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TABLE OF CONTENTS

SECTION: ART STUDIES

Мырзақанов Мадуақас Сексембайұлы,
Әлмұрат Мейір Мерейұлы (Семей, Қазақстан),
Хасенова Эльмира Келісқызы (Астана, Қазақстан)
МЕКТЕПТЕРДЕ ОҚЫТУДЫҢ ЖАҢА ӘДІС-ТӘСІЛДЕРІН ПАЙДАЛАНА ОТЫРЫП ШЫҒАРМАШЫЛЫҚҚА БАУЛУ 7
Халмуратов Имаматдин Тажетдинович (Нукус, Узбекистан)
ИСТОРИЯ РАЗВИТИЯ ИЗОБРАЗИТЕЛЬНОГО ИСКУССТВА КАРАКАЛПАКСТАНА 12
Халмуратов Имаматдин Тажетдинович (Нукус, Узбекистан)
ИСКУССТВО КАРАКАЛПАКСКИХ ЖЕНЩИН 14

SECTION: PEDAGOGY

Dyuzhikova Tetyana, Kulyk Iryna (Melitopol, Ukraine)
FORMATION OF PROFESSIONAL COMPETENCE OF FUTURE CHEMISTRY TEACHERS IN THE CONDITIONS OF THE MODERN EDUCATIONAL PARADIGM 18
Huseynova Elmira (Nakhchivan, Azerbaijan)
THE APPLICATION OF PRAGMATICS IN ESL CLASSES 22
Uteyeva Kundyz Zhumashovna (Almaty, Kazakhstan)
THE IMPORTANCE OF THE FORMATION OF NATIONAL SELF-CONSCIOUSNESS AMONG SCHOOLCHILDREN THROUGH EDUCATIONAL ACTIVITIES 32
Арапбаев Д., Серик Г., Тлеужанова Г.К. (Караганда, Казахстан)
ПРОЕКТИРОВАНИЕ РАЗВИВАЮЩЕЙ ОБРАЗОВАТЕЛЬНОЙ СРЕДЫ В ПРОЦЕССЕ РАННЕГО ОБУЧЕНИЯ АНГЛИЙСКОМУ ЯЗЫКУ 37
Асаухан С.А. (Караганда, Казахстан)
КОМПЕТЕНТНОСТНАЯ МОДЕЛЬ УЧИТЕЛЯ ИНОСТРАННОГО ЯЗЫКА: СУЩНОСТЬ И СТРУКТУРА 41
Керекова Мөлдір Абзалқызы (Ақтау, Қазақстан)
ОҚУШЫЛАРДЫҢ СЫНИ ОЛАУ ТҮРҒЫСЫНАН STEM НЕГІЗІНДЕ ФИЗИКАНЫ ОҚУДЫ БАҒАЛАУ 46
Косташ Людмила Леонтиевна, Якимович Елена Леонидовна (Тирасполь, Молдова)
ВОСПИТАТЕЛЬНАЯ СИСТЕМА ВУЗА И РОЛЬ КУРАТОРА СТУДЕНЧЕСКОЙ ГРУППЫ 50
Сартбекова Н.К., Анаркулова А.А. (Бишкек, Кыргызская Республика)
ПОВЫШЕНИЯ ЭФФЕКТИВНОСТИ АВТОРСКОГО УРОКА ПО АНГЛИЙСКОМУ ЯЗЫКУ В ОБРАЗОВАТЕЛЬНОМ ПРОЦЕССЕ ВУЗА СО СТУДЕНТАМИ 55

Baibatyr M.O. (Almaty, Kazakhstan)
THE METHODOLOGY FOR THE FORMATION OF READINESS OF FUTURE TEACHERS FOR USE BUSINESS GAMES IN A PROFESSIONAL ACTIVITY 60
Bilal P.E. (Almaty, Kazakhstan)
THE METHODOLOGY OF THE MANAGEMENT CULTURE FORMATION OF THE FUTURE FOREIGN LANGUAGE TEACHERS IN THE PROCESS OF PROFESSIONAL TRAINING 65
Mametova E. Kh. (Almaty, Kazakhstan)
METHODOLOGY FOR THE FORMATION OF INTELLECTUAL ABILITIES OF HIGH SCHOOL STUDENTS BY MEANS OF INFORMATION AND COMMUNICATION TECHNOLOGIES 68

SECTION: TECHNICAL SCIENCE. TRANSPORT

Адамқұлов Нұрали Мерекебайұлы, Бакирова Лайля Шораевна, Абдуллаева Гүлнар Дайрабайқызы (Талдыкорган, Қазақстан)
СЫРНАЙЛАРДЫҢ ЖАСАЛУ ТЕХНОЛДОГИЯСЫ 72
Арипов Н.М., Отажонова М.К., Ниязова Н.А. (Ташкент, Узбекистан)
ПРИМЕНЕНИЕ МЕТОДА РАНГОВОЙ КОРРЕЛЯЦИИ ДЛЯ ПРЕДВАРИТЕЛЬНОЙ ОЦЕНКИ ХАРАКТЕРА ОТКАЗОВ В ЭЛЕКТРОДВИГАТЕЛЯХ 82
Кимстач Олег Юрьевич, Мелихов Дмитрий Сергеевич, Чумак Николай Вадимович (Николаев, Украина)
БИТОКОВАЯ СИСТЕМА РАСПРЕДЕЛЕННОЙ ГЕНЕРАЦИИ 87
Мирзаахмедова Хурят Баситовна, Юлдашев Сурожиддин Хасанович, Мурадов Журабек Музафарович (Ташкент, Узбекистан)
АНАЛИЗ ВОЗМОЖНОСТЕЙ ПАРАЛЛЕЛЬНОГО ПРОГРАММИРОВАНИЯ В ПАКЕТАХ MATLAB 92
Сайдахмедов Равшан Халходжаевич, Рузметов Азим Азадович (Ташкент, Узбекистан)
К ВОПРОСУ РАСЧЕТА ФИЛЬТРА С КОМБИНИРОВАННЫМИ НАПОЛНИТЕЛЯМИ 96
Смаилова Бахытгуль, Кардыбай Сауатбек, Шежау Кадылет (Астана, Казахстан)
ИССЛЕДОВАНИЕ И РАЗРАБОТКА КОНСТРУКЦИИ ПРОТИВОЭРОЗИОННОГО ОРУДИЯ ОСНОВНОЙ ОБРАБОТКИ ПОЧВЫ СО СМЕННЫМИ РАБОЧИМИ ОРГАНАМИ 100
Тухлиев Абдиали Нематулло угли, Мавлянов Айбек Палванбаевич, Каримова Гулжахон (Ташкент, Узбекистан)
АНАЛИЗ ВЗАИМОДЕЙСТВИЯ ЛЕТУЧЕК ХЛОПКА С МНОГОГРАННОЙ СЕТЧАТОЙ ПОВЕРХНОСТЬЮ ОЧИСТИТЕЛЯ 106
Хасенов Аянберген Каирбекович, Карабекова Дана Жылкибаевна, Булкаирова Гульден Айтпаевна, Жолдасбек Ердәулет Әлжанұлы, Мамыр Ғасыржан Жұмабайұлы (Қарағанды, Қазақстан)
КВАРЦ МИНЕРАЛЫН ЭЛЕКТРОИМПУЛЬСТІК ӘДІСПЕН ҰНТАҚТАУ 111

SECTION: PHILOLOGY AND LINGUISTICS

Kanseitova Eleonora, Sadykova Zhanat Esenzhanovna (Almaty, Kazakhstan)
THE USE OF DIGITAL TOOLS AND SERVICES IN TEACHING FOREIGN LANGUAGE 115
Sarymbetova Alma, Nurzhanova Aigerim Altynbekovna (Almaty, Kazakhstan)
COMPARATIVE ANALYSIS OF THE CONCEPT OF MAN AND WOMAN IN KAZAKH AND ENGLISH PROVERBS AND SAYINGS 122
Акатаева Ш.Б., Акшабаева Л.М. (Қарағанды, Қазақстан)
ҚАЗАҚ, ТАТАР, БАШҚҰРТ АУЫЗ ӘДЕБИЕТІ ҮЛГІЛЕРІНІҢ ҰҚСАСТЫҚТАРЫ МЕН ӨЗГЕШЕЛІКТЕРІ 126
Апаева Софья Хусеиновна, Дооталиева Жылдыз Догдурбековна, Байтикова Шолпан Акимжановна (Бишкек, Кыргызстан)
ИНТОНАЦИЯ КАК СРЕДСТВО ВЫРАЖЕНИЯ СИНТАКСИЧЕСКИХ ОТНОШЕНИЙ В РУССКОМ И КИТАЙСКОМ ЯЗЫКАХ 133
Апаева Софья Хусеиновна, Дооталиева Жылдыз Догдурбековна, Байтикова Шолпан Акимжановна (Бишкек, Кыргызстан)
ПОСТРОЕНИЕ ПОРЯДКА СЛОВ В РУССКОМ И КИТАЙСКОМ ЯЗЫКАХ 138
Власенко Наталія Давидівна (Кам`янське, Україна)
ОСОБЛИВОСТІ ПЕРЕКЛАДУ МЕТАЛУРГІЙНОЇ ТЕРМІНОЛЕКСИКИ 142
Ибраимова Женисгуль, Сабит Малика (Караганда, Казахстан)
ИМЕНА ЧИСЛИТЕЛЬНЫЕ В РУССКОМ И КАЗАХСКОМ ЯЗЫКАХ 148
Каримсакова Б. А., Орынбаева И.О., Дүйсенова Г.Е. (Ақтау, Қазақстан)
А. БАЙТҰРСЫНОВ – ӘДІСКЕР ҒАЛЫМ 152
Стаховська Наталія Федорівна (Кам`янське, Україна)
АНАЛІЗ ЛЕКСИКОГРАФІЧНИХ ДОСЛІДЖЕНЬ ПРИ ПЕРЕКЛАДІ ТЕРМІНА «РЕШЕТКА» В УКРАЇНСЬКІЙ ТЕРМІНОЛОГІЇ 157

SECTION: SCIENCE OF LAW

Istrati Petru Iurie (Chişinău, Republica Moldova)
ASPECTE GENERALE PRIVIND PROTECȚIA DATELOR CU CARACTER PERSONAL LA PRELUCRAREA DATELOR GENETICE 162
Hapotii Viktor (Melitopol, Ukraine)
PECULIARITIES OF THE FORMATION OF CIVIC CULTURE OF FUTURE LAWYERS IN INSTITUTIONS OF HIGHER EDUCATION 167

SECTION: ECONOMICS

Grigoryan Emil A. (Yerevan, Armenia)
EVOLUTION OF THE CONCEPTS OF NATIONAL INNOVATION SYSTEMS UNDER CONDITIONS OF TECHNOLOGICAL TRANSFORMATION OF THE ECONOMY ... 171

SECTION: JOURNALISM

Ludovit Hajduk (Bratislava, Slovakia)
DISCURSIVE ANALYTICAL APPROACH IN MEDIA CONTENT RESEARCH..... 175

SECTION: MANAGEMENT AND MARKETING

Адамкулов Нурали Мерекебаевич (Талдықорған, Казахстан), Алиева Аида (Астана, Казахстан)
ЖАРНАМА ӘРЕКЕТІНІҢ НЕГІЗГІ ҚАҒИДАЛАРЫ..... 183
Адамкулов Нурали Мерекебаевич, Сарсенбаева Сымбат Берікқызы (Талдықорған, Казахстан), Нурке Майна Сыздыккызы (Алматы, Казахстан)
ДИЗАЙНДАҒЫ ТУРИЗМДІ ЖАРНАМАЛАУ ӘРЕКЕТІНІҢ НЕГІЗГІ ҚАҒИДАЛАРЫ..... 187

SECTION: PHILOSOPHY

Botezatu Liuba Constantin (Comrat, Moldova)
THE PRINCIPLE OF GLOBAL AXIOLOGY – IMPERATIVE OF PRIMORDIAL TIME 191
Білогур Влада Євгенівна (Мелітополь, Україна)
ОСНОВНІ СУПЕРЕЧНОСТІ ДЕМОКРАТИЗАЦІЇ СВІТОГЛЯДУ СТУДЕНТСЬКОЇ МОЛОДІ ТА МОЖЛИВІ ШЛЯХИ ЇХ ПОДОЛАННЯ..... 199

Issue 9(89) p. 1 ISSN 2524-0986

SECTION: PEDAGOGY

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FORMATION OF PROFESSIONAL COMPETENCE OF FUTURE CHEMISTRY TEACHERS IN THE CONDITIONS OF THE MODERN EDUCATIONAL PARADIGM

Annotation. *A modern chemistry teacher should have the following key competencies and personal qualities: scientific worldview; creativity, striving for development; computer literacy; professional competence; communicative competence; personal qualities, abilities for the profession of a chemistry teacher; creative style of activity; high moral culture.*

Key words: *key competencies, chemistry teacher, activity, scientific, worldview, creativity, development, stimulation, culture, education.*

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ФОРМУВАННЯ ПРОФЕСІЙНОЇ КОМПЕТЕНЦІЇ МАЙБУТНІХ УЧИТЕЛІВ ХІМІЇ В УМОВАХ СУЧАСНОЇ ОСВІТНЬОЇ ПАРАДИГМИ

Анотація. *Сучасний вчитель хімії повинен мати наступні ключові компетенції та особисті якості: науковий світогляд; креативність, прагнення розвитку; комп'ютерна грамотність; професійна компетентність; комунікативна компетентність; особистісні якості, здібності до професії вчителя хімії; творчий стиль діяльності; висока моральна культура.*

Ключові слова: *ключові компетенції, учитель хімія, діяльність, наукова, світогляд, креативність, розвиток, стимулювання, культура, освіта.*

Modernization of modern natural science education requires special attention to the personality of the teacher, revision of the main links of his professional activity.

The priority tasks of natural science education is the transition to such a model of education, when chemistry, biology, geography, physics become not the goal of education, but a means of developing and educating students, mastering their key competencies [1, p. 41-45]. The modernization of modern natural science education requires special attention to the personality of the teacher, a revision of the main links of his professional activity.

The successful solution to the tasks of teaching and educating the young generation is connected with the improvement of the training of teachers, their professional skills, erudition

and culture. A teacher should be a bright, unique personality, a carrier of deep and diverse knowledge, universal human values and high culture.

The modern training of a chemistry teacher in a pedagogical university is a multi-component system of pedagogical education and is built on the basis of the interconnection of various types of student activities, a combination of theoretical and practical knowledge and skills [2].

Improving the professional and pedagogical training of students is one of the urgent problems of the methodology of teaching chemistry at a university, and therefore the question of the requirements that apply to the training of students in general and chemists in particular is important

The issue of the formation of professional competence in the process of training a chemistry teacher is considered in the works of E. Arshanskyi, V. Davydov, N. Kuznetsova, M. Pak, M. Shatalov, I. Tytova, and others. The main attention in the works of researchers is given to methodical training of students. In the context of this study, the formation of professional competence in the process of studying chemical disciplines is of greatest interest.

The effective formation of the professional competence of a chemistry teacher provides for the following pedagogical conditions: stimulation of the professional and pedagogical orientation of students; ensuring the unity of the main components of the professional competence of chemistry teachers; introduction of methods for activating the educational and cognitive activity of specialists; providing students with program and methodological materials created on the basis of structured integrity.

Considerable attention in the process of training a chemistry teacher should be paid to the study of new pedagogical learning technologies, students should master the methods of forming independent work skills, development of creative abilities and logical thinking of students, widely use the chemical experiment as the basis of the study of chemistry [3].

When forming the professional competence of a future chemistry teacher, it is necessary to consider two approaches with the concepts of «competence» and «competence».

Competence is some alienated, predetermined requirement for training a person (properties or qualities, potential abilities of a person), a predetermined requirement for knowledge and experience in a certain field [4,5]; competence is the possession of competence that manifests itself in effective activity and includes a personal attitude to the subject and product of activity; competence is an integrative formation of a personality that integrates knowledge, abilities, skills, experience and personal attributes that determine the desire, ability and readiness to solve problems and tasks that arise in real life situations, while being aware of the importance of the subject and the result activities [4, 6].

In the most general case, all professional competencies can be divided into key and specific ones. Core competencies relate to the general content of education and are applicable to all educators. Specific competencies relate to an individual teacher within a specific academic subject [7, p. 62].

O.V. Bilous, P.V. Samoilenko in his work singled out the following professional and pedagogical competencies of bachelors of education (chemistry):

1. Demonstration of understanding of the general structure of chemical science based on the interrelationship of the basic teachings of chemistry (understanding of the regularities

Issue 9(89) p. 1 ISSN 2524-0986

of the course of chemical reactions, factors influencing them; understanding of the mechanisms of chemical reactions; modern ideas about the structure of matter; the ability to predict the properties of elements, their compounds and products reactions).

2. The ability to transfer the system of scientific chemical knowledge to the level of the academic subject of chemistry, to implement the structuring of the educational material (the ability to establish intra-subject and inter-subject connections of the educational discipline, the ability to structure the educational material within the topic).

3. The ability to apply modern research methods to establish the composition of substances and identify patterns of chemical reactions and to integrate the results of research (the ability to apply methods of observation, description, identification, modeling, classification of chemical objects; the ability to apply basic methods of physical and chemical analysis to establish qualitative and the quantitative composition of substances; the ability to organize work in accordance with the requirements of safety and occupational health and safety).

4. The ability to clearly and logically reproduce basic knowledge of chemistry, to evaluate new information and interpretations in the context of this knowledge (the ability to clearly and in a logical sequence characterize the structure, properties and methods of obtaining substances; the ability to explain chemical phenomena using the basic laws and theories of chemistry).

5. The ability to characterize chemical objects and phenomena in the unity of qualitative and quantitative aspects (the ability to perform calculations using the basic laws of chemistry) [7, 8].

Within the framework of key competencies, the teacher must realize his educational function:

1. Value-semantic competence is associated with the teacher's value orientations, his ability to see and understand the world around him, navigate in it, realize his role and purpose, be able to choose target and semantic settings for his actions and deeds, make decisions.

2. Competence of personal improvement. It is aimed at mastering the ways of physical, spiritual and intellectual self-development, emotional self-regulation and self-support.

3. Information competence includes the ability to independently search, analyze and select the necessary information, organize, transform, store and transmit it, as well as teach students all this. With the help of this competence, the teacher ensures the development of students' activity skills in relation to the information contained in the subjects and educational areas, as well as in the surrounding world.

4. Communicative competence. Communicative competence includes knowledge of the necessary languages, ways of interacting with surrounding and remote people and events, experience in working in a group, and mastery of various social roles in a team. The teacher should teach students to introduce themselves, write a letter, questionnaire, statement, ask a question, support a discussion, etc.

5. Professional and pedagogical competence. The professional qualities of a teacher, in terms of professional and pedagogical competence, include: pedagogical erudition; pedagogical goal setting; pedagogical (practical and diagnostic) thinking; pedagogical intuition; pedagogical improvisation; pedagogical observation; pedagogical optimism, pedagogical resourcefulness; pedagogical foresight and pedagogical reflection.

So, a modern chemistry teacher should have such key competencies as: scientific worldview; creativity, striving for development; computer literacy; professional competence; communicative competence; personal qualities, abilities for the profession of a chemistry teacher; creative style of activity; high moral culture; healthy lifestyle.

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