientation of the educational process to the development of the personality of students is determined by the principles of learning, that is, those provisions that build the trajectories of achieving the educational goal[3].

The analysis of practical activities on the creation of a virtual reality software and hardware complex for learning a foreign language for special purposes allowed us to identify the following principles that will create the required orientation of the educational process:

- facilitation;
- autonomy;
- interactivity;
- professional orientation;
- multimodal presentation of educational information;
- independent educational activities.

Absolutely any situation in a person's life can be suitable for teaching a foreign language. It can be working in the office, speaking at an event, a meeting, a dialogue on the street with passers-by, travel, customs control and much more. The crucial point is that the language environment determines the effective acquisition

of foreign language skills and the principle of facilitation is observed through the simulation of real conditions in a virtual environment of a certain professional

orientation. The considered principles of the formation of the process of teaching a foreign language for special purposes using virtual reality are of particular importance for the professional formation of a future specialist, since the content of training, educational material intended for the development of students' language skills and skills correspond to professional orientation; forms and methods of language teaching with the use of computer technologies, they contribute to the future specialist's positive perception of the chosen profession, ensure the development of creative thinking and consolidation of professional and socio-psychological knowledge [6].

The implementation of an **independent project work** for virtual reality involves:

- **organizational-preparatory.** At this stage, the topic of projects is defined and clarified, working groups are selected, roles are allocated through collective discussion, and information is collected. Students clarify information, discuss the task.

- **search.** At this stage, students make assumptions about how to solve the problem and search for the necessary information, collect, processes analyzes, and organizes the information necessary for the development of the project. Moreover, at this stage, there is a detection («brainstorming») and discussion of alternatives that have emerged during the implementation of the project. At this stage, students express ideas, assumptions, analyze and evaluate ideas, formalize ideas. Students make a plan of actions, select the means for their implementation, and determine the possible consequences of the proposed actions[4].

- **final.** At this stage, the project is prepared and executed, the results are analyzed, and the project is defended. Students present and defend the product and result obtained during the project activity; prove the presence of the necessary characteristics of the product obtained, show its advantage, and answer questions from those present at the presentation.

The motivational-target stage in this complex is represented by the following tasks:

Task 1. Read the following definition. How can virtual reality change our lives?

Virtual reality is a digital environment people can experience through sights and sounds computer provides, which allows people to participate in an experience and not just watch it.

Task 2. Collect information about inventions that will improve our lives and describe your impressions of the issue under study.

Task 3. Write five predictions about other technological developments in the future.

Task 4. Find information about an art/or technology award for young people in your country (e.g. what it is, when and why it was started, what it involves, why someone should take part in it, what the prize is). Write a paragraph about it.

At the **informational-accumulative stage**, there is a system of exercises aimed at formation the procedural component of informational activity, which included the following tasks:

Task 5. Go to the site <https://www.crissh2020.eu/uses-of-virtual-reality-in-education/> and check out the article and leave a comment on the question "Are you in favour of introducing these new technologies in the classroom?"

Task 6. Do some internet research to find out more information about virtual reality. Present your findings to the class.

Task 7. Find out from the Internet which application of virtual reality is important? Why? Imagine you have virtual reality headsets in the classroom. Where would you go and what would you do? Why?

Task 8. Search for more information on the topic Hawthorn School using different Internet

resources and separate basic information from a minor.

Task 9. Gather information about virtual learning in Kazakhstan and make a comparison between British virtual learning and virtual learning of Kazakhstan.

At the **pragmatic-representational stage**, systems of typical, variable, and creative tasks are used by us. As part of the standard tasks, students learned how to create a blog, write an essay, search, and evaluate information using informative texts.

Task 10. Match the words with definitions.

recreate; experience; endless; leap forward; brain surgery; peasant; nobleman; affordable

- create again, reproduce
- practical contact with and observation of facts or events.
- having or seeming to have no end or limit.
- to hop, jump, or dart forward very quickly or suddenly.
- surgery performed on the brain or other parts of the nervous system.
- a poor smallholder or agricultural labourer of low social status
- a man who belongs by rank, title, or birth to the aristocracy; a peer.
- inexpensive; reasonably priced.

Task 11. Read the text and answer the questions in complete sentences.

A TOTAL REALITY EXPERIENCE

Drawing, sculpting, storytelling and even films are some of the different ways that people have tried to recreate reality. But it's only in the past fifty years that technology has advanced enough to allow people to experience other environments using virtual reality (VR) 3D headsets. The next step in VR development will be that users get a complete interactive experience of the environment they are exploring. They will be able to see, touch and hear everything in their VR environment.

The first use for total experience VR is in the gaming industry. Imagine how gamers could actually play golf on a VR golf course or really drive a Formula 1 racing car! The possibilities are endless. But VR won't just be for fun and games. It will also be a massive leap forward for education. It will transform how people learn different skills and subjects. Learning to drive a car, fly a plane or even perform brain surgery will be absolutely risk-free.

Also, students won't need a textbook to learn about life in the Middle Ages as they will be able to visit a medieval village and spend the day living the life of a 14th-century peasant or as a nobleman in his castle. Already, there are educational apps which allow students to use VR headsets and go on exciting virtual school trips to museums, coral reefs, rainforests and many more! Imagine seeing space through the eyes of an astronaut – what a lesson that would be! Or going to places like the Amazon Rainforest – without even leaving the classroom.

Also, it won't be long before we use VR for online shopping. Nowadays, when we buy things online, we can only see photos of products, but with VR devices we will be able to tour virtual shops and even touch the products we are interested in! But that's not all. Have you ever been disappointed by a holiday you booked online? Well, in the future you will be able to take a virtual tour of your accommodation before you make any decisions! There is simply no limit to the ways we will be able to use Virtual Reality.

As advanced VR equipment becomes more affordable, it's going to reach more and more people. It looks set to be a digital revolution that will change the way we live, learn, work and play forever! Virtual Reality is going to completely change the way we see our world and we will even be able to control reality for our own benefit. It's an exciting future. Aren't you looking forward to it?

Questions:

- How long have virtual reality headsets been available?
- Where will total virtual reality first be used?
- Why will shoppers benefit from virtual reality?

Task 12. Mark the statements as T(true) or False(false).

- Virtual reality 3D headsets were invented 50 years ago.
- VR equipment is too expensive for some people at the moment.

Each task involves the selection of an individual path for the implementation of information activities and its implementation in accordance with the following steps: 1) awareness of the need for information; 2) goal setting; 3) activity planning; 4) information search; 5) selection of information; 6) preservation of information; 7) evaluating the received information, and during the implementation of information search on the Internet, students are asked to follow these steps. Students record the time spent searching for information, and the report on the implementation of information activities involves not only the presentation of specific information, but also a reflection on the activities carried out, and

at the initial stages of training, discussions are held step-by-step movement toward the goal and the most rational ways are determined.

Conclusion

The potential of computer technologies, namely virtual reality technology, for the implementation of high-quality foreign language teaching based on full immersion in a professional environment allows students to build an individual trajectory of studying the discipline. Within the framework of such an approach to learning, the task of mastering a foreign language of a professional orientation is successfully solved with the involvement of a minimum number of teachers and in the shortest possible time. Virtual reality technology creates advantages for effective teaching of a foreign language in connection with increased motivation to learn, harmonious development of all language skills and is an ideal educational environment.

References

1. Dobrova V.V., Labzina PG. Virtual reality in teaching foreign languages // Bulletin of Samara State Technical University. Ser. Psychological and pedagogical sciences. – 2016. – Issue 4 (32). – pp. 13-20.
2. Makarova O.Y. Implementation of the principle of professional orientation in the process of training a social worker (in foreign language classes at a medical university): Candidate of Pedagogical Sciences: 13.00.01. – Kazan, 2004. – 23 p.
3. Nosacheva E.A. Fundamentals of the development of professional autonomy of the future teacher of foreign languages as a subject of educational activity //. – 2009. – № 100.
4. Starichenko, B. Ye. Professional'nyy standart i IKT-kompe- tentsii pedagoga/ Pedagogicheskoye obrazovaniye v Rossii. 2015. № 7. — S. 6 -16.
5. Trishina, S. V. Informatsionnaya kompetentnost' kak pedagogicheskaya kategoriya [Elektronnyy resurs] / S. V. Trishina // Eydos: internet-zhurnal. — 2005.
6. Godwin-Jones, R. (Emerging technologies: Blogs and wikis: Environments for on-line collaboration. Language Learning & Technology, 2003,-7(2): p.13–24.

WAYS OF DEVELOPING STUDENTS ' RESEARCH SKILLS IN PREPARATION FOR INTELLECTUAL – RESEARCH COMPETITIONS IN BIOLOGY

Esen L.B.

*1st year Master's degree student of Abay Kazakh National Pedagogical University,
Almaty, Kazakhstan*

Aidarbayeva D.K.

*PhD, Doctor of Biological Sciences,
Abay Kazakh National Pedagogical University, Almaty, Kazakhstan*

Abstract

This article analyzes the ways of forming research activities of students in preparation for intellectual and research competitions in biology. The growth of the scientific and technical potential of the state makes it necessary to increase the level of effectiveness and development of research activities in higher educational institutions. It is obvious that at the stage of development of Kazakhstan today, the relationship between science and education is the main driver of its economic growth, increasing its efficiency and competitiveness.

Keywords: *research skills, biology, intellectual competitions, complexity level, research projects*

INTRODUCTION

Today, in connection with major changes in the development of society and in accordance with new requirements, the main goal that the education system sets for itself is the formation of a person with deep critical thinking.

In this regard, in the world educational space, there is a need to train specialists who are not limited to mastering a set of information, but can effectively organize their activities independently, quickly adapt to everyday changes, work creatively, are passionate about comprehensive integration knowledge, are able to create creative actions on their own, have a mature personal quality of being, and are able to organize education from a research point of view. In accordance with the state standard of education in the Republic of Kazakhstan, the requirements for education in higher educational institutions are radically changing, and the priority is not to equip the student with a certain set of subject knowledge, skills and abilities, but to implement the goal of forming their educational, cognitive, research activities[1].

Through research activities, the student's scientific worldview develops. The scientific worldview is formed not only through the acquisition of theoretical knowledge, but also as a result of consistent arguments and research activities. As a result of independent research activities, students are convinced of the real reality. This sets the task for pedagogical universities to master the methods of forming research activities in the preparation of future teachers[2].

RESEARCH METHODS

(1) Forming Small Groups

We may decide to devote all or part of a class session to research works, but students must form small work groups during that time. We can ask the students to form groups of 3-5 people, or assign the groups ourselves.

(2) Presenting the Problem

Present the students with a brief problem statement (preferably on a printed work sheet, an example of which is shown below), e.g., "A 28-year-old man appears to have osteoporosis." In some cases a video clip or specimen might be used as a trigger. Emphasize to the students that they are dealing with an authentic case history[4]. Bizarre problems work best. Prior to class you should review the case history and arm yourself with data that can be released incrementally (progressive disclosure) as the case proceeds. Needless to say, the students should not be given the reference, as the objective is to solve a problem, not read a solution.

(3) Activating the Groups

Ask the groups to brainstorm possible causes of the osteoporosis. Each group will have to discuss, review, or investigate the biology of bone, including the role of osteoblasts, diet, vitamin D, parathyroid

hormone, growth hormone, calcitonin, kidney function, etc. This is when much learning occurs, as the students help each other understand the basic biology. Olympiads must reflect upon biological mechanisms rather than just memorize facts (as might occur in some traditional lecture-only courses). The instructor circulates among the groups, providing assistance but not solutions. The groups may well explore avenues unanticipated by the instructor. This is highly desirable and should not be discouraged. The instructor should avoid controlling the agenda of the groups[5]. Each group ranks its hypotheses in order of priority and prepares requests for more data. (E.g., for calcium deficiency hypothesis – "What did he usually eat?")

(4) Provide Feedback

Ask that a rep from each group place their top priority hypothesis or data request on the chalkboard (if already entered by another group, place their second choice, etc.). If this is not practical, ask for oral suggestions from the groups when the small group work is halted and the class is reconvened. Student suggestions may include[3]:

- ✓ Low calcium diet
- ✓ Immobility
- ✓ Low density of vitamin D receptors
- ✓ Calcitonin deficiency
- ✓ Excessive PTH
- ✓ Chronic acidosis buffered by salts mobilized from bone

The small group work can be stopped and the instructor can briefly discuss the ideas with the entire class. It is important to value every contribution, to assist the students in analysis of the biology involved, and to provide further information [he was not immobile, he had a normal diet, etc.]. The students can be prompted for data requests: "If you could ask for just three test results from examination of this man, what would they be?"

It is not likely that the students will solve a problem on the first pass, and the feedback from the instructor motivates the next round of small group work. The students could now be told that the man's lumbar spine density is 3.1 standard deviations below the average age-matched healthy female (osteoporosis = 2.5+ SD), his height is 204 cm, his left middle finger is 10 cm, and knee films show open epiphyses[6]. The cycle of small group work and instructor feedback can be continued during the current class session or on future occasions. The key to managing a PBL session is providing continual feedback to maintain student enthusiasm while simultaneously prolonging the resolution of the problem to ensure that adequate learning occurs.

Unlike simple tests and tests, project and research activities, various intellectual competitions, writing essays, Olympiads cover a wider range of knowledge in general education subjects and contribute to a wider erudition.

Preparation for the Olympic movement should be serious, long-term and systematic. In order for a 9th grade student to show decent results, it is necessary to start at least from the 6th grade.

1. Olympiad tasks form three groups:

Part 1 – tasks with the choice of one correct answer out of four;

Part 2, 3 – tasks with a choice of multiple answers or matching.

2. 25% of the tasks on the knowledge of the subject in the framework of an in-depth school curriculum.

3. 50% of knowledge assignments are outside the school curriculum.

4. 25% of tasks are for the application of knowledge in a non-standard situation, data analysis and problem solving.

As you can see, the knowledge that the guys receive in the lessons is not enough. Additional extracurricular training is needed.

Next, I conduct the selection of students and the formation of a school team of students who want and can engage in serious training in the subject.

We are planning work.

-creation of individual educational trajectories;

-the predominance of individual forms of work over group ones;

-close interaction of older students with younger ones.

When planning work with a group of schoolchildren, formalism and excessive organization should be avoided. Taking into account different ages and different levels of training, it would be optimal to build individual educational trajectories for each participant, and the student should be given the freedom to choose this trajectory. This implies free attendance of most classes, free choice of the

direction of cognitive or research work. Students can come to class to get a brief consultation and a task for individual work, to get help in carrying out project work, mini-groups are gathered to solve biological problems, discuss theoretical issues. Seniors can, solving their tasks, act as consultants and supervisors for the younger ones. The teacher consults individual students or talks with mini-groups, outlines the prospects and goals of further training[7].

There is a way of effective preparation - targeted study of biological literature

Table 1

Stages of preparing for the intellectual research competitions

Research and design	The "mature" project reflects the personal and individual position of the author and has a social and practical significance. With such projects, our students became the winners of the regional
Solving problems, performing tests	The student has the opportunity to gradually perform simple tasks first, and then a higher level of complexity.
Carrying out practical work	The requirements for the practical tour are increasing every year, because it is here that the student can apply his knowledge in practice.
The principle of knowledge activity	Olympiad tasks are compiled in such a way that the entire stock of knowledge is in active use. They are compiled taking into account all previous knowledge, in accordance with the requirements of the standard of education and the knowledge gained at the moment

[a table is compiled by authors]

The goals may be different, as a rule, it is a generalization, systematization of the material, or, conversely, a leading question before studying a new topic. In search of the necessary information, a variety of sources are "shoveled", the necessary skills are acquired, and the products created at the same time are then used as reference materials. Much attention is paid to working with educational and reference literature on ecology, because this subject is not studied in our school, and schoolchildren show great interest in it.

Currently, along with books, perhaps an important role is played by such a source of information as the Internet. Electronic versions of books, journal articles, various tests, tasks of Olympiads of various levels can also be found on various biological sites. Is it possible and necessary to manage this flow of information? In any case, it is advisable to familiarize students with a list of biological sites where they can find useful information for themselves. One of these sites is undoubtedly www.kpdbio.ru, where resources are placed to prepare for the regional stage in biology. On this site, you can get online advice on a question of interest, test your knowledge by performing test tasks of previous years, watch a video tutorial.

Conclusion

When analyzing the past Olympiads, omissions, shortcomings, findings that were not taken into account in the previous activities of both the teacher and the student are revealed. This principle is mandatory for teachers, as it will positively affect the quality of preparation for the Olympiad. But it is also necessary for students, as it helps to increase the strength of knowledge and skills, develops the ability to analyze not only successes, but also shortcomings.

References

1. Sidorov, V. A. Intellectual competitions as one of the directions of modern learning technologies / V.A. Sidorov // Knowledge. Understanding. Ability. - 2018. - No. 1. - pp. 148-158.
2. Mardakhaev L.V. Dictionary of Social Pedagogy. – M., 2020, p. 112.
3. Brookfield, Stephen D; 2012 Teaching for Critical Thinking: Tools and Techniques to Help Student Question Their Assumptions (San Francisco: Jossey-Bass), p. 210.
4. Burrow, A K; 2018 The Bulletin of the Ecological Society of America, pp. 137–150
5. Dolmans, D H J M., De Grave, W, Wolfhagen, I H A P, & Van Der Vleuten, C P M; 2021; Medical Education 39 (7), pp. 732–741
6. Orozco, J A & Yangco, R T; 2016 Asian Journal of Biology Education 9, pp. 1–10
7. Kojaspirov A.Yu., Kojaspirova T.M. Pedagogical dictionary: for students of higher and secondary education. Educational institutions. – M., 2019, p. 106.

ETHICAL ADVANTAGES OF ENGLISH SLANG VOCABULARY DURING TEACHING OF STUDENTS OF PEDAGOGICAL SPECIALTIES

Kateryna Kiryushina

Lecturer in the Applied College «Universum»
Borys Grinchenko Kyiv University,
L. Kadeniuk ave., 16, 02094, Kyiv, Ukraine

ЕТИЧНІ ПЕРЕВАГИ АНГЛІЙСЬКОГО СЛЕНГОВОГО СЛОВОТВОРУ ПІД ЧАС НАВЧАННЯ СТУДЕНТІВ ПЕДАГОГІЧНИХ СПЕЦІАЛЬНОСТЕЙ

Кірюшина Катерина Костянтинівна,

викладач Фахового коледжу «Універсум»
Київського університету імені Бориса Грінченка,
просп. Л.Каденюка, 16, 02094, Київ, Україна

Abstract

The article examines the impact of English slang vocabulary on the development of students of pedagogical specialties in foreign language classes on the basis of an ethical approach. The importance of developing the creativity of future specialists in foreign language classes is indicated and substantiated.

Анотація

У статті розглянуто питання впливу англійського сленгового словотвору на розвиток студентів педагогічних спеціальностей на заняттях з іноземної мови на засадах етичного підходу. Зазначено та обґрунтовано важливість розвитку креативності майбутніх фахівців на заняттях з іноземної мови.

Keywords: English slang vocabulary, creativity, future teachers, foreign language.

Ключові слова: англійський сленговий словотвір, креативність, майбутні педагоги, іноземна мова.

Постановка проблеми. Соціально-економічні трансформації сучасного суспільства та стрімкий розвиток кіберпростору висувають нові запити та вимоги до професійної підготовки майбутнього фахівця: здатність до постійного професійного та особистісного зростання та розвитку, спроможність приймати нестандартні рішення в процесі виконання професійної діяльності. У зв'язку з цим актуальним стає підвищення якості професійної підготовки майбутніх фахівців та сприяння розвитку їх нестандартного мислення.

Метою даної статті є у висвітлення етичних засад використання англійського сленгового словотвору в розвитку майбутніх педагогів на заняттях з іноземної мови.

Аналіз досліджень і публікацій. Станом на сьогодні питання висвітлення впливу етичних домінант англійських мережових сленгових неологізмів в розвитку креативності майбутніх соціальних педагогів на заняттях з іноземної мови не було ціллю наукових розвідок. Але окремим її аспектам присвячена окрема низка наукових досліджень, зокрема: проблемі деонтології соціальної роботи як складової професійно-етичної компетенції майбутніх фахівців (Р. Зозуляк-Случик, О. Радкевич та ін.) [6]; питання практичної підготовки майбутніх соціальних педагогів у професійному середовищі (Т. Зінченко) [5]; сутнісним характеристикам поняття «креативність» та його властивостям (Л. Близнюк, Л. Сологуб [1], С.-У. Тап [6], Х. Сун [1], Ю. Арифани [6], М.-Н. Massie та ін. [5]); розвитку креативності майбутніх фахівців під час занять з іноземної мови (М. Ganapathy [1], М. Ismail [2], У. Ма, S. Mohamed Kassem [2], та ін.); емоційній креативності як предикату мовної креативності та мовних досягнень майбутніх соціальних педагогів (S. Benesch [2], J. Bielak, A. Mystkowska Wiertelak [3], Х. Сун, J. Li, and L. Meng [4]); особливостям використання англомовного молодіжного мережевого сленгу у вивченні іноземної мови (О. Бондар-Фурса [2], Л. Шисюн (кит. L. Shixiong) та ін. [6]. Особливість нової парадигми освіти полягає в переорієнтації системи освіти в цілому та вищої освіти, зокрема на врахування потреб молоді шляхом інтеграції англійських сленгових неологізмів в практику вивчення іноземної мови, що вказує на сучасний підхід та свіжий погляд на проблему етичних засад

розвитку креативності майбутніх соціальних педагогів на заняттях з іноземної мови

Виклад основного матеріалу. Структурний аналіз наукових публікацій дозволяє термін «етичні домінанти майбутніх педагогів» визначити як комплекс етичних знань, професійних особистісних якостей, норм і принципів, необхідних для здійснення професійної роботи майбутніх педагогів. Визначено, що до складових етичних домінант майбутнього педагога відносять етику соціального педагога, що виявляється в етичній культурі, закладеній у свідомості, для якої, типовий високий рівень морально-етичних знань, тверджень, потрібних для побудови системи етичної підготовки майбутніх фахівців соціальної сфери, а також етичного усвідомлення, що позначене фаховою спрямованістю етичних взаємин і етичної діяльності, наявністю сукупності професійних якостей та цінностей, етичної регуляції, необхідних для успішної фахової діяльності, рівнем особистої етичної культури, що є базою фахового етичного вивищення [6].

Водночас етичні домінанти майбутнього педагога пов'язані з деонтологією соціальної роботи – системою етичних норм, напрацьованих практичним шляхом у межах фахової спільноти. Професійна етика майбутнього педагога вивчає особливості етики, специфіку реалізації її загальних принципів. Важливим для етичних домінант майбутнього педагога є закономірності прояву етики у свідомості, спілкуванні з іншими. Вони допомагають зрозуміти характер етичної діяльності та етичних взаємин під час освітнього процесу, формує основи етикету, що означає апробовані у робочому середовищі особливі правила спілкування, поведінкові манери, які допомагають у наданні допомоги особам, які її потребують. Означене розширює спектр можливостей їх професійної підготовки шляхом використання англійських мережових сленгових неологізмів під час занять з іноземної мови, як засобу розвитку креативності у вирішенні майбутніх професійних завдань [5]. В контексті досліджуваної проблеми доцільно зосередити увагу на сутнісних характеристиках поняття «креативність» та його властивості. Так, більшість науковців розглядають креативність як властивість особистості (здатність до творчості) і як творчий процес [1, с. 52]. Зокрема, малайзійські дослідники Ч. Тан та ін. [6] вважають, що креативність зазвичай концептуалізується як здатність створювати продукти, які є оригінальними та адаптивними [5, с. 1].

Дослідники з Саудівської Аравії С. Ісмаїл і М. Кассем стверджують, що «креативність є дуже суперечливим поняттям, яке має здатність до трансформації. Воно змінюється з часом та відповідно до культурних і соціально-економічних реалій. Креативність походить від латинського слова «сгеаге», що означає «робити» або «виробляти». Мається на увазі представлення чогось нового та оригінального. Таким чином, воно тісно пов'язане з оригінальністю, новизною, натхненням, геніальністю та індивідуальністю [6, р. 145]. У розвитку креативності майбутніх соціальних педагогів на заняттях з іноземної мови важливою є креативність і викладачів, зокрема у дослідженні ситуацій під різними кутами зору, у баченні нових підходів, в адаптації до різноманітних потреб здобувачів освіти і в навчанні їх таким чином, щоб вони також могли впоратися з очевидною великою кількістю труднощів, з якими вони стикаються в освітньому процесі [6, с. 1]. У будь-якому освітньому контексті академічні результати та досягнення здобувачів освіти є головною метою посадових осіб в галузі освіти, адміністраторів і викладачів, і контекст навчання іноземної мови не є винятком [6, с. 1]. Точніше, креативність викладачів іноземної мови пов'язана з їхньою здатністю запропонувати студентам певні можливості використовувати мову, яку вони опановують, новими та інноваційними способами. Креативне викладання підвищує інтерес студентів, які вивчають іноземну мову, збільшує академічну мотивацію та навчальні досягнення [6, с. 2]. У зв'язку з цим креативність викладача та ефективність викладання є двома основними елементами викладання, і поняття ефективності викладання частіше розглядається з багатовимірної точки зору, наприклад професійних, педагогічних, соціальних та особистих якостей [6, с. 127].

Висновок. Аналіз наукової літератури з проблеми дослідження дозволяє стверджувати, що: формування креативності майбутніх педагогів під час занять з іноземної мови на засадах етичного підходу вимагає вдосконалення в методичному аспекті; форми, методи та технології теоретичної та практичної підготовки не дозволяють розвивати креативність на належному рівні; повністю не використовується потенціал рефлексії та самоосвіти, що в майбутньому може негативно позначитися на професійній діяльності майбутнього педагога. У такий спосіб використання мережових сленгових неологізмів під час занять з іноземної мови є чудовим розважально-комунікативним засобом взаємодії між людьми, який має великий освітній потенціал, адже мережевий сленг – це жива мова сучасного молодого покоління. Перебуваючи на одній хвилі із студентами можна легко та невимушено застосовувати англійський мережевий

сленг як засіб розвитку креативності майбутніх соціальних педагогів до вивчення іноземної мови шляхом використання арсеналу різноманітних інтерактивних вправ, ігор, квізлетів, ребусів, організацію соціальних челенджів, створення дописів соціальних мереж, тощо. Перспективи подальших наукових розвідок будуть пов'язані із експериментальною перевіркою ефективності застосування англійського мережевого сленгу як засобу розвитку креативності майбутніх педагогів на заняттях з іноземної мови на засадах етичного підходу.

References

1. Shulyk, M., Shulha, N., Oblovatska, N., Andrusiak, H., Pobiianska, N. *State policy and legal provision of socially hazardous diseases in Ukraine: the case of HIV/AIDS analyzed from bioethical, medical, and legal perspectives*. Amazonia Investiga. 2023. 12(65). P.276-286.
2. Близнюк Л., Сологуб Л., Марєєва Т. Методичні аспекти креативної діяльності викладача іноземної мови. *Перспективи та інновації науки*. 2022. No 6 (11). С. 49–60. URL : [https://doi.org/10.52058/2786-4952-2022-6\(11\)-49-60](https://doi.org/10.52058/2786-4952-2022-6(11)-49-60).
3. Бондар-Фурса О. Можливість використання сленгу у вивченні іноземної мови. *Наука та суспільне життя України в епоху глобальних викликів людства у цифрову еру (з нагоди 30-річчя проголошення незалежності України та 25-річчя прийняття Конституції України): у 2 т.: матеріали Міжнар. наук.-практ. конф. (м. Одеса, 21 трав. 2021 р.) / за загальною редакцією С. Ківалова. Одеса : Видавничий дім «Гельветика», 2021. Т. 1. С. 654–657.*
4. *State Guarantees of the Right to Housing for War Veterans: Substantive and Procedural Aspects*. Andriy P. Cherneha, Zhanna V. Udovenko, Nataliia A. Sergiienko, Nataliia O. Oblovatska, Alyona O. Dotsenko. *Cuestiones Políticas*. Vol. 38 N Especial (1era parte 2020). P 223-247.
5. Khatnyuk N.S., Pobiyanska, N.B. Oblovatska N.O. *Problems of transformation of labor legislation in accordance with the conditions of martial law in Ukraine*. Journal «ScienceRise: Juridical Science». 2022. № 4 (22). с. 4-10.
6. Khatnyuk N.S., Oblovatska N.O., Pobiyanska, N.B. *Ways of adapting labor legislation to wartime conditions*. Scientific and practical magazine "European Perspectives". 2022. № 4. P.143-151.

ADVANTAGES OF CREDIT-MODULAR TRAINING IN THE SYSTEM OF TRAINING ENGINEERS***Khalmatov Rustam Raufovich****senior Lecturer of the Department of Higher Mathematics
Tashkent State Technical
University named after Islam Karimov****Abstract***

The credit-modular training system is aimed at achieving the most effective result in the assimilation of knowledge, the formation of professional and personal qualities of future specialists and should be considered as a prospect for improving the educational process in higher educational institutions. This article is devoted to the introduction of a credit-modular system of education in technical universities of the Republic of Uzbekistan. The advantages of the credit-modular system in the process of training engineers in technical universities are shown.

Keywords: кредит, модуль, технический вуз, инженер

In Uzbekistan, over the past years, the educational system has been gradually switching to a credit-modular system of education and there are already positive results. Examples are branches of foreign universities in the republic and domestic universities that carry out the educational process with the introduction of international standards.

To date, the teaching methodology, like all didactics, is going through a difficult period. Currently, the goals of higher education have changed, new curricula are being developed, new approaches to reflecting the content through integrated educational areas rather than separate separate disciplines. New concepts of education based on the activity approach are being created.

It is known that the quality of knowledge is determined by what the learner is able to do with them. As time has shown, unfortunately, the forms of passive-informative teaching of students do not overcome the differences between the assimilation of theoretical material of academic disciplines and the level of proper formation of students' creative clinical thinking and research skills. Today we cannot rely only on explanatory illustrative and reproductive methods widely used in teaching practice. The renewal of education requires the use of non-traditional methods and forms of educational organization, including integrative ones. Integration should be considered not only from the point of view of interrelations in subjects, but also as the integration of technologies, methods and forms of education.

The need to turn to integrated learning is caused by a number of objective reasons: a noticeable decrease in students' interest in subjects; insufficient thoughtfulness and elaboration of existing programs; inconsistency, disunity of the stages of students' knowledge formation, the development of generalized skills and abilities. As practice shows, in some cases, the same concept or term within the framework of individual disciplines is defined differently, which in turn complicates the learning process. Insufficient consistency of work programs leads to the fact that the same topic in different disciplines is studied at different times. All these contradictions can be easily eliminated with integrated learning. The principles of integrated learning are aimed at achieving the main goal — the development of students' thinking.

Modular training is the organization of the educational process, in which educational information is divided into modules (completed and independent units, parts of information).

A module is a block of information that includes a logically completed unit of educational material, a target action program and methodological guidance that ensures the achievement of the set goals. The concept of a module contains "such a volume of educational material, thanks to which the initial acquisition of some theoretical and practical skills for performing any specific work is ensured."

The essence of modular training is that the content of training is structured into autonomous organizational and methodological blocks- modules, the content and volume of which can vary depending on the didactic goals, profile and level differentiation of students, and the desires of students to choose an individual trajectory for the training course.

A modular educational program is a set of modules aimed at mastering certain competencies necessary for the assignment of qualifications. Competence is the cumulative level of knowledge, skills and professional training (competencies) acquired by a student in the course of training and for successful activity in a certain field.

The purpose of introducing a credit-modular system is to create flexible educational structures, both in terms of content and organization of training, "guaranteeing satisfaction of the needs available at the moment and determining the vector of new interest."

The main task of the credit-modular system of education is the selection of new forms and methods of teaching that allow not just to give the necessary knowledge, but to include the student in the system of continuing professional education and self—education. The purpose of the development of the educational program is the acquisition by the student of certain competencies, the means of their formation is the module as an independent unit of the educational program, and the system of accounting for the complexity of training is credits (credits) accrued for the development of each module.

Unlike the traditional approach to learning, focused mainly on the transfer of knowledge, the modular approach is aimed at achieving a certain professional competence through independent activity.

With a credit-modular system of education, university students always have the opportunity to get help and advice, and, if necessary, an assessment of their activities from a teacher and other students. This will allow students to develop such a quality as collectivism, and will contribute to the acquisition of skills of teamwork (collective) work.

The main task that the credit-modular training system is designed to solve is the transition from information-informing training to modeling and shaping future professional activity, as well as the transition to active forms that allow training a doctor who is able to quickly adapt to changing conditions, see problems and directions of medical development, develop and professionally make optimal decisions..

The credit-modular system of training provides the possibility of rapid and adequate correction of educational programs in accordance with the requirements of medical science, the possibility of creating new programs based on existing ones and their adaptation to the level of available training of students. This system helps to increase the activity of not only students (increasing their motivation to acquire knowledge), but also teachers, forcing them to improve their pedagogical skills.

The credit-modular training system is aimed at achieving the most effective result in the assimilation of knowledge, the formation of professional and personal qualities of future specialists and should be considered as a prospect for improving the educational process in higher educational institutions.

The introduction of a credit-modular system will contribute to the resolution of important tasks of higher education in Uzbekistan:

- adaptation of the ideas of ECTS (European Credit Transfer and Accumulation System) to the higher education system of Uzbekistan in order to ensure the mobility of students in the learning process and the flexibility of training specialists depending on the rapidly changing requirements of the national and international labor market;*
- providing students with the opportunity to receive education according to an individual program formed according to the requirements of customers and the wishes of students, which contributes to their self-development and preparation for life in a free democratic state;*
- stimulating participants in the educational process in order to achieve high quality higher education;*
- standardize the procedure for obtaining a professional qualification by a student in accordance with the labor market.*

With a credit-modular training system, a student, having a work plan and a bank of information, as well as methodological recommendations for achieving the set learning goals, can independently master certain sections of the curriculum. Thus, during the transition to a credit-modular system of education at a higher technical educational institution, there will be an increase in the importance of independent work in the educational process, and this, in turn, will require increased independence, creative initiative and activity of future specialists.

Thus, the introduction of a credit-modular system will contribute to the improvement of the educational process at a technical university, since it will allow for the transition from information-reporting training to modeling and formative training, which determines the future professional activity of a doctor. The transition to active forms will allow us to train engineers who will be able to quickly adapt to changing conditions.

EFFICIENCY OF USING DIFFERENTIATED LEARNING TECHNOLOGY FOR THE DEVELOPMENT OF STUDENTS' COGNITIVE INTERESTS IN BIOLOGY

Kordabas Akniet Bazarbaikyzy

*1st year Master's degree student of Abay Kazakh National Pedagogical University,
Almaty, Kazakhstan*

Zhumagulova Kalampyr Abzhapparkyzy

*Associate Professor, Candidate of Biological Sciences,
Abay Kazakh National Pedagogical University,
Almaty, Kazakhstan*

Abstract

This article is devoted to use of differentiated learning at the lessons of biology, the author considers the technology of level of differentiation which enables to take into account the cognitive interests of all students, to develop each student to the best according to its talents and abilities not limiting the teachers selection of methods and forms of teaching. As the world has experienced fast and unpredictable changes in the 21st century that involved voluminous aspects of life such as technology, communication, information, economy, transportation, etc. Schools need to anticipate these changes by developing the 21st century skills . There are some competencies that must be developed in living in the 21st century. They are critical thinking skill, differentiated learning, creativity and innovation, communication and collaboration, social skill and cross culture, and mastery of information .

Keywords: *differentiated learning, personality-oriented learning, multi-level tasks, biology, stages, individual approach.*

Introduction

Modern concepts of secondary education proceed from the priority of the goal of education and development of the student's personality on the basis of the formation of educational activities. It is important to create conditions so that each student can fully realize himself, become a genuine subject of learning, willing and able to learn. The training should be "variable to the individual characteristics of schoolchildren". One of the means of implementing an individual approach to children is the differentiation of learning.

Differentiated learning is considered such an educational process, which is characterized by accounting typical individual differences of students. The differentiated approach at the individual level is caused by the following factors.

There is not a single child identical to another or a group [1, p.3]. Children are born with different abilities. Each child has his own individual fusion of abilities, temperament, character, will, motivation. These features develop, change, and are amenable to correction. In didactics, teaching is considered differentiated if individual differences of students are taken into account in its process [2, p.200]. Distinguish concepts "internal" and "external" differentiation. Internal refers to such an organization of the educational process, in which the individual characteristics of students are taken into account in the classroom in their classroom. This concept of differentiation is very similar to the concept of individualization of learning. With external differentiation, students of different levels of learning are specially grouped into study groups. With internal differentiation, personality-oriented learning is achieved mainly due to pedagogical technologies, and with external differentiation, students are grouped into study groups according to some individual characteristics. These signs are determined by the types of differentiation. This is differentiation by abilities [4, p. 140], by interests. Differentiation by general abilities is carried out on the basis of taking into account the general level of learning, the development of students, individual features of the psychological development of memory, thinking, cognitive activity.

Students love what they understand, in what they achieve success, which they know how to do. Any student is pleased to get good grades, even a violator of discipline. It is important that with the help of his comrades, teachers, he achieves

the first successes, and that they are noticed and noted, so that he sees that the teacher is happy with his successes, or saddened by his failures. In other words, the education process should be

differentiated taking into account the natural inclinations of students' abilities [4, pp.74-77].

Therefore, based on the above, the biology teacher faces several problems:

1. Create learning conditions so that a student with a low level of training feels more comfortable, so that knowledge is available to him, and a student with a high level of training "does not tread" on the spot, but studies the material in more depth.

In a modern school, in conditions of a large amount of educational information, it is almost impossible to teach all students at the same high level. Moreover, it is often unattainable for many students. And this means that most of them have a negative orientation towards the educational process as a whole.

2. Create a multi-level practical and didactic material. Existing biology textbooks are focused on their use within the framework of traditional education. In them, the studied material is built according to one template: general theoretical material and its application in practice in the form of frontal tasks.

Table 1

Stages of starting work on the introduction of a differentiated approach to the educational process

1	to justify the allocation of time in the classroom for independent work of students, work in a dialogue, in a group;
2	to identify the place of multi-level classes in the holistic educational process;
3	to identify conditions for improving the effectiveness of teaching and development of students;
4	to develop methodological recommendations on the use of differentiated learning technology.

[the table is created by author]

So, a differentiated approach to students is a purposeful attitude of the teacher to students, taking into account their typological features, manifested in the differentiation of tasks at various stages of the lesson, when organizing homework and extracurricular work [1, p.3-5]. After all, we have long realized the need for a differentiated approach to learning, so that we can devote more time to lagging students, without losing sight of the strong ones, creating favorable conditions for the development of everyone, in accordance with their abilities and capabilities,

features of their mental development, character [4, p.75]. After all, all children are very different: some are bright, talented, others are not. But every child must fulfill himself. And I think this is extremely important.

Effective problem-solving requires an orderly approach. Problem-solving skills do not magically appear in students as a result of instructors simply throwing problems at them.

It will be effective if students use the following heuristic: "How to make a DENT in a problem: Define, Explore, Narrow, Test."

Table 2

"Define, Explore, Narrow, Test" method

<i>(1) Defining the Problem Carefully</i>	<i>(2) Exploring Possible Solutions</i>	<i>(3) Narrowing Choices</i>	<i>(4) Testing Solution</i>
What exactly are you trying to determine? Does the problem have several components? If several, state them separately. Does everyone in the group agree with the way the problem has been framed? Ask group members to "think out loud," as that slows down their reasoning and enables people to check for errors of understanding.	Brainstorm ideas that may contribute to a solution. Justify your ideas to group members. Clarify for them the biology involved. Have them paraphrase your ideas. Listen carefully to the ideas of other group members and give positive feedback[5]. Make a list of learning issues. What do we know? What don't we know? Is this problem analogous to any past problem? What core biological concepts may apply to this	After developing a list of hypotheses, sort them, weed them, and rank them. List the type of data required to test each hypothesis. Give priority to the simplest, least costly tests. It is easier to get information on the diet of a subject than it is to do sophisticated biochemical tests.	Seek from your instructor the data that you need to test your ideas. If all your possible solutions are eliminated, begin the cycle again: define, explore, narrow, test. When you encounter data that confirm one of your hypotheses you may be asked to write a biological explanation of your solution and justify it using the available evidence.

	<i>problem? Assign research tasks within the group</i>		
--	--	--	--

[the table is created by author]

Conclusion

As we can see, the advantages of interactive learning with a differentiated approach are still much greater. Practice shows that interactive techniques contribute to the activation of the process of mastering the necessary knowledge, teach students constructive communication, the ability to find compromises, help form critical thinking, allow the child to know himself more deeply, identify his strengths and weaknesses, advantages and disadvantages[6].

They give a powerful impetus to the development of natural abilities, to develop certain models of behavior in society, for self-knowledge and self-improvement. In my opinion, differentiation is a great way to implement a personality-oriented approach to learning. Remember how in school years we liked to play with friends in the yard or at recess, and how we were saddened by the need to read boring textbooks, memorizing long abstruse phrases invented by adults? Nothing has changed today, and children just want to play and do not like to do incomprehensible and uninteresting things imposed on them by adults. Children don't like motionless and sit silently in uninteresting lessons, memorize a huge mass of information and then try to retell it for no clear reason. The question arises - why do we continue to use the same teaching methods that once caused boredom and irritation among us, why are we not doing anything to change this situation? A serious need for this has long been overdue. The main reason for the lag of our education system is the inability to apply the knowledge gained in the study of disciplines. Under the effectiveness of educational activities of the institution.

The success of a graduate of an educational institution who is ready to be competitive in a dynamically changing situation in the country is understood by the team, each teacher and student. To do this, it is not enough to possess a certain amount of knowledge, skills, skills (standard). It requires knowledge of the main ways of interacting with the world and with oneself, such as research, design, organization, communication and reflection constitutes the competence of the graduate. Therefore, I think, that in order to achieve such a quality of educational services, it is necessary to use a differentiated approach in educational activities and the use of interactive educational technologies, the transition to interactive learning, which takes into account the abilities and level of development of students.

At the same time, it is important to take into account that the technology of differentiated education and upbringing is effective only if it is integrated with other technologies: with the technology of personality-oriented, problem-based learning.

References

1. Potashnik, M.M. School of multi-level and multidirectional education [Text] / M.M. Potashnik // Pedagogy. - 2021. - №6. - C. 3 - 11.
2. Skatkin, M.N. Didactics of secondary school [Text]: Textbook for students of directors of general education. schools and as studies. the manual on a special course for students / Edited by M.N. Skatkin. — 2nd ed., reprint. and additional - M.: Enlightenment, 2016. - 319 p.
3. Dyachenko, O.M. The problem of individual differences in the intellectual development of a child [Text] / O.M. Dyachenko // Questions of psychology. - 2009. - No. 4. - pp. 138 - 142.
4. Herman, G.M. Degree of freedom of choice [Text] / G.M. Herman // The headmaster of the school. - 2020. - No. 5. - pp. 74-77.
5. Abasov, Z. A. Differentiated training [Text] / Z.A. Abasov // The headmaster of the school. - 2018. - No. 8. - pp. 61-63.
6. Malysheva, G.I. Modern pedagogical technologies as a means of improving the effectiveness of the learning process [Text] /.

FEATURES OF INTERACTION BETWEEN THE COACHING STAFF OF A SPORTS SCHOOL AND PARENTS OF STUDENTS

Letyagina Yana

student of the Russian State Vocational Pedagogical University

Komleva Svetlana

Docent of the Russian State Vocational Pedagogical University

Abstract

This essay highlights several aspects of communication between student parents and the coaching staff of a sports school. The role that moms, dads, and coaches play in helping young athletes during their training. There are also some intriguing methods for parents to communicate with the instructors at sports institutions.

Keywords: *interaction, sports school, parents, coaches, children*

The secret to the effective sports growth and instruction of kids and teens is the collaboration of the sports school's coaching team and the parents of the pupils. In order to provide the best environment possible for athletes to improve their skills and achieve remarkable outcomes, it is crucial to address the complex world of relationships that exist between coaches, players, and their parents. In the end, only with the combined efforts of parents and coaches can athletes get the best outcomes. Here, we'll talk about the particulars of this collaboration and how it affects kids' sports-related motivation and performance.

A key component of the successful sports education of young athletes, which influences kids' enthusiasm to play sports, is collaboration between the sports school's coaching staff and the parents of the students. From an early age, parents provide their children with support, education, inspiration, sporting encouragement, and problem-solving assistance. Maternal figures establish conducive environments for their offspring's athletic growth by offering adequate sustenance, relaxation and sleep, as well as encouragement throughout practices and tournaments. To help their children do better in sports, parents may also assist in setting up extra instruction, physical education, and sports programs. In addition to playing a significant role in the growth of young athletes, coaches must be proficient communicators who can update parents on their athletes' accomplishments and progress in a two-way exchange. To attain excellent athletic performance, the coaching team needs to address each kid on a unique basis.

Parents and coaching staff members have misconceptions that turn into heated arguments. In contrast to the coaches' beliefs, parents may have different expectations and ideas about what their kids should accomplish, how to conduct the training process, and a host of other topics. In these situations, it's critical to come to a compromise and look for cooperation in order to promote the child's development. According to research, students' sports careers are directly impacted by the positive relationships that coaches have with their children and their parents. When combined, the three elements support achieving the best outcomes without causing harm to any individual. Children who have mutual understanding and feel encouraged by their parents and instructors are more likely to achieve and conquer life's and sports' obstacles. For kids and teens to get effective sports instruction, communication between the parents of the students and the coaching staff of the sports school is crucial.

Children's motivation and achievement in the realm of sports are influenced by the support and collaboration between parents and coaches. It's critical to keep in mind that every participant experience good communication differently. Having open lines of communication is crucial. Parents should feel at ease discussing their child's difficulties, development, and progress with coaches. Respect and comprehension from coaches as well as parents. Everyone ought to understand that everyone only wants the best for their kids. No one knows a kid better than their parents—not only about their strengths and weaknesses but also about their unique requirements, hobbies, and dietary preferences. In order to choose the best course of action for the young athlete's growth, the coaching staff should consider the opinions and recommendations of the parents and pay attention to them. To avoid making matters worse and starting a fight that will only make the student's sports performance worse, you should never make fun of one another. Establishing dispute resolution protocols is crucial for preserving a constructive rapport. It's important to establish expectations and roles early on. Parents must think about supporting

their children outside of sports and engaging in active recreation, while coaches must select what duties their athletes do during practice and competition. Regular feedback is a crucial component of the interactions between the athletes at the sports school. The coaching team has a responsibility to update the parents about the events, training schedule, competition schedule, and their children's accomplishments. This will support moms and dads in staying in touch with their children and participating in the training and educational process. The goal of the coaching staff's interactions with the parents should be to foster harmony within the squad. Parent-teacher conferences are one way to do this, as coaches may address concerns and plans with parents and provide information about the programs and accomplishments of their pupils. All parties will be able to develop trust, get a deeper understanding of one another, and collaborate toward a common objective through these encounters. For instance, a sports school may be able to plan volunteer projects, team training, or contests to promote the collaboration of parents and coaches. Thus, fostering a positive and encouraging atmosphere for kids enrolled in sports schools to grow personally as well as for the development of sports and sportsmanship depends in large part on the collaboration of coaches and parents. It goes without saying that the collaboration between the parents of the children and the coaches at the sports school is a difficult process that need for ongoing care, growth, and attention. Nonetheless, it is because of these kinds of interactions that young athletes may have the most success in their sporting careers and find joy and fulfillment in physical education and sports.

Interactions between parents and coaches in sports schools that are interesting.

– Establishing cooperative chat rooms, online communities, and groups on different social media sites where people can talk about current events, exchange helpful materials, and start new lines of connection with other parents of students.

– Coaches' full reports on kids' training, accomplishments, and athletic performance are sent electronically.

– Hosting webinars and online training sessions led by mental health experts in the area to provide parents direction and advice on the psychological, physical, and overall health of their children.

– The development of engaging workshops, online competitions, and tournaments for parents and kids, all directed by the coaching team, to provide more opportunity for engagement. Fathers and mothers are invited to attend master workshops where they may learn about the intricacies of sports and training methods.

– The creation of a personalized learning route for each student and the use of one-on-one online consultations to facilitate a methodical discussion of developmental traits and assistance requirements.

– The use of internet platforms, programs, or trackers to keep an eye on student development and encourage it within the framework of child evaluation and encouragement.

– Development of a smartphone application that will show young athletes' training and recovery timetables in addition to their competition calendar. Notifications on changes or cancellations of classes, other events and activities, and outcomes for kids and young people will also be sent to me.

The development of children's athletic skills, better communication between coaching staff and parents, and increased efficacy during classes are all made possible by new approaches and methods of involvement.

List of sources

1. Interaction of the sports school with parents of students. Text: electronic // Site infowork. URL: <https://infourok.ru/vzaimodejstvie-sportivnoj-shkoly-s-roditelyami-obuchayushih-sya-4621733.html>

2. Organization of coach's work with parents. Text: electronic // Site infowrock. URL: <https://infourok.ru/organizaciya-raboti-trenera-s-roditelyami-1133640.html>

CURRENT STATE OF USING OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN TEACHING BIOLOGICAL DISCIPLINES AT THE UNIVERSITY

Yermagambetov M.N.

*1st year Master's degree student of Abay Kazakh National Pedagogical University, Almaty
Kazakhstan*

Zhaksybaev M.B.

*Associated professor, Candidate of Biological Sciences, Abay Kazakh National Pedagogical
University, Almaty, Kazakhstan*

Abstract

The theme of informatization of the educational process is one of the most relevant and widely discussed. The use of information and communication technologies (ICT) in biology lessons is one of the successful modern pedagogical teaching methods that allows increasing the understanding of biological processes and phenomena by increasing the visibility of the studied material using 3D models, interactive illustrations, simulations of biological processes and performing virtual laboratory work and research projects at universities. This article briefly describes the present state of using ICT tools in teaching biology, types of electronic educational publications on biology.

Keywords: *ICT, biology, university students, computer modeling, virtual laboratory.*

Introduction

Nowadays, the development of computer software and hardware opens up wide opportunities for involving students in the learning process, design and testing. Modern realities are such that the voluntary assimilation of any information by children of this time occurs through gadgets. Therefore, the use of information and communication technologies (ICT) in biology lessons at university is one of the successful modern pedagogical methods of teaching. In 2020, the world is faced with a serious epidemiological situation that it affected all spheres of life. The field of education was no exception. The inability to conduct face-to-face classes and attend schools to switch to a distance learning format. And here the main role of an assistant, an intermediary between a teacher and a student, was taken over by computer technology.

Unfortunately, we are currently seeing how commercially oriented ICTs lead to the opposite process. The easy accessibility and ease of use of information and gaming applications create the illusion for users that they are deeply advanced in "programming" and have unlimited freedom in self-expression and the choice of certain solutions. Therefore, young people spend a lot of time on completely

useless communication on social networks. It is possible to reverse this situation with the help of the same ICT, redirecting the uselessly wasted energy into a creative channel by involving students themselves in the teaching process by participating in the development of control and training systems [2].

The theme of informatization of the educational process is one of the most relevant and widely discussed. The phenomenon of informatization has been brought into the number of universal ideological categories, forming a new triad in the scientific and educational space: "Matter – Energy – Information". Information and telecommunications acquire not only cognitive meaning in the modern information society, but also become a powerful transformative force in the organization of its life [1].

Information and communication technologies are an extensive area that includes radio, television, as well as new digital technologies such as computers, smartphones and the Internet. The latter is a potentially powerful tool for change and reform in the field of education. When used correctly, various ICTs are designed to expand access to education and improve the quality of education, turning teaching and learning into an exciting, active process related to real life [3].

Biology is a complex discipline, it has many sections, each of which has its own characteristics, the secrets of our life that seem inaccessible until you join the process of learning them and understand how interesting and attractive this science is. When submitting new material in biology, constant demonstration support is required. Modern students are not interested in simple pictures, they need to be constantly surprised. Research shows that most biology teachers still use traditional and outdated methods in teaching biology. Teachers convey the facts of biology directly to students and encourage

rote memorization of actual knowledge for exams that cannot teach students to solve complex biological problems [4].

According to the Center for the Sociology of Education of the Kazakhstan, Kazakhstani teachers strive to use the capabilities of modern ICT: many teachers create their own data banks on their subject (47%), according to teaching methods (39%), offer homework that requires the use of computers (65%), and keep pedagogical diaries on the Internet (23%).

The practice of working at school has shown that the use of ICT in the organization of the biology teaching process allows solving a number of tasks of different orientation: increasing visibility, improving the effectiveness of the learning process, developing creative abilities, stimulating learning motivation, developing cognitive interest, self-education and individualization of learning, identifying gaps in students' knowledge [6].

Interactive illustrations are used to increase visibility – 3D models of biomolecules, living organisms, interactive animated biological processes. The computer modeling method is an excellent way to visually study a range of topics from molecular biology to evolution and can be a safe and effective form of introducing students to laboratory work.

To solve these problems, we can use:

1. Scientifically reliable 3D models and animations from Visual Science, which are engaged in visualization, education and communication in the field of science, pharmaceuticals, medicine and other high-tech fields requiring scientific expertise.

2. The program of the Massachusetts Institute of Technology (MIT)

Software Tools for Academics and Researchers (STAR), aimed at bridging the gap between scientific research and the classroom, because understanding and applying various research methods can be complicated due to lack of time and the need for advanced equipment. STAR contains components and modules of educational programs that facilitate the use of their educational resources in various educational institutions.

3. VirtualLab and PhET virtual laboratories, representing educational interactive laboratory work that allows students to conduct virtual experiments in natural science disciplines.

One of the survey questions is aimed at determining the value of multimedia teaching tools in the process of teaching biology. University teachers showed the values of using ICT tools:

- development of educational motivation and interest in the subject-42%;
- formation and development of knowledge in biology-25%;
- development of universal educational activities-20%;
- helps teachers to see students in an unconventional form of education-8%.

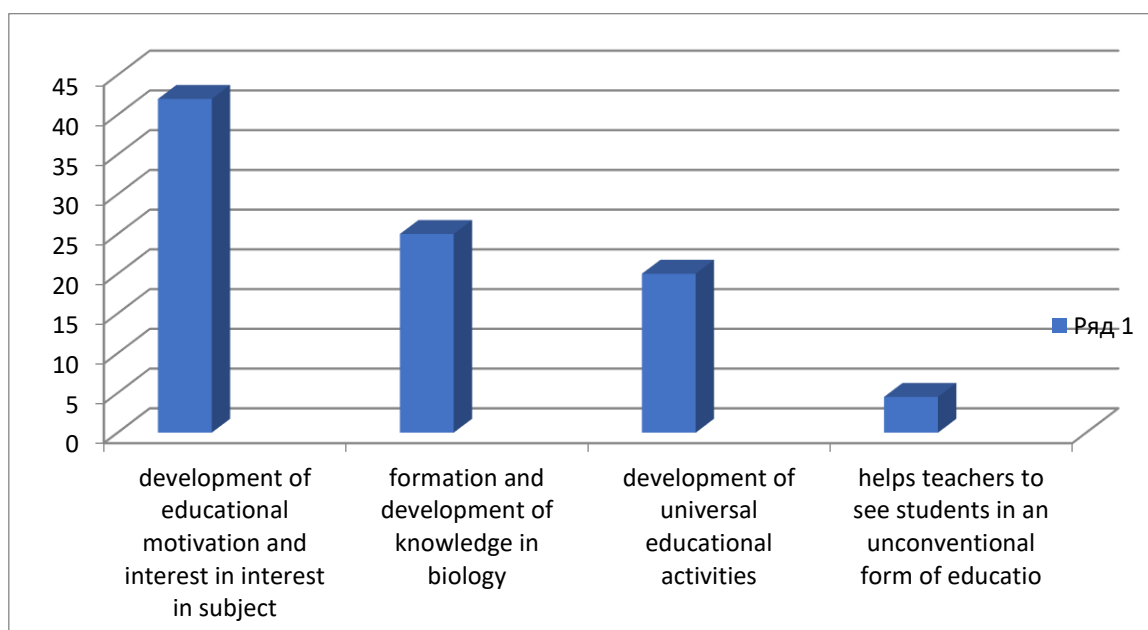


Figure 1: Teachers' answers towards the value of multimedia teaching tools in the process of teaching biology at universities

All these resources allow us to diversify the learning process, make it more visual. In addition, the use of such ICTs helps students to get much more opportunities for independent study of the material,

organizing research activities in the form of laboratory work in combination with a computer at home and a real experiment at school, planning and analyzing those experiments that are not feasible in real life in school laboratories, but are possible in virtual reality. In addition, do not forget about the expediency of using ICT for the development of students' personality and their preparation for independent production activities in the conditions of modern information society.

Conclusion

It is also necessary to involve students in research projects. The project is a set of actions specially organized by the teacher and independently performed by students, culminating in the creation of a creative product [5]. We study the structure of scientific research, the writing and presentation of research work, learn to obtain and systematize reliable scientific information using a computer, multimedia, work with scientific databases and scientific search platforms NCBI, Elibrary, Google Academy, thereby going beyond the school curriculum and instilling in them a love of science. The technology of project preparation takes into account the age and individual characteristics of children, stimulates independence, the need for self-realization.

The use of ICT in preparation for the Olympiads and the Unified State exam also has a number of advantages. To date, many multimedia textbooks on biology have been developed, which can be used for self-study of the material, repetition or consolidation of the topics covered, allow for monitoring and evaluation of knowledge. The use of ICT in pedagogical activity helps to ensure that the process of teaching biology meets the advanced requirements of pedagogical science, combines all the best of classical pedagogy with innovation, which ultimately leads to an increase in the efficiency of the educational process [5]. The competent use of ICT allows us to present the studied material in as much detail and detail as possible, solves the problem of the shortage of visual aids, optimizes the process of understanding and memorizing educational material and increases interest in the educational process to a higher level.

References

1. Krasilnikova V.A. *Information and communication technologies in education: textbook*. – M.: LLC "House of Pedagogy", - 2006. – 231 p.
2. Petrov P.P. *Application of information and communication technologies in teaching biology //Biology at school*, – 2008. – №. 1. – Pp. 16-18.
3. El Asli A. et al. *Effect of the use of Information and Communication Technologies ICT Resources on the scholastic performance of Middle School students in Biology and Geology Courses //Procedia-Social and Behavioral Sciences*. – 2012. – p. 1113-1117.
4. Osman K., Hiong L.C., Vebrianto R. *21st century biology: an interdisciplinary approach of biology, technology, engineering and mathematics education //Procedia-Social and Behavioral Sciences*. – 2013. – p. 188-194.
5. Khaibulina K.V. *The use of information and communication technologies in the study of biology // [Electronic resource]. Electron. version. –2012. №6 (89). Access mode: <https://cyberleninka.ru/article/n/ispolzovanieinformatsionnyh-kommunikatsionnyh-tehnologiy-pri-izuchenii-biologii/>*

WAYS OF IMPROVING THE METHODOLOGY FOR USING DIDACTIC MATERIALS IN THE PROCESS OF TEACHING BIOLOGY

Oksikbaev B.K.

Doctor of Biological Sciences, Zhetysu University, Kazakhstan, Almaty

Zhanbay D.N.

1st year Master's degree student Zhetysu University, Kazakhstan, Almaty

Abstract

The article briefly describes the essence of didactic materials in teaching biology, types of electronic educational publications on biology. The mechanisms of working with multimedia tools in the classroom and in extracurricular activities of a biology teacher are shown. The results of a pedagogical experiment on the problem of using multimedia tools in teaching biology are summarized. There are some competencies that must be developed in living in the 21st century. They are critical thinking skill, problem solving, creativity and innovation, communication and collaboration, social skill and cross culture, and mastery of information .

Keywords: *didactic materials, ways of using didactic tools, problem solving, biology, communication, creativity, self-directed learners*

Introduction

A modern teacher requires not only a deep expert in his subject, but also historical cognitive, pedagogical and psychological literacy, political and economic knowledge and information literacy. The intensity of the flow of information received by students is constantly increasing.

Multimedia is an information environment with various channels for obtaining aggregate information. Didactic situations artificially created by multimedia programs imitate the natural sensations of sound, drawing, presence, and allow you to create a virtual learning environment [1, p. 110].

Scientists note that using multimedia means saves 30% of the time spent on studying the content of educational material. Unfortunately, at present there is still a problem of the high cost of purchasing computers, demonstration equipment, electronic instruments, audio players, etc. In general education institutions. Many teachers independently develop and apply multimedia tools to biology lessons. Teaching biology with the help of multimedia means is carried out by special methods, software and technical means (video, audio means, computers, mobile phones, telecommunication networks).

Multimedia tools in the field of teaching biological education will help to solve the following typical tasks:

1. intensification of the educational process, including improving the quality and effectiveness of training; educational motivation of cognitive activity of students; deepening of interdisciplinary connections.

2. Development of personal qualities of students: analytical, constructive and creative thinking; communication skills in communication and cooperation with classmates; ability to defend your point of view; independent work skills; ability to overcome intellectual difficulties, etc.

The work of a biology teacher with multimedia means involves the acquisition of commonly used, general pedagogical and subject-pedagogical skills [2, p.24].

Activity of a biology teacher with multimedia tools:

- preparation and use of information environment components;*
- planning and organization of the educational process in the classroom;*
- organization of visual communication and coordination, placement of employees, management of the telecommunications network of the office, the briefing venue;*
- the function of individual monitoring of the health status of students, providing differentiated assistance.*

The study of the concept of multimedia methods in the theory and methodology of teaching biology was first described by I. N. Ponomareva in 2003. The manual presents the features of multimedia methods of teaching biology for students of biological faculties of pedagogical universities, a multimedia lecture and a description of multimedia practical work [3, p. 175].

Signs of multimedia teaching methods verbal, visual and practical methods combine all channels of information transmission, which can be considered complex, integrated or multifunctional.

What is the role of multimedia skills in the practice of a biology teacher?

Multimedia, like traditional teaching tools, perform a trinity of didactic functions: teaching within the discipline, development, education.

1. The most common way of using multimedia is the use of educational electronic resources by a biology teacher.

There are the following types of educational electronic resources in biology:

- electronic edition containing text, digital complex, graphic, musical, speech, photo, video, audio and other information, as well as collectible printed documentation (maps, reproductions, archival sources, etc.). Electronic edition can be made in a magnetic or optical environment[4,p.65];

RESEARCH METHODS:

The pedagogical experiment took place in a secondary school and consisted of the stages of identification and training. The identification stage provided for an interview, a questionnaire. Direct contact with teachers at the designated stage of the study made it possible to determine the importance of using multimedia in the educational process[5, p.112].

One of the survey questions is aimed at determining the value of multimedia teaching tools in the process of teaching biology. Teachers showed the values of using didactic tools:

- development of educational motivation and interest in the subject-42%;*
- formation and development of knowledge in biology-25%;*
- development of universal educational activities-20%;*
- helps teachers to see students in an unconventional form of education-8%.*

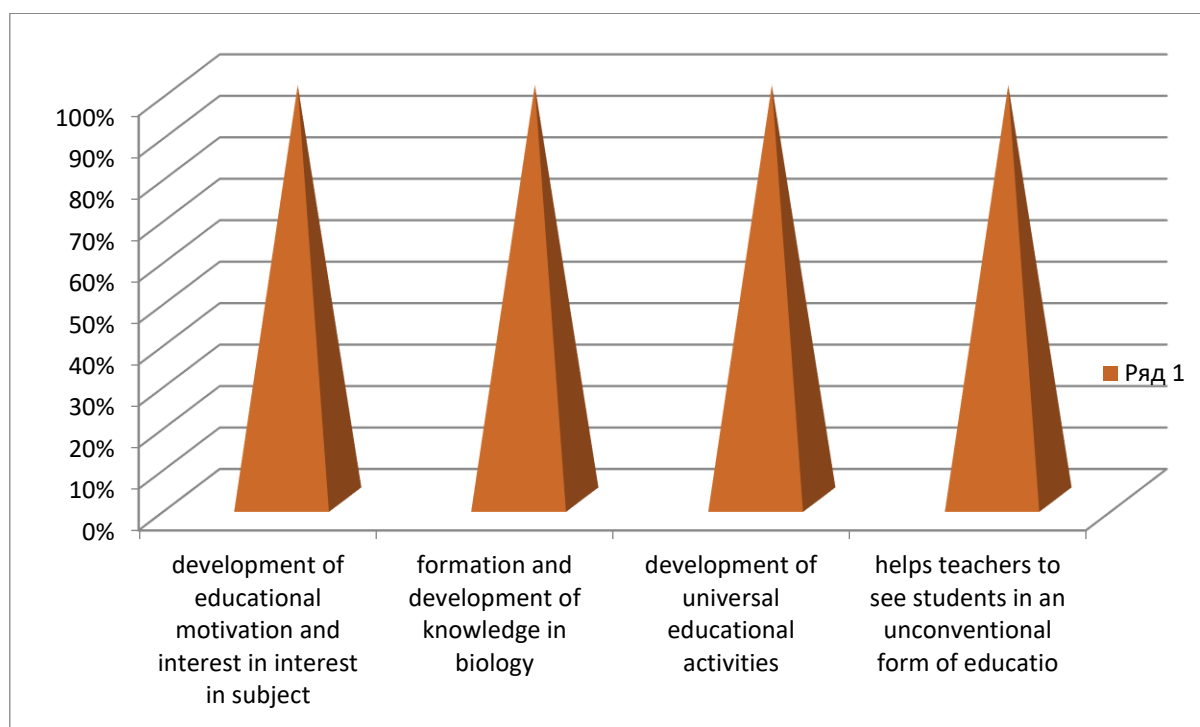


Figure 1: Teachers' answers towards the value of didactic materials in the process of teaching biology

The leading functions in the work of a biology teacher with multimedia are: the function of preparing the components of the information environment, the function of organizing learning, the function of the process, the organization of activation and management in the classroom, individual control over the work of students. There are various ways to use multimedia tools (the use of educational electronic resources, the development and use of computer presentations by the teacher, the development and use of "ready-made" test materials, the development of thematic collections on biology)[6,p.235].

Using didactic materials in teaching (exactly problem –based learning method, a teacher:

- creates a problematic situation;*
- forms a problem task;*
- solves it by demonstrating the stage of problem solving, the sequence of reasoning, the pattern of reasoning.*

And the student:

- perceives, realizes, comprehends, remembers knowledge about the course of solving a holistic*

problem;

- argues with the teacher.

The purpose of the application of problem presentation is the assimilation by students of knowledge about the main stages of solving the problem, their content and sequence of presentation

The effectiveness of using multimedia tools in biology lessons is due to the developed structure of the lesson, the complex didactic purpose with other visual aids, the content of educational electronic resources, the possibility of visiting a computer classroom, the acquisition of elementary computer skills by students, etc.

When choosing the type of multimedia tool and introducing it into the education system, the process should be guided by the learning objectives; the specifics of the content of the topic being studied; the type and structure of the lesson; the age characteristics of the student; the material equipment of the cabinet.

Conclusion

Based on the conducted research, we came to the following conclusion.

The problem of using didactic tools in the educational process is relevant in the modern conditions of general biological education. Currently, psychologists, educators, methodologists in general define the special role and place of multimedia means of informatization of society.

The use of didactic materials characterized as a method organized by the teacher in the educational process in order to form qualitative knowledge and develop students' skills, develop cognitive interests, abilities and personal qualities of the student promotes development.

References

1. Tatarintsev A. I. The use of didactic tools in the lessons of technology // concept. - 2013. - No. 1 (January). - Art 13012. -URL: <http://ekoncept.ru/2013/13012.htm> 2.
2. Makarova O. B. Didactic tools in natural sciences education. - Novosibirsk: NGPU, 2011. - 64 P.
3. Glazunova L. A.: Technology for creating thematic multimedia presentations of students biology lessons // Biology at school. - 2012. - No. 8. - pp. 23-28.
4. Burrow, A K ; 2018 The Bulletin of the Ecological Society of America 99 (1) 137–150
5. Dolmans, D H J M., De Grave, W, Wolfhagen, I H A P, & Van Der Vleuten, C P M; 2021; Medical Education 39 (7) 732–741
6. Orozco, J A & Yangco, R T; 2016 Asian Journal of Biology Education 9 , pp. 1-10

EFFECTIVENESS OF USING PROBLEM-BASED LEARNING IN TEACHING BIOLOGY**Zhavlieva Aizira Tugelkyzy***1st year Master's degree student of Abai Kazakh National Pedagogical University**Specialty 7M01513 -Biology***Abstract**

This article aims at investigating the effectiveness of Problem-Based Learning on the students' critical thinking skill in the Biology learning. As the world has experienced fast and unpredictable changes in the 21st century that involved voluminous aspects of life such as technology, communication, information, economy, transportation, etc. Schools need to anticipate these changes by developing the 21st century skills. There are some competencies that must be developed in living in the 21st century. They are critical thinking skill, problem solving, creativity and innovation, communication and collaboration, social skill and cross culture, and mastery of information.

Keywords: *Problem-Based Learning, biology, communication, problem solving, creativity, self-directed learners, approach, instructor*

Introduction

Problem-based learning is considered as a technology of developing education, aimed at the active acquisition of knowledge by students, the formation of methods of research cognitive activity, involvement in the scientific search for creativity, education of socially significant personality traits. Problem-based learning is used in the design of creative learning tasks, stimulate the learning process and increase the overall activity of students. It forms the cognitive orientation of the personality, contributes to the development of a psychological attitude to overcome cognitive difficulties.

The theory of problem-based learning has been developed for quite a long time. This problem was dealt with by teachers and psychologists: Lerner I. Ya., Makhmutov M. I., Savchenko A. Ya., Customs officer A. Ya., Baibara T. M., Matvogikin A.M., Alekseyuk A.M., Sukhomlinsky V. V.[1].

Problematicness is one of the main laws of the process of cognition. Scientists define problem-based learning from different positions: a new type of method, principle, and technology of learning (G. Aksenova, N. Savve, M. Skatkin, A. Okun, G. Ponurova, I. Lerner).

So in the pedagogical literature, problem-based learning is understood as the educational and cognitive activity of students with the assimilation of knowledge and methods of activity based on the creation and solution of problem situations. Each educational problem is an artificial pedagogical construction that is modeled by the teacher in the structure of the content of the educational subject.

The method of problem presentation is a method, using which, the teacher:

- creates a problematic situation;*
- forms a problem task;*
- solves it by demonstrating the stage of problem solving, the sequence of reasoning, the pattern of reasoning.*

And the student:

- perceives, realizes, comprehends, remembers knowledge about the course of solving a holistic problem;*
- argues with the teacher.*

The purpose of the application of problem presentation is the assimilation by students of knowledge about the main stages of solving the problem, their content and sequence of presentation [3].

Problem-based learning (PBL) is an exciting way to learn biology and is readily incorporated into large classes in a lecture hall environment. PBL engages students in solving authentic biological case problems, stimulating discussion among students and reinforcing learning. A problem-based learning environment emulates the workplace and develops self-directed learners. This is preferable to a mimetic learning environment in which students only watch, memorize, and repeat what they have been told.

RESEARCH METHODS**(1) Forming Small Groups**

We may decide to devote all or part of a class session to PBL, but students must form small work groups during that time. We can ask the students to form groups of 3-5 people, or assign the groups

ourselves.

(2) Presenting the Problem

Present the students with a brief problem statement (preferably on a printed work sheet, an example of which is shown below), e.g., "A 28-year-old man appears to have osteoporosis." In some cases a video clip or specimen might be used as a trigger. Emphasize to the students that they are dealing with an authentic case history[4]. Bizarre problems work best. Prior to class you should review the case history and arm yourself with data that can be released incrementally (progressive disclosure) as the case proceeds. Needless to say, the students should not be given the reference, as the objective is to solve a problem, not read a solution.

(3) Activating the Groups

Ask the groups to brainstorm possible causes of the osteoporosis. Each group will have to discuss, review, or investigate the biology of bone, including the role of osteoblasts, diet, vitamin D, parathyroid hormone, growth hormone, calcitonin, kidney function, etc. This is when much learning occurs, as the students help each other understand the basic biology. PBL students must reflect upon biological mechanisms rather than just memorize facts (as might occur in some traditional lecture-only courses). The instructor circulates among the groups, providing assistance but not solutions. The groups may well explore avenues unanticipated by the instructor. This is highly desirable and should not be discouraged. The instructor should avoid controlling the agenda of the groups[5]. Each group ranks its hypotheses in order of priority and prepares requests for more data. (E.g., for calcium deficiency hypothesis – "What did he usually eat?")

(4) Provide Feedback

Ask that a rep from each group place their top priority hypothesis or data request on the chalkboard (if already entered by another group, place their second choice, etc.). If this is not practical, ask for oral suggestions from the groups when the small group work is halted and the class is reconvened. Student suggestions may include:

- ✓ Low calcium diet
- ✓ Immobility
- ✓ Low density of vitamin D receptors
- ✓ Calcitonin deficiency
- ✓ Excessive PTH
- ✓ Chronic acidosis buffered by salts mobilized from bone

The small group work can be stopped and the instructor can briefly discuss the ideas with the entire class. It is important to value every contribution, to assist the students in analysis of the biology involved, and to provide further information [he was not immobile, he had a normal diet, etc.]. The students can be prompted for data requests: "If you could ask for just three test results from examination of this man, what would they be?"

It is not likely that the students will solve a problem on the first pass, and the feedback from the instructor motivates the next round of small group work. The students could now be told that the man's lumbar spine density is 3.1 standard deviations below the average age-matched healthy female (osteoporosis = 2.5+ SD), his height is 204 cm, his left middle finger is 10 cm, and knee films show open epiphyses[6]. The cycle of small group work and instructor feedback can be continued during the current class session or on future occasions. The key to managing a PBL session is providing continual feedback to maintain student enthusiasm while simultaneously prolonging the resolution of the problem to ensure that adequate learning occurs.

(5) Ask for a Solution

At this point in our example the groups will likely focus on the hormones required for epiphyseal closure and bone mineralization. They may ask you for serum estrogen levels (high) which will suggest estrogen-resistance. Were estrogen receptors defective? (Yes.) When a reasonable number of groups have solved the problem, you might request a brief written analysis from each group describing the biology involved in the case. Students may be asked to include certain key words in their reports. If you wish to further pursue this case at a later date you could tackle the genetics of the defect [7].

Effective problem-solving requires an orderly approach. Problem-solving skills do not magically appear in students as a result of instructors simply throwing problems at them.

It will be effective if students use the following heuristic: "How to make a DENT in a problem: Define, Explore, Narrow, Test."

Table 1

"Define, Explore, Narrow, Test" method

<i>(1) Defining the Problem Carefully</i>	<i>(2) Exploring Possible Solutions</i>	<i>(3) Narrowing Choices</i>	<i>(4) Testing Solution</i>
<i>What exactly are you trying to determine? Does the problem have several components? If several, state them separately. Does everyone in the group agree with the way the problem has been framed? Ask group members to "think out loud," as that slows down their reasoning and enables people to check for errors of understanding.</i>	<i>Brainstorm ideas that may contribute to a solution. Justify your ideas to group members. Clarify for them the biology involved. Have them paraphrase your ideas. Listen carefully to the ideas of other group members and give positive feedback. Make a list of learning issues. What do we know? What don't we know? Is this problem analogous to any past problem? What core biological concepts may apply to this problem? Assign research tasks within the group</i>	<i>After developing a list of hypotheses, sort them, weed them, and rank them. List the type of data required to test each hypothesis. Give priority to the simplest, least costly tests. It is easier to get information on the diet of a subject than it is to do sophisticated biochemical tests.</i>	<i>Seek from your instructor the data that you need to test your ideas. If all your possible solutions are eliminated, begin the cycle again: define, explore, narrow, test. When you encounter data that confirm one of your hypotheses you may be asked to write a biological explanation of your solution and justify it using the available evidence.</i>

*[the table is created by author]***Conclusion**

The researchers expect this study can be a source of information for teachers in applying Problem Based Learning in schools, thus students can construct their knowledge. The implementation of this model should be done continuously to improve the students' critical thinking skill. Before the class begins, teachers should prepare everything well mainly the selection of real problems appropriate with the materials. Therefore, students can analyze and solve problems accordingly. Teachers also need to manage their time to better implement Problem Based Learning with Fishbone Diagram. Further researchers can conduct the similar study focusing on other materials, and even other fields of study.

References

1. Sidorov, V. A. *Problem-oriented learning as one of the directions of modern learning technologies* / V.A. Sidorov // Knowledge. Understanding. Ability. - 2018. -No. 1. - pp.148-158.
2. Mardakhaev L.V. *Dictionary of Social Pedagogy*. – M., 2020
3. Brookfield, Stephen D; 2012 *Teaching for Critical Thinking: Tools and Techniques to Help Student Question Their Assumptions* (San Francisco: Jossey-Bass)
4. Burrow, A K ; 2018 *The Bulletin of the Ecological Society of America* 99 (1) 137–150
5. Dolmans, D H J M., De Grave, W, Wolphagen, I H A P, & Van Der Vleuten, C P M; 2021; *Medical Education* 39 (7) 732–741
6. Orozco, J A & Yangco, R T; 2016 *Asian Journal of Biology Education* 9 , pp. 1–10
7. Kojaspirov A.Yu., Kojaspirova T.M. *Pedagogical dictionary: for students of higher and secondary education*. Educational institutions. – M., 2019.

Philological sciences

NEW ERA ORGANIZATION OF AZERBAIJAN LITERATURE OF EMIGRATION

Muslimova Ofelya Surkhay qizi
Doctor of Philosophy in Philology,
Ganja State University

YENİ DÖVR AZƏRBAYCAN MÜHACİRƏT ƏDƏBİYYATININ TƏŞƏKKÜLÜ

Müslümova Ofelya Surxay qızı
filologiya üzrə fəlsəfə doktoru,
Gəncə Dövlət Universiteti

Summary

The author noted in this article that the people of Azerbaijan have created a rich and unique scientific-literary heritage both within the territory where they live now and beyond it. Azerbaijan's national liberation movement created a new perspective on emigration literature and new moral values. The author emphasized that the emigrant literature of Azerbaijan has given Azerbaijan's literary treasury many valuable pearls in the fields of poetry, prose, dramaturgy, publicism, criticism and literary studies. As in German emigration literature, the main theme of Azerbaijani emigration literature is the homeland and its independent theme. Its founders always longed for independence in their lives, did not reconcile with the occupation, and continued to fight for the freedom of their homeland until the end of their emigrant lives. The author spoke in detail about the prominent representatives of this literature, including Almaz İldırım, Karim Yayçılı, Alazan Baycan, Gültəkin, Hamid Dönmez, Araz Almaz and others, whose life and creative path were spent in emigration.

Xülasə

Müəllif bu məqalədə qeyd etmişdir ki, Azərbaycan xalqı istər indi məskunlaşdığı ərazi daxilində, istərsə də onun hüdudlarından kənarda zəngin və özünəməxsus elmi-ədəbi irs yaratmışdır. Azərbaycan milli azadlıq hərəkatı mühacirət ədəbiyyatına yeni baxış, yeni mənəvi dəyərlər yaratdı. Müəllif Azərbaycan mühacirət ədəbiyyatının Azərbaycanın ədəbi xəzinəsinə poeziya, nəsr, dramaturgiya, publisistika, tənqid və ədəbiyyatşünaslıq sahəsində xeyli dəyərli incilər bəxş etdiyini vurğulamışdır. Alman mühacirət ədəbiyyatında olduğu kimi Azərbaycan mühacirət ədəbiyyatının da əsas mövzusu vətən və onun istiqlal mövzusu aparıcı yerlərdən birini tutur. Onun yaradıcıları öz həyatlarında daima istiqlal həsrətini yaşamış, işğalla barışmamış, mühacir ömürlərinin sonuna qədər Vətənlərinin azadlığı uğrunda mübarizəni davam etdirmişlər. Müəllif bu ədəbiyyatın bariz nümayəndələrini, o cümlədən, həyatı və yaradıcılıq yolu mühacirətdə keçmiş olan Almaz İldırım, Kərim Yayçılı, Alazan Baycan, Gültəkin, Həmid Dönmez, Araz Almaz və başqalarının Azərbaycan mühacirət poeziyasında yaratmış olduğu gözəl nümunələrindən ətraflı bəhs etmişdir.

Keywords: emigration, formation, national liberation movement, German emigration literature, different characteristics, typological similarities

Açar sözlər mühacirət, təşəkkül, milli azadlıq hərəkatı, alman mühacirət ədəbiyyatı, fərqli xüsusiyyətlər, tipoloji eyniliklər

Əsrlər boyu Azərbaycan xalqı istər indi məskunlaşdığı ərazi daxilində, istərsə də onun hüdudlarından kənarda zəngin və özünəməxsus elmi-ədəbi irs yaratmışdır. Xalqın tarixində baş verən mühüm siyasi proseslər, onun azadlıq və müstəqillik uğrunda mübarizəsi, işğalçı müharibələr və silahlı üsyanlar müxtəlif zaman dövrlərində Azərbaycandan güclü mühacirət axınlarının çıxmasına səbəb olmuşdur. Yalnız XX əsrdə deyil, daha əvvəlki dövrlərdə də qüdrətli sənətkarların, elm və mədəniyyət xadimlərinin adları ilə təmsil olunan Azərbaycan mühacirət ədəbiyyatı mövcud olmuş və yaşamışdır. Milli şüurun gücləndiyi, milli dövlətçilik ənənələrinin formalaşdığı XX əsr şəraitində isə bu mühacirət ədəbiyyatı şolastik ənənələrdən, amorf şərq-islam hüdudlarından uzaqlaşaraq üzünü tamamilə Azərbaycana tərəf çevirmişdir. Zaman-zaman mühacirət ədəbiyyatı yad, özgə sayılsa da, tarix vahid mənəviyyatın tərkib hissəsi kimi ona bəraət verir və gec-tez mühacirət ədəbiyyatı vahid ədəbiyyatın

tərkib hissəsi kimi öz yerini tutur.[2 s.54]

Azərbaycan milli azadlıq hərəkatı mühacirət ədəbiyyatına yeni baxış, yeni mənəvi dəyərlər yaratdı. Sovet rejimi ilə bağlı olaraq reallaşan mühacirətin ayrı-ayrı nümayəndələrinin irsinin ortaya çıxarılması, yeni ictimai-siyasi kontekstdə araşdırılıb öyrənilməsi günün vacib tələbi kimi ortaya çıxdı.

Azərbaycan mühacirət ədəbiyyatının ilk mərhələsi 1909-1910-cu illərdə Stolipin irticası ilə bağlı azadfikirliyin təqib olunması nəticəsində başlamışdır. Əhməd bəy Ağaoğlu, Əlibəy Hüseynzadə və təkrar Vətənə dönmüş **Məhəmməd Əmin Rəsulzadənin** mühacirətdəki yaradıcılığı bu mərhələyə təsadüf edir. Belə ki, M.Ə.Rəsulzadə Tehrandakı ilk dəfə Avropa üsulu ilə çap olunan „İrani-nou“ qəzetinin əsasını qoymuş və qəzetdə ədəbi-kulturoloji səpkili məqalə, şeir və tərcümələri ilə çıxış etmişdir. **Məhəmməd Əmin bəyin** Azərbaycan mətbuatında nəşr olunan bir çox yazıları məhz İran mühacirəti dövrünün məhsuludur. Nəzərə almaq lazımdır ki, onun sonralar Türkiyədə və Azərbaycanda nəşr olunmuş elmi-nəzəri tədqiqatları və bədii əsərlərinin materialları İranda yaşadığı dövrdə toplanmışdır. Eyni zamanda ədibin Tehrandakı „Tənqidi-firqeyi-etidalıyyun“ adlı kitabı nəşr edilmişdir. [1 s.420]

Həmin dövrdə İstanbulda yaşayan Əlibəy Hüseynzadə və Əhməd Ağaoğlu da „Türk ocağı“nda, „İttihad və tərəqqi“ cəmiyyətində çalışmış, müxtəlif mətbuat orqanlarında ədəbi-publistik yazıları ilə çıxış etmişlər.

Azərbaycan mühacirət ədəbiyyatının digər mərhələsi 1920-ci ilin aprelindən, yəni Azərbaycan Xalq Cümhuriyyətinin süqutundan sonra başlamışdır. M.Ə.Rəsulzadə, M.B.Məmmədzadə, Ə.Yurdsever, Ə.Topçubaşev, Y.V.Çəmənəminli, C.Hacıbəyli, Ə.Cəfəroğlu, Kərim Ödə, H.Baykara, A.İldırım və başqaları Vətəni tərk etməyə məcbur olmuş, mühacirətdə yazıb-yaratmışlar. 1924-cü ildə mühacirət ədəbiyyatımız M.Ə.Rəsulzadənin İstanbulda əsasını qoyduğu Azərbaycan Milli Mərkəzində birləşmiş və onun rəhbərliyi ilə təşkilatlanmışdı. M.B.Məmmədzadənin çox düz qeyd etdiyi kimi, **Məhəmməd Əmin bəyin** gəlişinə qədər Azərbaycan mühacirəti „başsız, imkansız, pərişan bir şəkildəydi“. Məhz onun ciddi, səmərəli fəaliyyəti nəticəsində Türkiyə və Avropanın müxtəlif ölkələrinə səpələnmiş Azərbaycan mühacirəti birləşmiş və məqsədyönlü fəaliyyət göstərə bilmişdir [3 s.18]

Məhz bu illərdəki Azərbaycan mühacirət ədəbiyyatının alman mühacirət ədəbiyyatından fərqli xüsusiyyətlərindən biri də bu idi. Alman mühacirət ədəbiyyatının nümayəndələri dünyanın müxtəlif ölkələrində pərakəndə, bir-birindən təcrid olunmuş halda fəaliyyət göstərirdi, yazıb-yaradırdılar, bəzilərinin isə yazdıqlarını nəşr etdirməyə bir tərəfdən maddi imkanları çatmırdı (onların bir çoxu səfalət içində yaşayırdı), digər tərəfdən isə yerli hakimiyyət orqanları tərəfindən güclü təqib və təzyiqlər onların əl-qolunu bağlayırdı.

Azərbaycan mühacirət ədəbiyyatının bu dövrdə sistemli şəkildə nəşrinə və təbliğinə 1922-ci ilin sonundan dərc olunmağa başlayan mühacirət mətbuatı böyük təsir göstərmişdir. 1922-1931-ci illərdə İstanbulda nəşr olunan „Yeni Qafqaz“, „Azəri-türk“, „Odlu yurd“ yurnalları, „Bildiriş“ qəzeti özünün səhifələrində Azərbaycan mühacirətinin ədəbi-bədii və nəzəri-tənqidi yazılarına ardıcıl şəkildə yer ayırırdı. 1932-1934 və 1954-cü illərdə professor Əhməd Cəfəroğlunun redaktorluğu ilə nəşr edilən „Azərbaycan yurd bilgisi“ jurnalı mühacirət ədəbiyyatşünaslığı və ədəbi tənqidinə üstünlük verirdi. [3 s.25]

XX əsrin mühacirəti Azərbaycanın ədəbi xəzinəsinə poeziya, nəsr, dramaturgiya, publisistika, tənqid və ədəbiyyatşünaslıq sahəsində xeyli dəyərli incilər bəxş etmişdir. Həyatı və yaradıcılıq yolu mühacirətdə keçmiş olan Almaz İldırım, Kərim Yayçılı, Alazan Baycan, Gültəkin, Həmid Dönmez, Araz Almaz və başqaları Azərbaycan mühacirət poeziyasının gözəl nümunələrini yaratmışlar.

Alman mühacirət ədəbiyyatında olduğu kimi Azərbaycan mühacirət ədəbiyyatının da əsas mövzusu V Ə T Ə N və onun istiqlalı mövzusu aparıcı yerlərdən birini tutur. Onun yaradıcıları öz həyatlarında daima istiqlal həsrətini yaşamış, işgalla barışmamış, mühacir ömürlərinin sonuna qədər Vətənlərinin azadlığı uğrunda mübarizəni davam etdirmişlər.[4 s.370]

Azərbaycan mühacirətinin milli məənəviyyatında, mədəniyyətində və elmdə tutduğu yer uzun müddət diqqətdən kənarda qalmış, mühacirətimizin səbəbləri, əsas dalğaları, yaradıcı simaları haqqında söz açılmamışdır. Azərbaycan mühacirliyi Vətənə və torpağa bağlı, qütbətdə də Vətəni düşünən, onun istiqlalının gələcəyinə inanan və bu amal uğrunda fədakarlıqla mübarizə aparan insanların əqidə birliyi idi. Bu əqidə birliyində mədəniyyət və ədəbiyyat ən önəmli yerlərdən birini təşkil edirdi. Azərbaycan mühacir ədəbiyyatının görkəmli nümayəndələri qütbətdə haqsevərlik duyğuları, Vətən həsrəti ilə alışıb yanaraq, əzab-əziyyətli, acı bir tale yaşamışlar. Azərbaycan ədəbiyyatında qütbət poeziyasının min ildən artıq yaşı var. Bu sənətkarların yaradıcılığında qərblilik, Vətənsizliyin acıları, ağır və göynərtisi əks olunmuşdu. Lakin onlardan heç birinin taleyi **Almaz İldırımın** ömür yoluna bənzəmir və onların heç birinin əsərlərində qütbət onun şeirlərində olduğu kimi ağır, çəkilməz dərəcəyə qədər çevrilir. Elə məhz buna görə

Azərbaycan Respublikasının Prezidenti **İlham Əliyevin** 16 aprel 2007-ci ildə Almaz ildırımın 100 illik yubileyində onun yaradıcılığı haqqında söylədiyi fikirlər bunları özündə əks etdirir: "Almaz ildırım yaradıcılığı Azərbaycan mühacirət poeziyasının bənzərsiz səhifələrindən birini təşkil edir. Şairin milli azadlıq və müstəqillik uğrunda mübarizəyə həsr olunmuş əsərlərində xalqımızın ağırlı tarixi taleyi, Vətən məhəbbəti və qəriblik mövzusu dolğun bədii əksini tapmışdır." [8 s.2-7]

Almaz ildırımın istər sürgün zamanı, istərsə də mühacirətdəki yaradıcılığı mühacirət ədəbiyyatımızın ən parlaq səhifələrindəndir. Bu iki dövrü birləşdirən ən ümdə xüsusiyyət millilik, işğalçılara qarşı mübarizə, müstəqillik uğrunda çarpışan xalqların iradəsi ilə həmrəylikdir. Bu baxımdan Almaz ildırımın yaradıcılığı Azərbaycan mühacirətinin ən böyük ədəbi hadisəsidir. Onun yaradıcılığında Azərbaycan mühacirəti üçün xas olan problemlər: "Qırmızı" kabusə qarşı mücadilə, istiqlal savaşı, açıq sözlülük, vətəni tərənnüm, xalqın taleyi və qütbət dərdi çox geniş təmsil olunmuşdur. Onun poeziyasının əsas özülləri azərbaycançılıq və türkçülükdür. Almaz ildırım azərbaycançılığı təkcə istiqlala xidmətdə, qütbət poeziyasını yaratmasında deyil, həm də Azərbaycan həqiqətlərinin dünyaya çatdırılmasında, Azərbaycan idealını yaratmasında, bu mövzunu özünün əsas dəyəri elan etməsindəndir. [5 s.3]

Almaz ildırım türkçülüüyü əxlaqi-mənəvi türkçülükdür. Bu türkçülüyn ən səciyyəvi xüsusiyyəti Vətənə məhəbbət, millətə böyük sevgi, ana yurduna dərin bağlılıqdır:

Bir gün gələr qoşaraq yurdumun harayına,
Mən atəş edəcəyəm düşmənin sarayına.
Nə düşər yurdu batmış bir iyidin payına,
Ya şərəfli istiqlal, ya qızıl qan, a dağlar...

("Dağlara vida" şeiri).

1930-cu ildə Almaz ildırımın Bakıda "Dağlar səslənir" adlı kitabı nəşr olunur və bu kitab kommünizmin əleyhinə fikirlər aşılardan bir məxəz kimi mağazalardan yığılıb müsadirə olunur [9 s.98]

XX əsr ədəbiyyatımızda "Azərbaycan" mövzusunda çox şeirlər yazılıb. Lakin onların heç biri Almaz ildırımın "Əsir Azərbaycanım" şeiri qədər insanın ruhuna hakim kəsilmir, bu şeir qədər hissləri ehtizaza gətirmir:

Harda mənə gül goynunda doğuran,
Xamırını göz yaşı ilə yoğuran,
Beşiyimdə "layla balam" çağıran
Azərbaycan, mənim baxtsiz anam oy!
Neçə ildir həsrətimdə yannam oy!..

Sənsiz neyləm qütbət eldə günü mən,
Sənsiz neyləm Allahı mən, dini mən.
Azərbaycan, mənim tacım, taxtım oy!
Oyanmazmı kor olası baxtım oy?! [7 s.191]

Bu şeir sadəcə bədii düşüncə faktı deyil, şairin boğulan qəzəbindən, kükrəyən ehtirasından irəli gəldiyi üçün belə təsirli və ürəkağrıdır. Onun digər bir şeiri "Qütbətdə" qəribliyə məhkum bir şairin Vətənə olan ilahi sevgisinin daha bir qəmgin tablosu yaradılmışdır.

References:

1. Almazadə İ. XX əsr Azərbaycan yazıçıları – Ensiklopedik məlumat. Bakı Nurlan, 2004. s.420-421
2. Azərbaycan Legion ədəbiyyatı. 2005. s. 53-97
3. Cabbarlı N. Azərbaycan mühacirət nəsrə Bakı 2011 səh 18-45
4. Cəfərli M. Azərbaycan legion ədəbiyyatı. Bakı Qapp-Poliqraf, 2005, 370 s.
5. Daşqın M. Vətən qəhrəmanlığı. "Azərbaycan" qəz., 1944, yanvar s.3
6. "Ədəbiyyat" qəzeti, 2002, 22 avqust, №34 (3315)
7. Ələkbərli N. "Üç budaq", Əhməd Cavad, Mikayıl Müşviq, Almaz ildırım, Gənclik 1999 səh. 191
8. Əliyev İ.H. A.İldırımın 100 illik yubiley materialları.
9. Əlisa N. Dünya fəlsəfi irsindən yarpaqlar. Bakı Azər nəşr, 1991, s. 98-133.

Physical education and sport

THE DEVELOPMENT OF THE FOOTBALL IN 21ST CENTURY

Stanislav Chernov
Vadym Refel

*The National Academy of the State Border Guard
Service of Ukraine named after Bogdan Khmelnytsky*

INTRODUCTION

Relevance of research. One of the most significant technological advances in football in recent years has been the introduction of VAR (Video Assistant Referee) technology. This technology allows the referee to review video footage of incidents that occur during the game, such as potential fouls, penalties or offside decisions. VAR has been implemented in several major football leagues around the world, including the English Premier League, La Liga and the Bundesliga. This technology has been praised for its ability to increase the accuracy of decisions made on the field, reducing the possibility of human error and ensuring fair play.

Another important technological development in football is the Hawk-Eye goal line technology. This system uses a series of cameras placed around the field to determine whether the ball has crossed the goal line, providing an accurate and instant decision. This technology has been successfully implemented in several major football leagues, including the English Premier League and the UEFA Champions League. The use of Hawk-Eye technology has significantly reduced the number of disputed goal decisions, ensuring that matches are decided fairly and accurately.

Wearable technology for players is also becoming more common in football. This technology includes devices such as GPS trackers, heart rate monitors and accelerometers that can provide valuable data on players' physical performance during training and matches. This data can be used to monitor players' fitness levels, identify areas for improvement and reduce injury risk. Wearable technology can also provide coaches with real-time information on players' physical condition during matches, allowing for more informed decisions about substitutions and tactical changes. As this technology continues to evolve, it has the potential to revolutionize the way football teams train and perform on the field.

The **purpose** of this work is to study and analyze the development of football in the 21st century, taking into account its impact on modern society and identifying the key factors influencing this process.

The main **task** is to identify the trends that determine the dynamics of the development of football in the new millennium, and consider opportunities for further improvement of this sport.

Research methods: literary analysis, comparison and generalization.

1. History of football

1.1 A BRIEF OVERVIEW OF THE HISTORY OF FOOTBALL

Soccer has a rich history that dates back to ancient civilizations, where early versions of the game were played in various forms. The ancient Greeks and Romans played a game called harpaston, which involved kicking the ball between two teams. In China, a game called "tsuju" was played, which involved kicking the ball through a small hole in the net. These early versions of soccer laid the foundation for the modern game as we know it today [6,p.379].

The development of modern football as we know it today can be traced back to England during the 19th century. In 1863, the Football Association was founded in England and their version of the game became known as "Association Football". The first set of rules for the game was developed in 1846 in rugby, giving rise to rugby football. Over time, both games evolved into separate sports, with soccer becoming the more popular of the two. The creation of organized football in England laid the foundation for the growing popularity of this sport and the creation of international competitions.

The popularity of football continued to grow throughout the 20th century, with the establishment of international competitions and the formation of professional leagues. The first international football match was played in 1872 between Scotland and England, and the first World Cup was held in 1930. Today, soccer is the most popular sport in the world, with millions of fans and players worldwide. The sport has evolved significantly since its inception, but its core principles remain the same: teamwork, strategy, and the love of the game [1].

1.2. CHANGES IN THE RULES AND FORMAT OF FOOTBALL OVER TIME

The original rules and format of overtime in football were introduced at the beginning of the 20th

century. Prior to this, games that ended in a tie were simply recorded as such, without further action. The original overtime format involved one 20-minute period, with the team that scored first being declared the winner. If neither team scored during this period, the game was recorded as a draw. This format remained in place for several decades, with minor variations in the length of the overtime period.

Changes to the rules and format of overtime began in the second half of the 20th century with the goal of making the game more exciting and reducing the likelihood of ties. One of the significant changes was the introduction of the "golden goal" rule in 1993. Under this rule, the team that scores first in overtime will be declared the winner, effectively ending the game once a goal is scored. This rule was later replaced by the "silver goal" rule, which allowed play to continue after the first goal was scored, but ended the game if one team was ahead at the end of the first half of overtime [8,p.128].

The current rules and format of overtime in football were introduced in 2002 and are still in effect today. Under these rules, each team is given an equal opportunity to possess the ball and attempt to score. The game consists of two halves of 15 minutes, in which the teams change sides. If the game is still tied at the end of overtime, a penalty shootout is used to determine the winner. This format has successfully reduced the number of draws in football while maintaining a fair and exciting way to determine the winner of the game.

2. Globalization of football

2.1 POPULARITY OF FOOTBALL IN DIFFERENT COUNTRIES

Soccer, also known as football, is the most popular sport in the world, which has a huge following in various countries. The popularity of this sport is particularly high in Europe and South America, where it is considered a cultural phenomenon. These regions have a long history with football and many of the world's most successful teams and players come from these regions. The South American Conference (CONMEBOL) was established in 1916, while the Union of European Football Associations (UEFA) was founded in 1954. Football is an integral part of the culture of these regions and many people follow their favorite teams and players passionately.

In recent years, the popularity of football has been growing in North America and Asia. While these regions have traditionally been associated with other sports, such as baseball and basketball in North America and cricket in Asia, soccer is gaining ground. The number of people playing and watching soccer in the United States has grown significantly, with over 13 million people playing the sport. In Asia, football is becoming more and more popular, recently Japan, South Korea and China have hosted major international tournaments. The growing popularity of football in these regions is a testament to the sport's universal appeal [12,p.43].

Football is also a cultural phenomenon in Africa and the Middle East. The sport has a long history in these regions and many countries boast successful national teams and players. Football is often used as a tool for social change and development, with many organizations using the sport to promote education, health and social cohesion. In Ukraine, for example, in recent years, the government has invested heavily in football infrastructure, as the country became a co-organizer of Euro-2012. In the Middle East, football is a unifying force where many people come together to support their favorite teams and players. The popularity of soccer in these regions highlights the sport's ability to bring people together and promote positive change.

2.2. THE IMPACT OF TELEVISION AND MEDIA TECHNOLOGIES ON THE GLOBALIZATION OF FOOTBALL

In the contemporary era, football has transcended geographical boundaries, becoming a global phenomenon. One of the driving forces behind this globalization is the pervasive influence of television and media technologies. This article delves into the profound impact these technologies have had on shaping the worldwide reach and appeal of football.

The marriage of football and television dates back to the mid-20th century, forever altering the landscape of the sport. The ability to broadcast matches to audiences worldwide transformed football into a shared global experience. Iconic moments, historic goals, and legendary players became accessible to fans far beyond the confines of stadiums.

With the advent of the internet and digital media, football has entered an era of instant connectivity. Social media platforms, streaming services, and mobile applications ensure that fans are constantly plugged into the latest developments, scores, and highlights from any corner of the globe. This immediacy has contributed significantly to the sense of a global football community.

Television and media technologies have played a pivotal role in the cultural exchange facilitated by football. Fans from different cultures and backgrounds connect through shared passion, contributing to a dynamic cultural exchange. Moreover, football has become a tool for identity formation, with fans

expressing their individual and collective identities through their support for particular teams or players [16].

The global reach of football, amplified by television and media technologies, has attracted substantial commercial interest. Sponsorships, merchandising, and broadcasting rights have turned football into a lucrative industry. Leagues and clubs harness these revenues for talent acquisition and infrastructure development, further fueling the sport's globalization.

While the influence of television and media technologies on football's globalization is undeniable, it comes with its set of challenges. Issues such as match-fixing, over-commercialization, and the influence of media on sporting decisions have sparked controversies. Striking a balance between the commercial aspects and the purity of the game remains an ongoing challenge.

Looking ahead, emerging technologies like virtual reality and augmented reality are poised to redefine the football-watching experience. These innovations hold the potential to deepen fan engagement and broaden the global football audience even further [3].

Television and media technologies have been instrumental in transforming football into a global cultural force. The instantaneous nature of information dissemination, coupled with cultural exchange and economic opportunities, ensures that football's globalization is a multifaceted and ever-evolving phenomenon. As technology continues to advance, football will likely remain at the forefront of the global sports landscape, with its impact resonating far beyond the pitch.

3. Economy and business of football

3.1 MONEY IN FOOTBALL: TRANSFERS, SPONSORSHIP AND PROFITABILITY

Football, once primarily a sport, has evolved into a colossal business, with transfers, sponsorships, and profitability standing as key pillars of the industry. This article delves into the intricate web of financial dynamics that underpin the world of football.

The transfer market is the heartbeat of football's financial ecosystem. Clubs engage in a perpetual dance, buying and selling players in a bid to assemble competitive squads. Transfers not only showcase the economic muscle of clubs but also reflect the ever-increasing value placed on top-tier talent. The astronomical fees associated with marquee transfers underscore the economic stakes involved.

In the modern football landscape, sponsorship deals have become a ubiquitous feature. From shirt sponsorships to stadium naming rights, corporate entities eagerly align themselves with football clubs. This financial infusion allows clubs to augment their resources, fund ambitious projects, and establish a global brand presence. The symbiotic relationship between football and corporate sponsors is a testament to the sport's ability to attract diverse commercial interests.

While revenue streams are robust, profitability in football is a complex puzzle. High player wages, transfer fees, and operational costs present financial challenges. Clubs navigate a delicate balance between investment in talent and maintaining fiscal sustainability. The specter of financial fair play regulations looms large, compelling clubs to adopt prudent financial strategies [4,p.227].

Football's reach has transcended geographical boundaries, thanks in part to the globalization of broadcast rights. Television networks and streaming platforms vie for exclusive rights to broadcast matches, injecting massive sums into the football economy. The widespread accessibility of matches contributes to the sport's global fanbase and enhances its marketability.

The COVID-19 pandemic disrupted the footballing world, exposing vulnerabilities in the financial model. With matches played in empty stadiums and revenue streams compromised, clubs faced unprecedented financial challenges. The pandemic prompted a reevaluation of financial structures, pushing clubs towards sustainable and resilient business models.

As football embraces the digital age, innovations in fan engagement contribute to revenue generation. Virtual experiences, interactive content, and digital merchandise open new avenues for monetizing the fan experience. Clubs invest in creating a comprehensive digital presence to connect with fans globally and capitalize on the burgeoning digital economy [10,p.842].

Money in football is a multifaceted and ever-evolving narrative. Transfers, sponsorship deals, and profitability are interwoven threads in the rich tapestry of football's financial landscape. As the sport continues to navigate economic challenges and seize opportunities for growth, the business of football remains a compelling saga, shaping the future of the beautiful game both on and off the pitch.

3.2. THE INFLUENCE OF FOOTBALL CLUBS ON THE LOCAL ECONOMY

Football clubs have a significant impact on the local economy, particularly in terms of job creation. These clubs require a wide range of staff, from players and coaches to administrative and support staff. In addition, the construction and maintenance of stadiums and training facilities can also create employment opportunities for local residents. Having a successful football club can also attract business

and investors to the region, contributing to job creation and economic growth.

Football clubs can also increase the number of tourists in their areas. Successful clubs attract fans from all over the world who can travel to attend matches or visit the club premises. This influx of visitors can lead to increased spending on local businesses, including hotels, restaurants and shops. In addition, the openness of a successful football club can contribute to the promotion of the area as a tourist destination, contributing to the further development of the local economy [14,p.8].

Football clubs can also provide a significant boost to local business and income. Having a successful club can lead to increased spending on merchandise, tickets and other related goods and services. In addition, the club itself can invest in or partner with local businesses to promote the region and further economic growth. As a result, football clubs can serve as engines of growth and generators of wealth in their local territories. Overall, the impact of football clubs on the local economy can be significant, contributing to job creation, increased tourism and increased local business and income.

4. Technological innovations in football

4.1 USE OF TECHNOLOGIES FOR ANALYSIS AND TRAINING

One of the most important ways technology has impacted football training and analysis is through the use of video analysis. Coaches and analysts can now use video footage of games and training sessions to analyze player performance, identify areas for improvement and develop strategies for future matches. Video analysis software allows coaches to break down footage into individual plays, analyze player movements, and track key performance indicators such as pass accuracy and shot performance. This technology has revolutionized the way coaches approach training and game preparation, providing a more data- and evidence-driven approach to coaching.

Wearable technology is another area where technology has changed soccer training and analysis. Athletes can now wear sensors and trackers that track their movements, heart rate and other key metrics during training and games. This data can be used to track performance, identify areas for improvement and prevent injuries. Coaches can use this information to develop personalized training plans for individual athletes, ensuring they are performing at their best and minimizing the risk of injury. Wearable technology has also allowed coaches to track an athlete's progress over time, allowing them to make data-driven decisions about player selection and team strategy [17,p.8].

Artificial intelligence and machine learning are emerging technologies that are rapidly transforming football training and analysis. These technologies can analyze vast amounts of data, identify patterns, and make predictions about player performance and team strategy. For example, artificial intelligence can analyze players' movements during the game and give recommendations to coaches to optimize team positioning and strategy. Machine learning algorithms can also be used to analyze training data and develop personalized training plans for individual athletes, ensuring they are performing at their best. These technologies have the potential to revolutionize football coaching and analysis, giving coaches unprecedented insight into player performance and team strategy.

4.2 Virtual Reality and Other Game Innovations

Virtual reality (VR) is becoming an increasingly popular tool in soccer training and analysis. VR technology can be used to create immersive simulations of game scenarios, allowing players to practice decision-making skills and tactical awareness in a safe and controlled environment. By placing players in realistic game situations, VR training can help improve their overall performance on the field. In addition, VR technology can be used for post-game analysis, giving coaches a more detailed and accurate understanding of player movements and decision-making during a match. This enables more effective coaching and training strategies, ultimately leading to better team performance [15,p.332].

Wearable technology is another innovation that has revolutionized football in recent years. Devices such as GPS trackers and heart rate monitors can be worn by players during practices and games, providing coaches with real-time data on player performance and fitness. This information can be used to tailor training programs for individual players, optimize game strategy and prevent injuries. Wearable technology has also made it possible to track player movements and ball possession during games, providing valuable information about team performance and opportunities for improvement.

Goal-line technology is another innovation that has had a significant impact on football in recent years. This technology uses cameras and sensors to determine whether the ball has crossed the goal line, providing referees with accurate and objective information to make goal scoring decisions. This eliminated many controversial and contentious challenges, ensuring fair and accurate assessment decisions. As a result, goal line technology has improved the overall integrity of the game and increased spectator confidence in the accuracy of goal decisions.

5. Sociocultural influence of football

5.1 Football as a cultural phenomenon

Football has a profound impact on society, with multi-faceted effects cutting across social, economic and psychological spheres. The game of football has a significant impact on social identities, forging bonds of amity and antipathy among fans and communities. Football has the power to promote diversity and inclusion, with teams engaging in community outreach activities to effect social change.

The game emphasizes physical exercise, collaboration, discipline, devotion, and fair play, instilling values that can address societal challenges. Football brings people together, promoting identity and pride, and leaving an indelible impression on the minds of football fans around the world. It is the most global and popular cultural phenomenon in the 21st century, with its influence extending beyond the field's boundaries, permeating various aspects of popular culture. Global corporations recognize the game's appeal and leverage it as a vector for their brands, ensuring its imagery is multiplied many times over [11,p.43].

Football is comparable to the world's religions in terms of the scale, regularity, and profundity of its cycles and rituals, and has a significant impact on global sporting culture. In America, football is deeply rooted in the fabric of society and has a significant impact on the nation's imagination. European football generates more revenue than the European publishing or cinema industries, making it a significant economic force in the region. All these factors make football a global cultural symbol that has the ability to inspire good change in civilizations.

5.2 THE INFLUENCE OF FOOTBALL ON SOCIAL STRUCTURES AND STEREOTYPES

Football, the beautiful game, extends far beyond the pitch. It serves as a powerful catalyst for change, influencing social structures and challenging deep-rooted stereotypes. This exploration delves into the multifaceted impact football has on reshaping societal norms and fostering inclusivity.

Football operates as a universal language that transcends cultural, racial, and economic boundaries. In the midst of a match, individuals from diverse backgrounds converge, united by a shared passion. The camaraderie formed in stadiums and on the playing fields serves to dissolve social barriers, fostering a sense of community that extends beyond the game.

Football has emerged as a platform for inclusivity, challenging societal norms and promoting diversity. The sport has become a vehicle for underrepresented groups to assert their presence, both on and off the pitch. Initiatives promoting women's football, LGBTQ+ inclusivity, and anti-racism campaigns exemplify football's role in advocating for a more inclusive society.

Football operates as a cultural force that shapes and reflects the narratives of societies. From iconic celebrations to memorable rituals, the sport intertwines with the cultural fabric of communities worldwide. Local teams often become emblematic symbols, representing the collective identity of a region and contributing to a shared cultural heritage.

Football engages young minds in a structured environment, teaching vital life skills such as teamwork, discipline, and leadership. Through grassroots programs and academies, football becomes a tool for social development, empowering youth and fostering a sense of belonging that extends into their broader communities [7,p.387].

The rise of women's football challenges traditional gender stereotypes, offering a platform for female athletes to showcase their skill and athleticism. As the sport gains recognition and support, it becomes a driving force in dismantling preconceived notions about gender roles, paving the way for greater equality in sports and society.

Football clubs often act as focal points for community development. Beyond matches, they engage in local initiatives, addressing social issues and contributing to the well-being of their communities. The sport becomes a catalyst for positive change, fostering a sense of pride and unity among residents.

6. Ethical aspects of football

6.1 PROBLEMS RELATED TO DOPING AND VIOLATIONS OF THE RULES

Football, revered for its spirit of fair play and camaraderie, has not been immune to the shadows cast by doping and rule violations. This exploration delves into the persistent problems that tarnish the integrity of the beautiful game.

Doping, a scourge that has plagued various sports, has found its way onto football pitches. The use of performance-enhancing substances undermines the essence of fair competition, creating an uneven playing field. The quest for physical excellence should be driven by talent, dedication, and hard work, not chemical shortcuts.

Instances of players and teams attempting to circumvent regulations have cast a shadow over football's sanctity. From falsifying documents to breaching transfer rules, these violations erode the foundation of fair competition and integrity. Stringent measures and transparent investigations are

imperative to maintain the sport's credibility.

Doping not only jeopardizes the health of athletes but also compromises the fairness of the game. When players resort to artificial enhancements, it distorts the equilibrium that defines football's charm – the unpredictable and level playing field where the outcome is determined by skill, strategy, and teamwork.

Doping and rule violations strain the ethical landscape of football, eroding the trust that fans, sponsors, and stakeholders place in the sport. The prevalence of such issues necessitates a comprehensive approach involving education, stringent testing protocols, and severe consequences for those who choose to compromise the sport's values.

Football's governing bodies play a pivotal role in addressing these challenges. Robust anti-doping measures, clear communication of rules, and proactive investigation of potential violations are essential. Collaborative efforts between national and international football organizations are crucial to maintaining a cohesive front against malpractices.

Prevention through education is a key component in the fight against doping. Players, coaches, and support staff must be well-informed about the risks and consequences associated with performance-enhancing substances. Awareness campaigns and educational programs contribute to fostering a culture of clean and fair competition [5,p.83-84].

Addressing the problems related to doping and rule violations is crucial for preserving the essence of football. By adopting a multi-faceted approach that involves strict enforcement, education, and collaboration, the football community can strive to ensure that the beautiful game remains a beacon of fair play, integrity, and the unbridled joy that it brings to fans worldwide.

6.2 RACISM, SEXISM AND OTHER SOCIAL PROBLEMS IN FOOTBALL

Football, often celebrated as a universal language, faces an ongoing struggle against social problems that stain its inclusive spirit. This exploration sheds light on the persistent issues of racism, sexism, and other societal challenges that linger within the football community.

Despite progress, racism continues to rear its ugly head on football fields globally. Players of diverse backgrounds face racial abuse, discriminatory chants, and unequal treatment. Initiatives like "Kick It Out" have been instrumental, but the battle against racism demands a united front from players, fans, and governing bodies.

Sexism persists, especially in women's football, where players encounter disparities in pay, facilities, and media coverage. The fight for gender equality in football extends beyond the pitch, requiring systemic changes and increased visibility for women in leadership roles within football organizations.

Football's journey towards inclusivity involves addressing LGBTQ+ representation. Homophobic chants, discrimination, and the lack of openly gay players highlight the challenges that the LGBTQ+ community faces. Fostering a safe environment and promoting inclusivity are crucial steps in dismantling these barriers [2,p.186].

Footballers, despite their public personas, are not immune to mental health struggles. The stigma surrounding mental health concerns often prevents players from seeking help. Football organizations must prioritize mental health initiatives, providing support systems that ensure the holistic well-being of players.

Addressing social issues requires diverse perspectives at the helm. Football's governing bodies and clubs must actively promote inclusivity in leadership roles. Diverse decision-makers can implement policies that reflect the varied experiences within the football community, fostering a more accepting environment.

Fans play a pivotal role in shaping football culture. Educational initiatives aimed at fostering inclusivity and respect among fans are crucial. Moreover, holding fans accountable for discriminatory behavior through strict sanctions sends a clear message that such actions will not be tolerated.

7. The future of football

7.1 TRENDS IN THE DEVELOPMENT OF FOOTBALL

The integration of technology is revolutionizing every aspect of football. From Video Assistant Referee (VAR) systems enhancing match officiating to wearable technology optimizing player performance and health monitoring, football is embracing innovation for a more accurate, efficient, and data-driven experience.

Football clubs and organizations are increasingly recognizing their environmental impact. Sustainable stadium designs, eco-friendly initiatives, and responsible resource management are becoming integral parts of football's identity. Clubs are engaging in green practices, contributing to a more sustainable future.

Football's global appeal is expanding, reaching new markets and demographics. Leagues are actively pursuing international fanbases, leading to diverse viewership and increased commercial opportunities. This globalization is not only enhancing the sport's popularity but also fostering cultural exchange.

Social media, streaming services, and interactive apps are reshaping how fans engage with football. Clubs are leveraging digital platforms for real-time updates, exclusive content, and direct interaction with supporters worldwide. This shift enhances the fan experience, making football a year-round, immersive journey [13,p.16].

The push for inclusivity and diversity is transforming football's landscape. Initiatives to address racism, sexism, and discrimination are gaining momentum. Clubs are fostering diverse talent, creating inclusive environments, and championing social causes, making football a platform for positive societal change.

Coaching methodologies and playing styles are evolving, influenced by tactical innovations and diverse football cultures. High-pressing systems, positional play, and versatile formations are becoming prominent, challenging traditional norms and adding layers of complexity to the game.

The rise of e-sports has opened up new avenues for football enthusiasts. Virtual football leagues, video game tournaments, and online platforms are creating a parallel football universe. This trend is not only engaging a younger audience but also blurring the lines between the digital and physical realms of the sport.

7.2 POSSIBLE SCENARIOS OF FURTHER DEVELOPMENT

In one scenario, football becomes an immersive technological experience. Augmented reality (AR) and virtual reality (VR) redefine how matches are consumed, allowing fans to step into the shoes of their favorite players, creating a more personalized and interactive connection.

A scenario unfolds where the allure of a global super league becomes irresistible. The traditional league structures transform, leading to the creation of a highly competitive, transcontinental league featuring the world's top clubs. This shift could redefine football's competitive landscape and fan allegiances.

In a more environmentally conscious future, football fully embraces sustainability. Stadiums become eco-friendly marvels, clubs adopt carbon-neutral practices, and the sport spearheads initiatives combating climate change. Football evolves into a powerful force for environmental awareness and action.

As players gain more influence, a scenario emerges where contracts become more flexible. Athletes have greater control over their careers, moving between clubs and leagues without the traditional constraints. This shift fosters increased competition and unpredictability in team compositions.

Football management experiences a revolution as artificial intelligence (AI) takes center stage. AI-driven analytics, scouting, and decision-making become integral to coaching strategies. This scenario could lead to a new era of data-driven football, optimizing performance and tactical approaches [9,p.2-4].

A scenario envisions a football ecosystem where fans actively participate in decision-making processes. Through digital platforms, supporters have a direct say in club policies, league structures, and even matchday experiences. This democratization of football governance ensures a more inclusive and fan-centric sport.

In a world where borders blur, football experiences a fusion of traditional and new formats. Hybrid competitions, combining physical and virtual elements, could redefine the concept of matches and tournaments. This scenario reflects a football landscape that seamlessly integrates the physical and digital realms.

The future of football is an open field, ripe with possibilities. These scenarios illustrate the potential directions the sport could take, driven by technological innovation, changing fan dynamics, and a commitment to sustainability. As football evolves, its ability to captivate hearts around the globe remains its constant, promising an exciting journey ahead.

Conclusion

In the 21st century, football has undergone significant rule changes with the introduction of new rules and regulations. These changes have had a significant impact on the game, both in terms of gameplay and player safety. For example, the introduction of Video Assistant Referee (VAR) technology has helped reduce refereeing errors, ensuring a fairer game for all players. In addition, the changes to the offside rule have led to more attack and increased scoring opportunities. However, some of the changes have also been met with criticism, such as the introduction of concussion substitutes, which some believe

do not adequately protect players from head injuries.

The 21st century also saw changes in transfer windows and player contracts. The transfer market is becoming increasingly competitive, with clubs competing for the best players from around the world. The introduction of new rules, such as Financial Fair Play, attempted to level the playing field and prevent clubs from spending beyond their means. In addition, changes to player contracts have given players more power and control over their careers, as well as the ability to negotiate higher wages and transfer fees.

The COVID-19 pandemic has had a significant impact on the development of football in the 21st century. The pandemic has led to the suspension of matches and tournaments, causing financial losses for clubs and disrupting training and player development. However, it has also led to innovation and adaptation, with the introduction of virtual matches and training sessions. The pandemic has also highlighted the importance of player health and safety, introducing new protocols and guidelines to prevent the spread of the virus. The impact of the pandemic on the development of football is likely to be felt for many years as changes in rules and practices are made to ensure the safety and stability of the sport.

References

1. Amara, M. (2017). *Football in West Asia*. In J. Hughson, K. Moore, R. Spaaij, & J. Maguire (Eds.), *Handbook of football studies*. Oxon, UK: Taylor & Francis.
2. Baric, R., & Bucik, V. (2009). Motivational differences in athletes trained by coaches of different motivational and leadership profiles. *Journal Kinesiology*, 41(2), 181–194.
3. Carroll, G. (2019). *Talent identification in football: an exploratory study from the scouts perspective*. Unpublished Undergraduate Thesis. West Sussex, England: University of Chichester.
4. Chelladurai, P. (1980). Leadership in sport organizations. *Canadian Journal of Applied Sport Sciences*, 5, 226–231.
5. Din, A., Rashid, S. A., & Awang, M. I. (2015). Aspek pengurusan program latihan dan kesannya terhadap kepuasan atlet sekolah sukan. *International Journal of Management Studies*, 22(1), 73–95.
6. Dyakova, G., Dyakov, T., & Angelova, I. (2017). Study of the students' interest in the football game, motivation and desire for practicing football. *Trakia Journal of Science*, 15(1), 375–382.
7. Goose, M., & Winter, S. (2012). The coach's impact on long distance runners' training and competition motivation. *International Journal of Sports Science and Coaching*, 7(2), 383–398.
8. Govindan, J. K., Geok, S. K., Yusof, A., & Omar-Fauzee, M. S. (2019). Persepsi atlet terhadap gaya tingkah laku kepimpinan jurulatih bola sepak sekolah yang digemari dengan gaya tingkah laku kepimpinan sebenar jurulatih bola sepak di daerah Alor Gajah, Melaka. *Malaysian Journal of Movement, Health & Exercise*, 8(1), 123–133.
9. Keatthoetswe, L., & Malete, L. (2019). Coaching Efficacy, Player Perceptions of Coaches' Leadership Styles, and Team Performance in Premier League Soccer. *Research Quarterly for Exercise and Sport*, 00(00), 1–9.
10. Kucukibis, H. F., & Gul, M. (2019). Study on sports high school students' motivation levels in sports by some variables. *Universal Journal of Educational Research*, 7(3), 839–847.
11. Lee, W. A. S. S., & Rengasamy, S. A. (2015). Gaya kepimpinan jurulatih yang diminati atlet-atlet sekolah menengah di Malaysia berasaskan jantina. *Jurnal Kepimpinan Pendidikan*, 3(1), 32–46.
12. Lescroart, M. A. Y., Brown, M. E., & Paskus, T. S. (2015). The relationship between ethical and abusive coaching behaviors and student-athlete well-being. *Sport, Exercise, and Performance Psychology*, 4(1), 36–49.
13. Mouloud, K., & Elkader, B. A. (2016). Self-efficacy and achievement motivation among football player. *The Swedish Journal of Scientific Research*, 3(11), 13–19.
14. Nazarudin, M. N., Omar-Fauzee, M. S., Jamalis, M., Geok, S. K., & Din, A. (2009). Coaching leadership styles and athlete satisfaction among Malaysian University basketball team. *Research Journal of International Studies*, 9(January), 4–11.
15. Pelletier, L. G., Rocchi, M. A., Vallerand, R. J., Deci, E. L., & Ryan, R. M. (2013). Validation of the revised sport motivation scale (SMS-II). *Psychology of Sport and Exercise*, 14(3), 329–341.
16. Rosly, J. (2019). MOM cadang bida Sukan Asia 2030. *Berita Harian*.
17. Ryan, R. M., & Deci, E. L. (2007). Active human nature. In M. S. Hagger & N. L. Chatzisarantis (Eds.), *Intrinsic motivation and self-determination in exercise and sport* (pp. 1–19).

Technical sciences

DDOS ATTACKS: TYPES OF ATTACKS AND LEVELS OF THE OSI MODEL

Gasimov Ibrahim Yildirim

Master, Azerbaijan State Agricultural University (ASAU)

Huseynov Novruz Matlab

Master, Azerbaijan State Agricultural University (ASAU)

Mammadov Abulfaz Rafiq

Master, Azerbaijan State Agricultural University (ASAU)

Abstract

The article explains what DDoS attacks are, their types and OSI levels, analyzes the types of DDoS attacks at different OSI levels and how to prevent them.

Keywords: service, denial of service, threat, attack, network, DDos, IP, OSI, TCP.

Introduction. The key concepts of cyber security are availability, integrity and privacy. Denial of Service (DoS) attacks affect the availability of information resources. Denial of service is considered successful if it leads to the unavailability of the information resource. The success of the attack and its effect on the target's resources differ depending on the effect on the victim. For example, if an online store is attacked, a long-term denial of service can cause financial damage to the company. In each specific case, DoS activity can either cause direct harm or pose a threat and risk of potential harm. The first D in DDoS stands for distributed: a distributed denial of service attack. In this case, we are talking about many malicious requests coming to the victim's server from many different places. Typically, such attacks are organized through botnets (Mammadov M.I., Huseynova D.B., Aliyeva A.N., Mammadova S.K. (2021)).

In this article, we will consider in detail what types of DDoS-traffic and what DDoS-attacks exist. For each type of attack, brief recommendations for preventing and restoring work capacity will be provided. We will also review the levels of network attacks according to the OSI model and analyze the levels most affected by DDoS attacks.

Material and method.

Types of DDoS traffic. The simplest type of traffic is HTTP requests. In order to form an HTTP request, it is necessary to compose an initial string and give at least one header - this is the Host header, which is mandatory and must be in every request.

An applicant can use any number of headers and assign them the desired properties. DDoS attackers can modify these and many other HTTP headers, making them difficult to recognize for attack detection. Additionally, HTTP headers can be written to handle caching and proxy services. For example, you can instruct the proxy server not to cache data. (Mammadov M.I., Safarova U.E. (2021)).

HTTP header. HTTP headers are fields that describe what resource, such as a URL or form or JPEG, is being requested. Also, HTTP headers tell the web server what type of browser is being used. The most common HTTP headers are ACCEPT, LANGUAGE, and USER AGENT.

HTTP (S) GET request - this method is the most common method, and requests to the server are most often made using it. To make a GET request, you need to enter a URL in the address bar of the browser.

HTTP (S) GET-flood - OSI model implementation layer (7) attack method. The goal of the attack is to make the server allocate as many resources as possible to serve the attack.

HTTP (S) POST request - method of placing data into the request body (Entity-Body) for later processing on the server. An HTTP POST request encodes the transmitted data and puts it into a form, and then sends that content to the server. This method is used to transfer large amounts of information when necessary.

HTTP (S) POST-flood - The number of POST requests floods the server to such an extent that the server cannot respond to all requests. This can cause the server to use more system resources and subsequently crash.

SYN-flood (TCP/SYN) is a type of denial-of-service network attack that consists of sending a large number of SYN requests (connection requests with the TCP protocol) in a fairly short period of time. The

client creates a SYN packet, requesting a new session from the server. As a TCP session is opened (TCP's "three-step handshake" algorithm is executed), the host will monitor and process each user session until it is closed. During a SYN Flood, the attacked server receives spoofed SYN requests containing the spoofed IP address at high speed. A SYN-flood usually affects a server by occupying the entire memory of the transmission control block (TCB) table, which is used to store and process incoming packets. This leads to a critical drop in productivity and ultimately to server rejection (Bogdanoski M., Shuminoski T., Risteski A. (2013)).

UDP-flood - consists of sending many UDP packets (usually in large volume) to specific or random remote host port numbers. As a result, the attacking system will be overloaded: the UDP protocol has no mechanism to prevent overloading, so once the attack is launched, parasitic traffic will quickly take over all the available bandwidth.

ICMP-flood - Spoofed ICMP packets from a wide range of IP addresses. The attacker's goal is to flood the channel and overload the victim server with a stream of fake requests. Given that ICMP packets do not require acknowledgment to be received as TCP, it is difficult to identify "junk" traffic with the ICMP protocol as UDP. ICMP Flood can be implemented to collect server information (open ports and destination address) in order to launch a targeted attack via a port or application.

MAC flood - a rare type of attack. The attacker sends empty Ethernet packets with different addresses. The switch considers such packets separately and reserves a certain amount of resources for each of them. Resource saturation can cause the switch to stop responding to requests, and in some cases cause the routing table to fail completely.

Levels of the OSI model. The modern Internet operates through a network infrastructure based on OSI - OSI / ISO protocols. This infrastructure allows devices on the network to communicate with each other. In the OSI model, each means of interaction is divided into 7 levels (Mammadov M.I., Orujova M.U., Bayramova N.B. (2014)):

1. Physical layer - Physical Layer;
2. Channel level - Data Link Layer;
3. Network layer - Network Layer;
4. Transport layer -Transportation Layer;
5. Session layer - Session Layer;
6. Presentation layer - Presentation Layer;
7. Application layer - Application Layer

The receiving computer forwards the data packet from lower levels to higher levels. Each layer reads and destroys the data of that layer attached to the other side. It cleans its own information and forwards the packet to a higher level. According to the model, each level works with three additional levels. These three levels are lower and upper levels and the same level on the opposite side (Mammadov M.I., Orujova M.U., Bayramova N.B. (2014)).

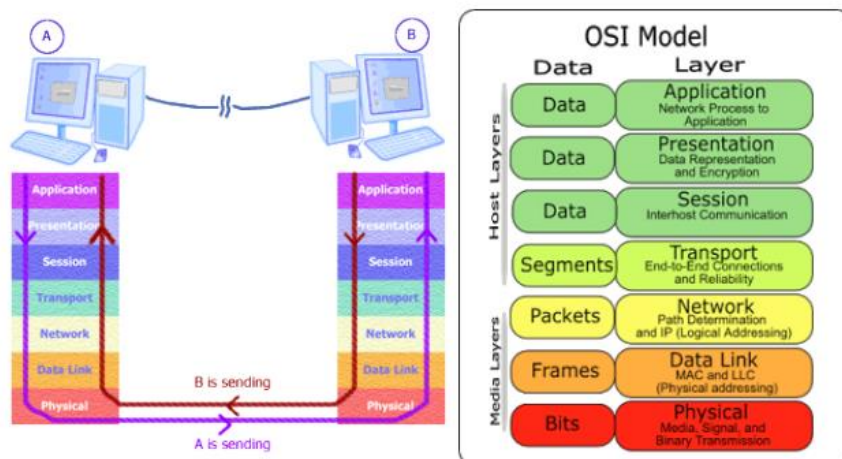
A DDoS attack can be organized into any of the seven layers, but most often these attacks are organized at the network and transport levels - low-level attacks, and at the session and application levels - high-level attacks. Let's consider what types of attacks exist at the application level and other defined levels of the OSI model.

Problem Analysis: 1.Types of DDoS attacks.

Low level attacks:

- OSI network layer attacks represent "clogging" of the channel. An example of this is CMP-flood - an attack that uses ICMP requests that reduce the throughput of the attacking network and overload the security system. The host is constantly being "pinged" by intruders, forcing it to respond to ping requests. When there are many of them, the network bandwidth is not enough, and the responses to the requests come with a considerable delay. To prevent such DDoS attacks, you can disable the processing of ICMP requests through the Firewall or limit the number sent to the server (Cопокин С. Н. (2014)), (Fu-Yuan, Lee.(2021)).

-Traffic-level attacks appear as traffic disruption and interception. For example, SYN-flood or Smurf-attack. The consequences of such a DDoS attack are an increase in favorable connections and interruptions in the operation of network equipment (Cопокин С. Н. (2014)), (Fu-Yuan, Lee. (2021)).



Source: Mammadov M.I., Orujova M.U., Bayramova N.B. (2014)–Computer networks. (Textbook). ADAU ed., 2014. –175 p

Figure 1. The relationship between the levels of the OSI model

High level attacks:

- Session-level network equipment is exposed to attacks. By exploiting vulnerabilities in the Telnet server software, attackers can prevent the switch from being managed by the controller. In order to prevent such attacks, it is recommended to keep the firmware of the equipment up-to-date (Bogdanoski M., Shuminoski T., Risteski A. (2013)).

High-level attacks on the application level are aimed at deleting memory or data from the disk, "stealing" resources from the server, extracting and using data from the DD. This can lead to a complete lack of resources to perform simple operations on the equipment. The most effective way to prevent attacks is timely monitoring of the state of the system and software (Бекенева Я. А. (2016)).

2. Elimination of DoS/DDoS attacks

Despite software developers solving security problems and regularly making software updates, attackers are constantly improving their DDoS capabilities - they find new ways to make systems fail (Браницкий, А. А. (2016).), (Корнев Д. А., Лопин В. Н., Luzgin V. G. (2012)).

Although an attack is possible at any level, attacks at levels 3-4 and 7 of the OSI model are very popular (Mammadov M.I., Safarova U.E.(2021)).

Level 3 and 4 DDoS attacks - infrastructure attacks - types of attacks based on the use of large volume, strong data flow (flood) at the network infrastructure level in order to slow down the work of the web server, "fill" the channel and, as a result, prevent other users from accessing the resource. Such attacks usually include ICMP-, SYN- and UDP-flood.

A DDoS attack at level 7 is an attack that consists of overloading some specific elements of the application server infrastructure. Level 7 attacks are particularly difficult due to their complexity, stealth, and similarity to useful web traffic. Even the simplest level 7 attacks, such as trying to log in with a random username and password or repeating random searches on dynamic web pages, can critically load the CPU and database. Also, DDoS attackers can repeatedly change the signals of level 7 attacks, making them even more difficult to recognize and eliminate (Kornev D. A., Lopin V. N., Luzgin V. G. (2012)).

Device	OSI level	For optimization	DDoS protection
Brandmauer	4-7	Flow check, deep check	Screens, session limits, SYN cookie
Router	3-4	(Check flow, deep check)	Access control linear lists, speed limit

Some moves and equipment to overcome attacks (Fu-Yuan, Lee.(2021)):

- Security that dynamically inspects packets
- SYN proxy dynamic mechanisms
- Limiting the number of SYNs per second per IP address
- Limiting the number of SYNs per second per remote IP address
- Installs ICMP flood screens in security airport
- Installs UDP flood screens at security airport
- Security and speed limiting of routers adjacent to the network

To protect your project (network) from low-level DDoS attacks, it is worth increasing the channel capacity or conducting prevention and deep analysis of the network infrastructure. To protect against high-level attacks, it is recommended to regularly analyze TCP clients and TCP packets on the server, as well as to use constant monitoring of the state of the system in general and software in particular.

The result. Detecting (identifying) DoS/DDoS attacks is one of the main steps to protect against such attacks, but detection of such attacks is problematic due to the large number of different types of attacks. In practice, it is very difficult to design and implement DDoS protection mechanisms. It is not possible to meet all requirements for DDoS detection in real-time networks, as it requires different performance parameters to be accurately and properly balanced. This article explains what types of DDoS-traffic and what DDoS-attacks exist. Brief recommendations for preventing and recovering from each type of attack are provided. Also, according to the OSI model, the levels of network attacks were reviewed and the levels most affected by DDoS attacks were analyzed. Some suggestions are given to eliminate the attacks.

References

1. Mammadov M.I., Huseynova D.B., Aliyeva A.N., Mammadova S.K. (2021). Classification of computer network attack detection methods// Scientific News magazine. GDU No. 1, 2021, p. 366-370
2. Mammadov M.I., Orujova M.U., Bayramova N.B. (2014)–Computer networks. (Textbook). ADAU ed., 2014. –175 p
3. Sorokin C. N. (2014), Method of detection of denial-of-service attacks on web applications, PDM, 2014, number 1, 55–64
4. Fu-Yuan, Lee.(2021) Defending against spoofed DDoS attacks with path fingerprint / Lee Fu-Yuan, Shihpyng Shieh// Computers & Security, 2005. - P 571-586.
5. Mammadov M.I., Safarova U.E. (2021). Research of methods for determining information attacks on computer networks// Actual scientific studies in the modern world // Journal - Pereyaslav, 2021. - Вып. 11(79), ch. 1 -133 c. pp.-13-17 ISCIENCE.IN.UA
6. Bogdanoski M., Shuminoski T., Risteski A. (2013). Analysis of the SYN Flood DoS Attack// I. J. Computer Network and Information Security, 2013, 8, 1-11. Published Online June 2013 in MECS (<http://www.mecspress.org/>) DOI: 10.5815/ijcnis.2013.08.01
7. Bekeneva Ya. A. (2016). Analysis of actual types of DDoS-attacks and methods of protection from them.// Informatics and computer technologies. / <https://izv.etu.ru/assets/files/izv-etu-1-2016-1-7-13.pdf>
8. Branitskii, A. A. (2016). Analysis and classification of network attack detection methods / A. A. Branitskiy, I. B. Kotenko // Труды СПИИРАН. — 2016. — Т. 2, No. 45. — С. 207-244.
9. Kornev D. A., Lopin V. N., Luzgin V. G. (2012). Active methods of detecting SYN-flood attack.// Ученые записки. Electronic scientific journal of the Kursk State University./ <https://cyberleninka.ru/article/n/aktivnye-metody-obnaruzheniya-syn-flood-atak>. 2012

AUTOMATION OF THE PROCESS OF SEPARATION OF FUEL INTO FRACTIONS**Maharramova Tamella Mustafa***Head, Ass.Prof. Ph.D. , ASOIU, ITIF, Department of Electronics and Automation***Mammadli Arif Tofiq***Master, ASOIU, ITIF, Department of Electronics and Automation***Abstract**

At present, efficient production of crude oil in the field of oil refining contributes to the development of the republic's economy to a great extent. Increasing oil processing by consuming less energy, increasing the quality of obtained oil products is related to efficient oil processing in the oil field.

In previous years, control systems and measuring devices in oil refineries did not meet modern conditions, due to the presence of a number of shortcomings during the operation of these devices, therefore, electrical and pneumatic elements were designed. These disadvantages include:

- low quality parameters of compressed air (in pneumatic systems);*
- low accuracy in automation equipment, control, measuring devices*
- to be;*
- delays exceeding the specified norm (in automatic regulation).*

Output signals are code (number) or 4÷20 mA, accuracy class is the most important among these parameters. One of the most important conditions for socio-economic development is to give impetus to the development of the Energy-Fuel Complex of our republic. One of the enterprises with the most potential in this field is "Azerneft gas station" PU.

Currently, 24 types of crude oil are produced in our country, of which 21 types are processed in this production area. The equipment at the facility is as follows:

- catalytic cracking;*
- primary processing of oil;*
- catalytic reforming;*
- modern equipment producing petroleum coke and gas fraction.*

In the new constructions, signal converters, sensitive elements, amplifiers, indicating devices of various purposes belonging to electric and pneumatic sections are used, and the following systems are built on their basis:

- launch systems;*
- automatic blocking systems;*
- security systems;*
- warning.*

The purpose of this article is based on separating fuel oil into fractions, obtaining a mathematical model of the technological process, and finding optimal values in the process. Proper management of this process is one of the main conditions for obtaining quality products.

Keywords: *Oil, fuel oil, fractional products, oil refining*

INTRODUCTION

The primary oil refining process consists of fractionation of oil and fuel oil, as well as atmospheric distillation of oil and vacuum distillation of fuel oil. The rectification process allows the separation of complex mixtures into two or more (products or fractions). Fuel oil and oil fractions are complex mixtures with many components, the number of which does not correspond to the nature of these mixtures. However, to determine these components, scientific and technical possibilities, practical expediency, certain methods used in the calculation of several-component rectification on the computer are possible.

To calculate the rectification, the complex mixture is given as a multi-component mixture with other conventional components: the greater their number, the higher the accuracy of the calculated parameters. Methods of physical separation of mixtures are widely used in the field of rectification and distillation chemistry.

Fuel oil enters the furnace to be heated to a temperature of 370-400°C. At the entrance of the furnace, the temperature, quality, consumption and pressure of the raw materials are controlled. The temperature at the outlet of the furnace TC-6 is controlled by changing the consumption of fuel with the

actuator TCV1 placed in the fuel line. Fuel heated in the furnace enters the bottom of the boiler. The boiler is also supplied with steam. Controlling steam consumption is a key and important issue. FC-38 is regulated by valve FCV12. In order to keep the temperature constant in the pot, periodic watering is used. In our scheme, there are 4 cycles of irrigation.

In the 1st round of irrigation, the fraction with a temperature of 360°C taken from the top of the tank is injected into the heat exchanger by means of a pump, then it is cooled to 70°C in the refrigerator and fed back to the top of the tank as irrigation. The fraction taken from the top of the tank enters the separator, and in this line, the LC-13 position level at the top of the tank is adjusted by the LCV4 actuator. The level inside the separator is controlled. Part of the fraction taken from the top of the separator is returned to the boiler as irrigation, and in this line the temperature of TC-8 at the top of the boiler is controlled by the TCV3 actuator. Diesel fraction is obtained from the bottom of the separator - line VI, and controlling its consumption and quality is one of the important issues.

The fraction taken from the middle of the second cycle irrigation passes through the heat exchangers and is cooled and re-enters the tank. In the fractionation line from the boiler to the evaporator, the LC-16 position level of the boiler is controlled by the LCV6 actuator. A part of the fraction from the top of the evaporator is returned to the boiler as irrigation, and the TC-10 temperature is regulated by the flow in this line. The level in the evaporator is monitored. Steam is supplied from line II and fraction < 350°C is obtained from the bottom of the evaporator. Consumption and quality are controlled in line VII.

III periodic irrigation. The fraction with a temperature of 360-450°C from the boiler enters the evaporator. The LC-23 position level in the coil is adjusted by means of the actuator LCV8 at the evaporator inlet. The evaporator is also supplied with steam and the level is controlled. Part of the fraction is removed from the unit and gas oil is obtained. Part of it is returned to the tank as a periodic irrigation, and the temperature of the TC-18 is controlled by the TCV7 actuator. Consumption and quality of gas oil received in line VIII is controlled.

IV periodic irrigation. The fraction with a temperature of 450-520°C enters the evaporator from the bottom of the boiler and light vapors are returned to the boiler. The LC-30 level in the tank is controlled by the LCV10 actuator at the evaporator inlet. The TC-25 temperature in the cylinder is regulated by the TCV9 valve in the irrigation line. A fraction at 450-520 °C is taken from the bottom of the evaporator and its consumption and quality are controlled.

The pressure above the cylinder is regulated by valve PCV2 in the PC-8 IV line. The oil vapors in the cylinder are removed from the IV line, and its quality and consumption are controlled. Tar is removed from the bottom of the tank along the X line. The LC-32 position level below the tank is controlled by the valve LCV11 in the tar line of the tank discharged from the tank, and it is important to control the quality and consumption of the tar. Also, the temperature and pressure at the bottom of the tank are controlled. All transactions listed above are reviewed.

Table 1

Control and adjustable parameters in the apparatus used in the process

No	Devices		Parameter	Control which is	Regulated
1.	Stove	In the introduction	Consumption	Control	-
			Temperature	Control	-
			Pressure	Control	-
			Quality	Control	-
		At the exit	Temperature	-	It is regulated
2.	Kalon	Above	Pressure	-	It is regulated
			Temperature	-	It is regulated
			Level	-	It is regulated
		In the middle	Levels	-	It is fixed
			Temperature	-	It is regulated
		Below	Level	-	It is regulated
			Temperature	Control	-
3.	Evaporator	Inside	Pressure	Control	-
4.	Separator	Inside	Level	Control	-

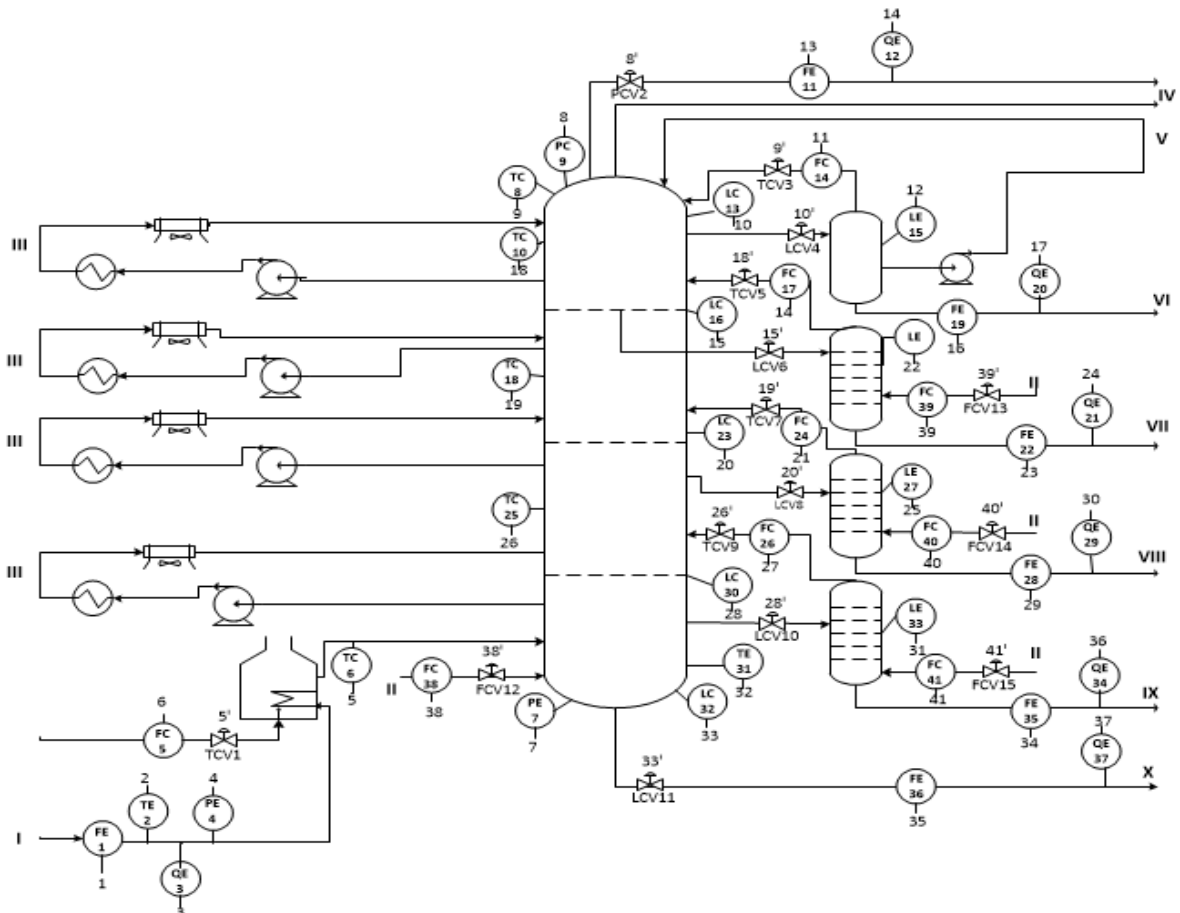


Figure 1. The scheme of automating the process of separating fuel oil into fractions

CONCLUSION

Of the fuel oil fractionation process was established and the main product was selected as the control object and discussed. Control and managed indicators were found in the devices used in the process and an automation scheme was created. Both schemes are designed in the "Visio" program. In the automation process, technical means - measuring equipment and controllers are selected, taking into account the measurement limit of each controlled or regulated parameter. The equipment of the companies Endress+Houser and Novus is shown here. A mathematical model was developed by selecting the parameters of the vacuum chamber from which the product was obtained. The coefficients of the regression equation were determined based on these data by entering the known primary statistical data into the "Microsoft Excel" program. Then, using the "Matchad" program, the optimal solution to the problem was obtained.

Literature

1. Efendiyev I.R., Mustafayev I.A. *Methods of designing optimal management systems of technological processes. Theory and application.* Baku, Çaşıoğlu, 2005, 240 pages.
2. Efendiyev I.R., Mustafayev I.A., Musayev S.A., Maharramova TM "Development of the adaptation algorithm of mathematical models in management systems." *Azerbaijan Airlines State Concern National Aviation Academy. Scientific Collections Volume 4. No. 2.* Baku 2002 p. 31-38.
3. Efendiyev.I.R, Karimov.CK, Huseynov.I.A. *Technological measurements of fields.* Baku, 2014. 260 p
4. <https://www.automation24.biz/capacitive-level-sensor-endress-hauser-liquicap-fmi21-b1a1c1-1000-mm>
5. <https://www.automation24.biz/flow-monitor-ifm-electronic-si5000>
6. <https://www.automation24.biz/pressure-sensor-ifm-electronic-pn7094>

UDC 621.377.512.32

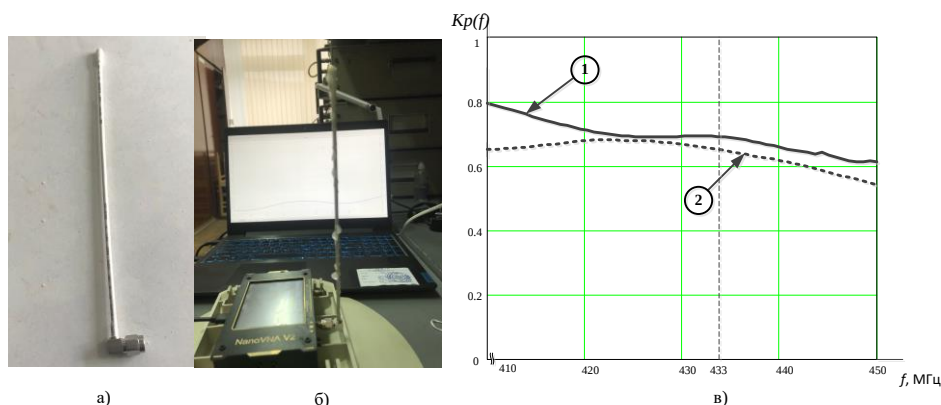
**MATCHING OF THE ANTENNA DEVICE OF THE CONTROL CHANNEL AND THE TRANSCEIVER
MODULE OF AN UNMANNED AERIAL VEHICLE IN ICING CONDITIONS****Pavel Valeryevich Boikachev***Candidate of Technical Sciences, Associate Professor of the Military Academy of the Republic of
Belarus***Vladislav Leonovich Metelitsa***Cadet of the Military Academy of the Republic of Belarus***Maria Ramjedovna Sharipova***Cadet of the Military Academy of the Republic of Belarus*

УДК 621.377.512.32

**СОГЛАСОВАНИЕ АНТЕННОГО УСТРОЙСТВА КАНАЛА УПРАВЛЕНИЯ И ПРИЕМО-
ПЕРЕДАЮЩЕГО МОДУЛЯ БЕСПИЛОТНОГО ЛЕТАТЕЛЬНОГО АППАРАТА В УСЛОВИЯХ
ОБЛЕДЕНЕНИЯ****Бойкачев Павел Валерьевич***Кандидат технических наук, доцент Военной академии Республики Беларусь***Метелица Владислав Леонович***курсант Военной академии Республики Беларусь***Шарипова Мария Рамжедовна***курсант Военной академии Республики Беларусь*

Важной частью создания современных приемо-передающих устройств является решение задачи широкополосного согласования, которое позволяет обеспечить передачу максимальной мощности в заданной полосе рабочих частот между источником сигнала и нагрузкой. В большинстве случаев при проектировании согласующих устройств (СУ) разработчики не учитывают нестабильность импеданса нагрузки, вызванную изменениями условий эксплуатации, особенно на подвижных объектах [1]. Такие явления ярко выражены в системах, нагрузкой которых являются антенные устройства (АУ). Импеданс АУ зависит от среды ее применения (снег, воздух, имеющий разную температуру и влажность, вода, сезонные и климатические изменения), а также от частоты излучаемого сигнала. Например, при эксплуатации беспилотных летательных аппаратов (БЛА), нередко имеют место быть ситуации обледенения АУ, что приводит к изменению импеданса АУ и, как следствие, к уменьшению дальности радиолинии или вообще потери связи с бортом. Для решения данной проблемы предлагается использовать СУ учитывающие нестабильность импеданса нагрузки, которые позволяют максимизировать передаваемую (принимаемую) мощность сигнала в нагрузку и обеспечивают устойчивую радиосвязь в различных условиях эксплуатации радиотехнической системы. Рассмотрим применение подобного СУ, синтезированного для АУ канала управления БЛА.

В качестве примера рассмотрим АУ, работающее в канале управления БЛА. Данное АУ представляет собой гибкую штыревую антенну, работающую на частоте 433 МГц. Ниже представлен вид АУ и зависимости коэффициент передачи по мощности (КПМ) между приёмо-передающим модемом и АУ в условиях обледенения АУ и без них.

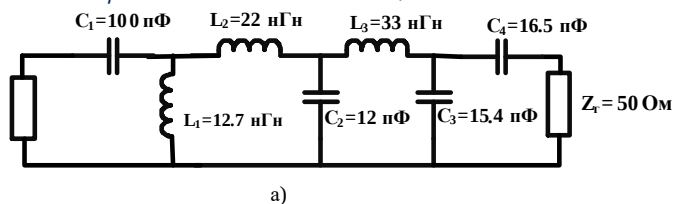


а) внешний вид АУ; б) фото проведения эксперимента (АУ в условиях обледенения); в) КПМ: 1 – без обледенения АУ; 2 – в условиях обледенения АУ

Рисунок 1 – АУ канала управления БЛА и ее характеристики передачи мощности от частоты.

Проанализировав полученные зависимости (рисунок 1), можно сделать вывод о том, что при обледенении АУ наблюдается изменение уровня КПМ в худшую сторону. Следует заметить, что уровень передачи мощности на рабочей частоте не является удовлетворительным (потеря мощности сигнала составляет примерно 30%), даже в штатных условиях проведения эксперимента (без обледенения).

Для обеспечения максимального уровня передачи мощности между АУ и приемо-передающим модемом в рабочей полосе частот, на основе метода вещественных частот [2] и теории чувствительности [3] по методике, представленной в [4] была разработана СЦ, лестничной структуры состоящая из семи элементов.



а) принципиальная схема; б) внешний вид СЦ

Рисунок 2 – СЦ, лестничной структуры состоящая из семи элементов

Применение СЦ в приемо-передающем тракте радиоканала управления БЛА обеспечивает уровень передачи мощности, представленный на рисунке.

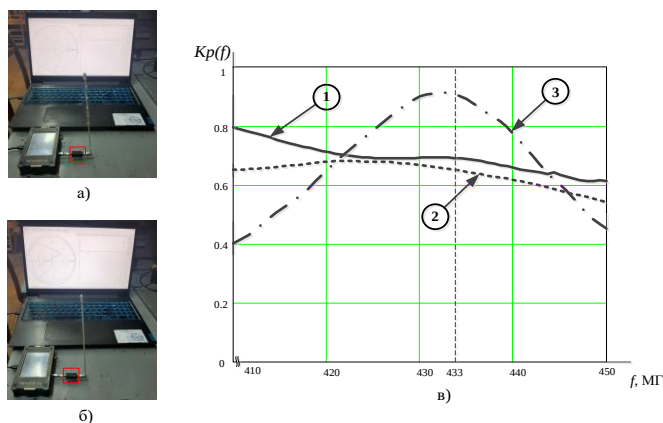


фото проведения эксперимента (АУ в условиях обледенения а) и без обледенения б) с согласующей цепью; в) зависимость КПМ в рабочем диапазоне частот: 1 – без обледенения АУ; 2 – в условиях обледенения АУ; 3 – с СЦ (без обледенения и в условиях обледенения АУ)

Рисунок 3 – Результаты проведения эксперимента

Таким образом, произведя анализ зависимостей, представленных на рисунке 3 (в) можно сделать вывод, что применение СЦ, синтезированной с использованием метода вещественных частот и теории чувствительности обеспечивает уровень передачи мощности от источника сигнала в нагрузку стремящийся к максимальному значению (потери мощности в рабочем диапазоне частот не превышают 10%), как в штатных условиях, так и в условиях обледенения АУ, что позволяет обеспечить канал управления БЛА устойчивой радиосвязью в широком спектре естественных условий его эксплуатации.

Список используемых источников

1. Бабков В.Ю., Муравьев Ю.К. Основы построения устройств согласования антенн // ВАС, 1980. – 240 с.
2. Yarman, B.S. Design of ultra wideband antenna matching networks / B.S. Yarman. – Istanbul: Springer, 2008. – 308 p.
3. Гехер К., ред: Ю.Л. Хотунцева. Теория чувствительности и допусков электронных цепей. М.Сов. радио. 1973.
4. Бойкачев, П.В., Метод синтеза широкополосных устройств с оптимальной характеристикой коэффициента преобразования мощности, согласующих изменяющийся во времени импеданс нагрузки / И. А. Дубовик, П. В. Бойкачев, В. О. Исаев // [Электронный ресурс] Журнал радиоэлектроники. – 2021. – №5. – Режим доступа: <https://doi.org/10.30898/1684-1719.2021.5.1>.



<https://sconferences.com>
info@sconferences.com

ISBN

