

**MoPED: Modernization of Pedagogical Higher Education by
Innovative Teaching Instruments**

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HANDBOOK

TITLE OF THE COURSE:

Geocultural Scientific Literacy

SPECIALITY - *013 Primary Education.*

Specialization «English Language and Literature»

HIGHER EDUCATION DEGREE: *Master*

Developer: *Candidate of Pedagogical Sciences, Associate Professor of the
Department of Pedagogy of Primary Education –*

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BRIEF SUMMARY OF THE COURSE:

The course "Geocultural scientific literacy" aims at improving students' command of English in the process of preparing a qualified specialist for work in New Ukrainian School. The educational content of the course contains material for the formation of students' geocultural scientific literacy through the recognition of the geographical and cultural differences of their native land and the English-speaking countries (Great Britain and the USA), scientific discoveries and achievements of prominent scientists in the field of STEAM (by the creation of game-cards "Guess Who?"). It is intended to familiarize students with innovative teaching tools based on English-language educational electronic resources. Within the course, future teachers are suggested to create their own educational content, which can be used in their professional activity in primary school.

Considerable attention is paid to the issues of conceptualization of geocultural scientific literacy; its evolution; developing a model of geocultural scholarly literacy, introducing innovative pedagogical technologies and teaching tools in primary school (Kahoot, Mentimeter, Flipgrid) for the development of appropriate educational content and constructive cooperation - student-teacher, student-student (pupil-teacher, pupil-pupil); development of future teachers' critical, creative thinking, presentations of educational creative work for collaboration with primary school students at lessons, etc.

KEY WORDS :

The concept of "literacy", scientific literacy, geocultural scientific literacy, the English language, future teachers of the New Ukrainian school, primary school students, innovative pedagogical technologies, innovative teaching/learning tools.

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1. DESCRIPTION OF THE COURSE

1.1. The volume of the course in ECTS credits and its distribution in hours by the forms of organization of educational process and types of classes:

MARK ON THE SCALE OF THE HIGHER EDUCATION INSTITUTION		
90 – 100	A	excellent
80 – 89	B	good
70 – 79	C	
60 – 69	D	
50 – 59	E	satisfactory
26 – 49	FX	unsatisfactory with the possibility of re-assessment
0-25	F	unsatisfactorily with compulsory repeated study of the course

1.2. Characteristics of the course by form of study

Full-time and Part-time study

1.3. Course status

The course of the choice of the HEI

1.4. Prerequisites for studying the course

Geocultural Scientific Literacy is the final English-language course for the students, future English teachers in primary school. After studying a number of courses during their four-year-study for Bachelor's degree students have already obtained knowledge in different English-language courses thus, developing the competence of using the English language correctly; mastering the ability of the future teacher (graduate) to solve standard and problematic professional issues that arise in the educational practice of primary school, based on the formed knowledge about the theoretical foundations of the content and process of teaching English to younger students; learning general information about the English-speaking countries, and many other related subjects. Within this new course the students will use already gained knowledge additionally to the new one for the formation and development of professional (specific) competences and integrate innovative content in the practice of New Ukrainian School.

1.5. Year of study, semester

The second year of study for Masters's degree, Semester 1

1.6. Form of final control

Exam

1.7. Language of the course.

English

1.8. Internet address of the permanent placement of educational content of the course:

Educational content of the course "Geocultural scientific literacy" is available at - <http://194.44.152.156/course/view.php?id=6>

Handbook «*Geocultural Scientific Literacy*»

1.9. Developer.

Tetyana Blyzniuk – Candidate of Pedagogical Sciences, Associate Professor of Pedagogy of Primary Education

1.10. Aims of the course .

The aims of the course is to increase the level of foreign language communication competence of students of pedagogical specialties on the basis of work with innovative teaching tools using English-language educational electronic resources; to expand the students' outlook on the geographical and cultural peculiarities of English-speaking countries (Great Britain and the United States), scientific discoveries and achievements of prominent scholars; to prepare a creative, competitive specialist for realizing the acquired knowledge at the New Ukrainian school, capable of successfully adapting to new situations and making non-standard solutions.

1.11. Competences that are formed during the study of the course.

Integral Competence (CI) –

Ability to solve simulated tasks of pedagogical situations in future professional pedagogical activity on the basis of knowledge of theoretical aspects of the course, obtained practical skills of using innovative teaching tools; communicate (oral and written communication) in English for successful adaptation to new situations and the adoption of non-standard solutions.

Generic Competences (GC) –

GC-1. Ability to communicate in a foreign language;

GC-2. Knowledge of the use of information and communication technologies;

GC-3. Ability to creative search, non-standard solution of pedagogical problems and situations.

Professional (Specific) competences (SC) –

CS-1. Ability to use digital tools in an interdisciplinary context to address communicative and cognitive tasks in primary school education.

CS-2. Ability to actualize and apply acquired experience of English-speaking communication for its successful implementation in pedagogical communicative activities with primary school students.

CS-3. Ability to use modern educational technologies, innovative approaches in solving standard and problem methodological issues while teaching certain themes of an educational field or primary school subject.

1.12. Learning outcomes of the course.

Professional knowledge

Students explain the basic theoretical concepts of the course: literacy, geocultural literacy, scientific literacy, geocultural scientific literacy.

Students analyze the main statements of the New Ukrainian School and to substantiate the connection of geocultural scientific literacy with key competences in its concept.

Students apply leading innovative pedagogical technologies to create projects at primary school.

Students use innovative learning tools for formative assessment and project creation in primary school within the subject "I explore the world".

Professional skills and abilities

Students analyze, critically comprehend and logically substantiate the theoretical and video material (concerning the conceptualization of geocultural scientific literacy).

Students use innovative pedagogical technologies in primary school for designing projects or fragments of lessons.

Students create new educational content with innovative teaching/learning tools based on English-language educational electronic resources for primary school students.

Communication

Students communicate (orally and in written form) in English in the field of professional interests; independently carry out designing of English language behaviour in pedagogical situations.

Students apply various forms (monologue speech, group discussion, etc.) and methods (oral, written, non-verbal) of communication for the implementation of innovative pedagogical technologies and the latest teaching/learning tools in the educational process in primary school.

Autonomy and responsibility

Students design fragments of lessons using the innovative pedagogical technologies and tools in organizing the educational process in primary school.

Students independently apply the latest pedagogical technologies and tools of teaching at the interdisciplinary level in primary school, to construct a teaching/learning educational environment.

Students argue, defend their own decisions, self-develop and improve geocultural scientific literacy.

1.13. Control of academic achievements of students .

Means for diagnosing learning outcomes

Oral evaluation of theoretical concepts.

Creative work:

construction of a conceptual mind map,

developing of the model of geocultural scientific literacy,

creation and piloting in mini-groups of developed thematic testing of primary school students using the tool Kahoot for formative assessment;

multimedia presentation of the developed fragment of any lesson for primary school students based on the chosen innovative pedagogical technology;

multimedia presentation of the online service Kahoot and justification of its use in primary school for formative assessment of the students' results in different subjects;

project as a developed piece of educational content – game-cards “Guess Who?”, as the integration of STEAM - topics in the primary school;

creation of the video educational content: development of a fragment of a lesson in the subject "I Explore the World" with the help of the platform - Flipgrid;

Written work (essay-reflections, digests, glossary based on theoretical material of the course (tag cloud with Mentimeter), testing, module tests);

Independent work;

Exam.

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2. CONTENT AND STRUCTURE OF THE COURSE

2.1. MODULE 1

GEOCULTURAL SCIENTIFIC LITERACY AND INNOVATIVE PEDAGOGICAL TECHNOLOGIES IN THE 21ST CENTURY

2.1.1. Theme 1

Definition and conceptualization of geocultural scientific literacy: main goal, tasks and expectations

2.1.2. Aims and expected learning outcomes.

Aims – to familiarize the students with a new concept – geocultural scientific literacy, exercise their listening and speaking comprehension skills on the topic.

Expected learning outcomes – 1) clearly define and argue the concept of geocultural scientific literacy; 2) analyze, critically comprehend and logically substantiate the theoretical and video material; 3) use Concept Map for creating the Model of GCSL; 4) create (together) Cloud of tags defining key terminology of Theme 1.

2.1.3. Criteria and forms for evaluating learning outcomes on the theme.

Table 1. Criteria for oral answer (formative assesment).

Criteria	Scoring Criteria	Total points 1 - 5	Student's points (1-5)
Relevance and thoroughness of the theoretical material (content development)	Logical sequence of presented information, accuracy and relevance of data	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Practical skills of using digital tools (Concept Map, Mentimeter) or other ICT.	Usage of digital tools is attention-getting, well selected	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Creative abilities in presenting English-language authentic material	Manner of the oral presentation, contact with the audience, good English language skills, visual aids, conclusions	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Communication skills with the other students and the teacher Reflection skills	The presenter involves and reaches the audience, felt feedback	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Score	Total points	20 (high level/excellent)	

Table 2. Criteria for the Model of Geocultural Scientific Literacy

Criteria	Scoring Criteria	Total points (1-5)	Student's points (1-5)
Organization of the answer presenting the Model	Logical sequence of presented information	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Content of the presented information	All structural elements of the Model are presented logically and thoroughly explained	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Creativity of the presentation	Manner of the presentation, contact with the audience, good English language skills, visual aids, correct use of Concept Map, conclusions	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Score	Total points	15 (high level/excellent)	

2.1.4. Digital tools.

Multimedia presentation

Concept Map (initial and final) – for designing the Model of geocultural scientific literacy

Mentimeter - Cloud of tags – for defining key terminology dealing with the topic of the lecture(practical)

Youtube video fragments – for making the students concentrated on the topic

2.1.5. Innovative Teaching / Learning Technologies.

Flipped learning

Interactive technologies

Problem-oriented learning

Online learning

Network and media technologies

Use of opportunities of the ICR - Presentation Space will be used for delivering the lecture material, watching videos; IT Space for creating the Model of GCSL and Mobile Learning Space - for creating the Cloud of tags on the topic.

2.1.6. Lecture.

Definition and conceptualization of geocultural scientific literacy: main goal, tasks and expectations

Lecture 1 presents theoretical material on a new concept – geocultural scientific literacy where students take opportunity to express own or collaborative ideas on the topic. The lector presents different approaches to define GCSL and promotes students to explain its relevance for a future primary school teacher.

Purpose - define and conceptualize Geocultural Scientific Literacy as an academic course, single out objectives and expectations.

Plan

- Literacy: variety of scientific meaning and interpretations, relevance of the research topic;
- Scientific Literacy and Geocultural scientific literacy: various components and understanding of the notion
- Reflections on literacy in its versatility

The main results of the lecture meet the above-stated goals

2.1.7. Seminar / practical / laboratory classes 1-2.

Definition and conceptualization of geocultural scientific literacy: main goal, tasks and expectations

Practical classes 1-2 are oriented at making the students aware of the meaning of the notion of geocultural scientific literacy, enrolling them in team work and improving their listening and speaking skills of English, using new key notions.

Expected students' activities: presenting personal or team understanding of the concept of Geocultural scientific literacy; using Concept Map (initial and final) for creating the Model of GCSL; practicing digital tool Mentimeter for creating the Cloud of tags defining key terminology on the theme and other educational purposes

Instructions for students: learn criteria for assessment of learning outcomes, practice the tool Concept map, train to use a digital tool Mentimeter, arrange a brief glossary for the theme, analyze the key terminology mentioned in the Cloud of tags with Mentimeter.

2.1.8. Topics for individual and / or group tasks (if any).

Oral justification of theoretical concepts, learning to design a mind map (using Concept Map).

Development of the Model of Geocultural scientific literacy.

Get acquainted with a digital tool Mentimeter and its types of presentations.

Preparation of thematic glossary in English (Mentimeter – Cloud of tags) .

2.1.9. Tasks for independent work.

Define and conceptualize the concept of geocultural scientific literacy.

Argue, and logically structure the key terminology on the topic for the design of the thematic glossary in English (Mentimeter – Cloud of tags).

Generate own ideas for the development of the model of Geocultural scientific literacy with the help of technology of concept mapping.

Select and be ready to present English-language video material for the topic

Table 3. Criteria for students' independent work

Criteria	Scoring Criteria	Total points 1 - 5	Student's points (1-5)
Relevance and thoroughness of the theoretical material presentation (content development)	Logical sequence of presented information, accuracy and relevance of data	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Practical skills of using digital tools	Usage of digital tools is attention-getting, properly selected	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Creative skills in presenting English-language domestic and authentic material	Manner of the presentation, contact with the audience, good English language skills, audio-visual aids	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Usage of Ukrainian and foreign sources (including printed and audio	Variety of sources used in independent work	Excellent - 5 Good - 4	

material, etc.)		Acceptable - 3 Unacceptable -2	
Score	Total points	20 (high level/excellent)	

2.1.10. Methodological materials and instructions (if any).

The abstract of the lecture, methodical instructions for preparation for the practical classes, methodical instructions for performing independent work, terminology dictionary on the topic are available at the link - <http://194.44.152.156/course/view.php?id=6>

2.1.11. Theme 2

New Ukrainian School and understanding the reflection of geocultural scientific literacy in its conception.

2.1.12. Aims and expected learning outcomes.

Aims – to present and collaboratively discuss with students the Concept of the New Ukrainian School (its main objectives and key competences to be formed in primary school children); prove the relevance of GCSL within the Concept; promote students' skills to analyze and evaluate the importance of using innovative pedagogical technologies in primary school.

Expected learning outcomes – 1) explain the relevance of GCSL within the Concept of the New Ukrainian School and examine the key competences; 2) argue the importance of using formative and summative assessment of learning outcomes at primary school (on the examples of Ukrainian, British and American sources); 3) write a paper work on the suggested topic.

2.1.13. Criteria and forms for evaluating learning outcomes on the theme (for oral See Table 1):

Table 4. Criteria for the written work.

Criteria	Scoring Criteria	Total points 1 - 5	Students points (1-5)
Introduction of the topic and its relevance,	Logical sequence of presented written information, accuracy and relevance of data in the main body	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Conclusions	attention-getting and well arranged	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Grammar and spelling	English language written skills	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Citations and sources used for the written	The presenter uses variety of sources and citations	Excellent - 5 Good - 4	

paper		Acceptable - 3 Unacceptable -2	
Score	Total points	20 (high level/excellent)	

2.1.14. Digital tools.

Ppt

Youtube video material (on formative assessment)

Mentimeter

2.1.15. Innovative Teaching / Learning Technologies.

Interactive technologies

Problem-oriented learning

Network or media technologies

Use of opportunities of the ICR - Presentation Space will be used for delivering the lecture material, watching videos; IT Space for working with PCs on creating multimedia presentations on the topic and Mobile Learning Space - for creating the Cloud of tags on the topic.

2.1.16. Lecture.

New Ukrainian school and understanding the reflection of geocultural scientific literacy in its conception.

Lecture 2 familiarizes the students with key objectives of the Concept of the New Ukrainian School, its main expectations and key competences to be formed in primary school children. The lector explains students the relevance of GCSL for a future primary school teacher and introduces major innovative pedagogical technologies in the teaching/learning process.

Purpose - explain relevance of the Concept of the New Ukrainian School to such a skill of a modern primary school teacher as GCSL; acquaint students with peculiarities of teaching generation Z and necessity of using innovative pedagogical technologies in the teaching process.

Plan

- Reflections on GCSL and its connection to the Concept of the New Ukrainian School
- Contemporary primary school children as compared to other generations and key competences to be formed
- Innovative pedagogical technologies in primary school (on the examples of Ukrainian, British and American sources)
- Necessity of using digital tools at school lessons

The main results of the lecture meet the above-stated goals

2.1.17. Seminar / practical / laboratory class 3.

New Ukrainian school and importance of geocultural scientific literacy skills for a new generation.

Practical class 3 is oriented at forming students' ability to argue key objectives of the Concept of the New Ukrainian School; identifying its main expectations and key competences to be formed in primary school children; enrolling students in team work and improving their all English language skills, using new key notions. Students find material and compare representatives of new generation Z and Alpha in Ukraine and English speaking countries (lifestyle, values, reasons for making achievements, etc.).

Expected students' activities: presenting personal or team understanding of New Ukrainian school objectives, its representatives as new generation Alpha taking into account geocultural peculiarities; using youtube videos for comparison between the generation in Ukraine and English speaking countries and necessity to change the direction in teaching process; project work on a suggested topic.

Instructions for students: learn criteria for assessment of learning outcomes, prepare information for the essay, watch and analyze the suggested or/and prepared video material on the problem raised, arrange a brief glossary on the theme.

2.1.18. Topics for individual and / or group tasks (if any).

Oral announcement of the key competences of the New Ukrainian school and the ability to theoretically justify their connection with the concept of Geocultural scientific literacy on the basis of analysis of video material.

Project work on the topic (ppt, oral-individual reflection or essay).

(For criteria of the oral answer see Table 1, written work see Table 4).

2.1.19. Tasks for independent work.

Identify and interpret the key statements of the New Ukrainian School (NUS) Concept

Analyze in what way geocultural scientific literacy is presented in the Concept of NUS.

Analyze video material on formative assessment and be ready to discuss.

Compare traditional model of evaluation of students' learning outcomes with formative and summative assessment.

Search for digital tool suitable for formative assessment in primary school, make the list and be ready to present on the following practical classes.

Select the material for writing a test work on the topic using various sources. (For criteria see Table 3).

2.1.20. Methodological materials and instructions (if any).

The abstract of the lecture, methodical instructions for preparation for the practical classes, methodical instructions for performing independent work, terminology dictionary on the topic are available at the link - <http://194.44.152.156/course/view.php?id=6>

2.1.21. Theme 3

Innovative pedagogical technologies in primary school

2.1.22. Aims and expected learning outcomes.

Aims – to acquaint students with innovative pedagogical technologies suitable for primary school teaching /learning process, summarize the material of Module 1.

Expected learning outcomes - students analyze the relevance of using innovative pedagogical technologies in primary school, compare main principles of different technologies; develop and present the example of the use of one innovative pedagogical technologies at a primary school lesson (“English”, “I Explore the World”); independently carry out designing of English language behaviour in pedagogical situations; Module test 1.

2.1.23. Criteria and forms for evaluating learning outcomes on the theme (for oral answer see Table 1):

Table 5. Criteria for creative work presentation.

Criteria	Scoring Criteria	Total points (1-5)	Student's
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			points (1-5)
Organization of the answer presenting the innovative pedagogical technology	Logical sequence of presented information	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Content of the presented information	Introduction is attention-getting, good lay out of the innovative pedagogical technology, accuracy and relevance of information according to the chosen lesson in primary school, demonstrating practical examples	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Creativity of the presentation	Manner of the presentation, contact with the audience, good English language skills, visual aids or / and use of ICT, conclusions	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Score	Total points	15 (high level/excellent)	

Table 6. Criteria for Module test 1.

Criteria	Scoring Criteria	Total points
Excellent	Answer is complete; factually correct, sufficient detail provided; answer focuses only on issues related to the question;	5
Good	Answer is brief with insufficient detail. Unrelated issues were introduced with minor errors in content	4
Acceptable	Answer is incomplete. Excessive discussion of unrelated issues and/or significant errors in content	3
Unacceptable	Weak organization with no answer to the question; none of the relevant details were included	2
Score	Total points	5 (high level/excellent) – 10%

2.1.24. Digital tools.

Ppt

Youtube

Mentimeter (for voting for the best introduction of the innovative technology)

Up to the students' choice

2.1.25. Innovative Teaching / Learning Technologies.

"Flipped learning", technology of "peer assessment", problem-oriented learning, project technology, inquiry based learning technology, interactive technologies, network and multimedia technologies, etc. (on the choice of students).

Use of opportunities of the ICR - Presentation Space will be used for delivering the theoretical material accompanied with multimedia presentation; Conference Space for presenting results of independent work on any innovative technology for the use in primary school and for writing Module test 1.

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2.1.26. Lecture.

None

2.1.27. Seminar / practical / laboratory classes 4-5.

Innovative pedagogical technologies in primary school

Practical classes 4-5 are oriented at forming students' ability to argue importance of using innovative pedagogical teaching technologies at primary school, main benefits for primary school children; enrolling them in creative work by presenting the most efficient innovative pedagogical teaching technologies for the lessons of "English" or/and "I Explore the World" for promoting geocultural scientific literacy of primary school children; summarizing the material of Module 1 in the written work.

Expected students' activities: announcing the list of well-known innovative pedagogical teaching technologies often used in Ukraine and English speaking countries, presenting one technology with examples of its using at a primary school lesson

Instructions for students: learn criteria for assessment of learning outcomes, arrange a glossary for the theme, prepare for Module test 1.

2.1.28. Topics for individual and / or group tasks (if any).

Individual presentation of the list of advanced innovative pedagogical teaching technologies that can be used in primary school.

Development and individual presentation at the practical class of one of innovative pedagogical technologies with examples of its use in primary school

(For criteria of the oral answer see Table 1, multimedia (creative work) presentation see Tables 5,7, 8; criteria for Module test work 1 see Table 6).

2.1.29. Tasks for independent work.

Report on innovative pedagogical teaching technologies: their essence and classification.

Select the material on the effective use of innovative pedagogical teaching technologies in primary school

(domestic and English language sources).

Define the basic principles and peculiarities of the use of the technology of "flipped learning", technology of "peer assessment", problem-oriented learning, project technology, inquiry based learning technology, interactive technologies, network and multimedia technologies, etc.

Revise the content of Module 1 for writing modular test work (for criteria see Table 6)

(For criteria see Table 3).

2.1.30. Methodological materials and instructions (if any).

The abstract of the lecture, methodical instructions for preparation for the practical classes, methodical instructions for performing independent work, terminology dictionary on the topic are available at the link - <http://194.44.152.156/course/view.php?id=6>

2.2 MODULE 2.

USE OF INNOVATIVE TEACHING/LEARNING TOOLS IN PRIMARY SCHOOL

2.2.1. Theme 1

Online service Kahoot as a partner collaboration tool: usage opportunities, guidelines for developing educational content

2.2.2. Aims and expected learning outcomes.

Aims – to acquaint students with online service Kahoot, its possibilities for using in primary school for promoting geocultural scientific literacy of children.

Expected learning outcomes – 1) apply online service Kahoot for formative assessment, collaboration and feedback at primary school; 2) create own Kahoot as the fragments of lessons for primary school students; develop a guideline for using Kahoot.

2.2.3. Criteria and forms for evaluating learning outcomes on the theme (for oral presentation see Table 1):

Table 7. Criteria for multimedia presentation:

Criteria	Scoring Criteria	Total points	Student's points
Organization of the oral answer	Logical sequence of presented information in ppt	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Content of the answer	Introduction is attention-getting, good lay out of the problem, accuracy and relevance of information according to the chosen lesson in primary school, demonstrating practical examples of using Kahoot tool	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Creativity of the multimedia presentation	Manner of the presentation, contact with the primary school audience, good English language skills, visual aids, use of ICT (video, audio, etc), conclusions	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Score	Total points	15 (high level/excellent)	

2.2.4. Digital tools.

Multimedia presentation
Youtube video (up to students' needs)
Online service Kahoot
Mentimeter

2.2.5. Innovative Teaching / Learning Technologies.

Online teaching/learning

Network and multimedia technologies (mobile teaching/learning)

Problem-oriented learning

Use of opportunities of the ICR - Presentation Space will be used for delivering the lecture material, watching videos; IT Space for practicing using Kahoot and getting feedback from the teacher and groupmates; Mobile Learning Space - for developing the guideline for using Kahoot; Conference Space for presenting results of creative work on the fragment of a lesson for primary school students.

2.2.6. Lecture.

Online service Kahoot and its pedagogical potential

Lecture 3 familiarizes the students with an interesting digital tool and online service Kahoot.

Purpose - explain benefits and advantages of using Kahoot at primary school lessons; train students in creating own Kahoots for making quizzes and surveys at a particular topic or fragment of the lesson

Plan

- Online service Kahoot – its advantages and benefits for using in primary school
- Guidelines for creating a quiz with Kahoot for primary school lessons
- Guidelines for creating a survey with Kahoot for primary school lessons
- Kahoot for formative assessment of primary school students' academic achievements

The main results of the lecture meet the above-stated goals

2.2.7. Seminar / practical / laboratory classes 6-7.

Online service Kahoot as a partner collaboration tool: usage opportunities, guidelines for developing educational content

Practical classes 6-7 are oriented at forming students' ability to use online service Kahoot at primary school for promoting geocultural scientific literacy of children; train students in creating a quiz (survey) with Kahoot for primary school lessons; enrolling them in creative work by presenting the fragments of primary school lessons; promoting online learning/teaching

Expected students' activities: expressing personal observations from using online service Kahoot, presenting the example of its using at a primary school lesson, practicing to work with Kahoot, designing guidelines for creating educational content (tests, quizzes, and discussions) for primary school students

Instructions for students: learn criteria for assessment of learning outcomes, create a piece of educational content for primary school with Kahoot, arrange a brief glossary for the theme.

2.2.8. Topics for individual and / or group tasks (if any).

Multimedia presentation of the Kahoot online service and justifying its use in primary school.

Developing practicing skills for creating educational content for primary school students.

Creation and piloting of the developed case-testing of primary school students' knowledge in a chosen subject ("English", "I Explore the World") using the Kahoot tool

(For criteria of the oral answer see Table 1, multimedia presentation see Table 7).

2.2.9. Tasks for independent work.

Analyze online service Kahoot - a partner collaboration tool.

Argue that online service Kahoot is a suitable tool for formative assessment of students' knowledge.

Demonstrate possibilities of using the Kahoot tool in primary school.

Design a guideline for creating educational content (tests, quizzes, and discussions) for primary school students using the Kahoot tool.

Create own Kahoot for primary school students

(For criteria see Table 3).

2.2.10. Methodological materials and instructions (if any).

The abstract of the lecture, methodical instructions for preparation for the practical classes, methodical instructions for performing independent work, terminology dictionary on the topic are available at the link - <http://194.44.152.156/course/view.php?id=6>

2.2.11. Theme 2

STEAM integration in the learning process by means of the game-cards “Guess Who?”: guidelines for developing educational content.

2.2.12. Aims and expected learning outcomes - to acquaint students with idea of the offline game-cards “Guess Who?” and mention their possibilities for promoting geocultural scientific literacy in primary school; develop the educational content creating the cards with English, American and Ukrainian scientists and their inventions.

Expected learning outcomes – 1) create 5 game-cards according to the scheme; apply offline game-cards “Guess Who?” at primary school lessons (“I Explore the World” or “English”) for analyzing geographical, scientific and cultural differences of the native land and the English-speaking countries (Great Britain and the USA); 2) demonstrate own game-cards “Guess Who?” as the fragments of a lesson for primary school students; 3) develop a guideline for using game-cards “Guess Who?”; 4) demonstrate geocultural scientific literacy in English-language communication and independently apply the innovative digital tools of teaching at the interdisciplinary level

2.2.13. Criteria and forms for evaluating learning outcomes on the theme (for oral presentation see Table 1)

Table 8. Criteria for multimedia presentation.

Criteria	Scoring Criteria	Total points	Student's points
Organization of the oral answer	Logical sequence of presented information in ppt	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Content of the answer	Introduction is attention-getting, good lay out of the problem, accuracy and relevance of information according to the chosen lesson in primary school, illustration of practical examples of using game-cards “Guess Who?”	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Creativity of the multimedia presentation	Manner of the presentation, contact with the primary school audience, good English language skills, visual aids, use of ICT (video, audio, etc), conclusions	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Score	Total points	15 (high level/excellent)	

2.2.14. Digital tools.

Multimedia presentation
Offline game-cards “Guess Who?”
Mentimeter

2.2.15. Innovative Teaching / Learning Technologies.

peer assessment
problem-oriented learning
inquiry based learning technology
interactive technologies
network and multimedia technologies

Use of opportunities of the ICR - Presentation Space will be used for delivering the lecture material, watching videos; IT Space for getting acquainted with game-cards “Guess Who?” and getting feedback from the teacher and groupmates; Mobile Learning Space - for developing the guideline for using game Steam Decks; Conference Space for presenting results of creative work on the fragment of a lesson for primary school students

2.2.16. Lecture.

STEAM integration in the learning process by means of the game-cards “Guess Who?”

Lecture 4 familiarizes and the students with an interesting offline teaching/learning game-cards “Guess Who?” for enrolling children in scientific environment; promotes using the game-cards in primary school teaching/learning process additionally analyzing geographical and cultural differences of the native land and the English-speaking countries (Great Britain and the USA)

Purpose - explain benefits and advantages of using game-cards “Guess Who?” at primary school lessons; train students in creating game-cards for explaining and checking a particular topic or a fragment of the lesson and promoting geocultural scientific literacy in English-language communication

Plan

- Game-cards “Guess Who?” – advantages and benefits for using it in primary school as STEAM integration in the learning process
- Guidelines for creating an offline game-cards “Guess Who?” for primary school lessons (“I Explore the World” or “English”)
- The main results of the lecture meet the above-stated goals

2.2.17. Seminar / practical / laboratory classes 8-9.

STEAM integration in the learning process by means of the game-cards “Guess Who?”: guidelines for developing educational content.

Practical classes 8-9 are oriented at forming students’ ability to use offline teaching/learning game-cards “Guess Who?” at primary school with the purpose of familiarizing junior students with geographical, scientific and cultural differences of scientific inventions in the native land and the English-speaking countries; train students in creating card games for primary school lessons; enrolling them in creative work by presenting the fragments of primary school lessons; promoting learning/teaching STEAM subjects.

Expected students’ activities: expressing personal observations from using game-cards “Guess Who?”, presenting the example of its using at a primary school lesson, practicing to work with

game-cards “Guess Who?” by promoting geocultural scientific literacy in English-language communication

Instructions for students: learn criteria for assessment of learning outcomes, create a piece of educational content for primary school, search for information on outstanding scientists and their discoveries and achievements in the field of STEAM, use this information for creating cards, arrange a brief glossary on the theme .

2.2.18. Topics for individual and / or group tasks (if any).

Benefits of work with the game-cards “Guess Who?” for the primary school students
Outstanding scientists and their discoveries and achievements in the field of STEAM (UK and the USA): the opportunity to present facts in primary school using game-cards “Guess Who?”.
Development and presentation of a piece of educational content - game-cards “Guess Who?”, as the integration of STEAM - topics in the primary school curriculum
(For criteria of the oral answer see Table 1, multimedia presentation see Tables 8).

2.2.19. Tasks for independent work.

Analyze the use of innovative teaching/learning tools at primary school: familiarizing yourself with the concept of the game-cards “Guess Who?”
Specify pedagogical possibilities of using the game-cards “Guess Who?” in primary school (in which subjects you can use this game).
Develop a relevant list of topics that can be worked out for students with game-cards “Guess Who?”
Design a methodology step by step instruction for creating the educational content for primary school students using game-cards “Guess Who?”
(For criteria see Table 3).

2.2.20. Methodological materials and instructions (if any).

The abstract of the lecture, methodical instructions for preparation for the practical classes, methodical instructions for performing independent work, terminology dictionary on the topic are available at the link - <http://194.44.152.156/course/view.php?id=6>

2.2.21. Theme 3

Flipgrid – educational platform for video conferencing in a virtual environment practicing innovative teaching approaches and supportive digital tools.

2.2.22. Aims and expected learning outcomes.

Aims – to raise the problem of Women in STEAM for group discussion (based on the material of the previous lecture/theme); acquaint students with the Flipgrid platform and introduce its teaching opportunities for integrating STEAM subjects in primary school; promote their geocultural scientific literacy by practicing students’ speaking skills through recorded videos on geocultural scientific knowledge, summarize the material of Module 2.

Expected learning outcomes – 1) apply Flipgrid– educational platform at primary school lessons (“I Explore the World”) for virtual video communication and collaboration between teacher and students; 2) Handbook «*Geocultural Scientific Literacy*»

create a fragment of a lesson for primary school students using video communication platform Flipgrid;
4) summing up information on Module 2.

2.2.23. Criteria and forms for evaluating learning outcomes on the theme (for oral presentation see Table 1).

Table 9. Criteria for Flipgrid Theme presentation:

Criteria	Scoring Criteria	Total points	Student's points
Organization of the oral answer	Logical sequence of presented information in the video messages	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Content of the answer	Introduction is attention-getting, good lay out of the topic, accuracy and relevance of information according to the chosen lesson in primary school, relevance of the applications used in the video messages	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Creativity of the Flipgrid Theme	Manner of the presentation, virtual contact with the primary school audience, good English language, visual aids (pictures, video, audio, etc), conclusions	Excellent - 5 Good - 4 Acceptable - 3 Unacceptable -2	
Score	Total points	15 (high level/excellent)	

Table 10. Criteria for Module test 2.

Criteria	Scoring Criteria	Total points
Excellent	Answer is complete; factually correct, sufficient detail provided; answer focuses only on issues related to the question;	5
Good	Answer is brief with insufficient detail. Unrelated issues were introduced with minor errors in content	4
Acceptable	Answer is incomplete. Excessive discussion of unrelated issues and/or significant errors in content	3
Unacceptable	Weak organization with no answer to the question; none of the relevant details were included	2
Score	Total points	5 (high level/excellent) – 10%

2.2.24. Digital tools.

Flipgrid educational platform for video communication
YouTube

2.2.25. Innovative Teaching / Learning Technologies.

inquiry based learning technology
interactive technologies
network and multimedia technologies
problem-oriented learning
peer assessment

Use of opportunities of the ICR - Presentation Space will be used for delivering the theoretical material, watching ppt; IT Space for getting acquainted with Flipgrid educational platform for video communication; Mobile Learning Space - for practicing video announcements and fragments of the lessons; Conference Space summarizing information on Module 2.

2.2.26. Lecture.

None

2.2.27. Seminar / practical / laboratory classes 10-11.

Flipgrid educational platform for video conferencing in a virtual environment

Practical classes 10-11 are oriented at forming students' ability to use online platform Flipgrid at primary school; train students in creating thematic videos with Flipgrid for primary school lessons "I Explore the World"; enrolling them in video communication online by presenting the fragments of primary school lessons; promoting online learning/teaching with Flipgrid at primary school; summarizing the material of Module 2.

Expected students' activities: expressing personal observations from using online platform Flipgrid, presenting the fragments of themes at the lesson "I Explore the World" at primary school, practicing to work with Flipgrid, designing thematic videos for primary school students

Instructions for students: learn criteria for assessment of learning outcomes; sign up at Flipgrid platform and share own creation with groupmates and a teacher; create a piece of educational content for primary school with Flipgrid, arrange a brief glossary for the theme, prepare for Module test 2.

2.2.28. Topics for individual and / or group tasks (if any).

Analysis of advantages and disadvantages of the Flipgrid Platform and its pedagogical opportunities for integrating STEAM subjects in primary school.

Creation educational content for primary school with Flipgrid as a fragment of a lesson for the subjects "I Explore the World" or /and "English".

(For criteria of the oral answer see Table 1, presentation see Table 9).

2.2.29. Tasks for independent work.

Explore additional information on famous Ukrainian and English or American scientists and their scientific achievements or inventions.

Find geocultural information about Ukraine, Great Britain and America (the USA) which can be integrated in the subjects "I Explore the World" or /and "English" with the help of video communication on Flipgrid platform.

Explain which STEAM topics can be handled effectively with students using the Flipgrid platform.

Revise the content of Module 2 for writing modular test work (for criteria see Table 10)

(For criteria see Table 3).

2.2.30. Methodological materials and instructions (if any).



The abstract of the lecture, methodical instructions for preparation for the practical classes, methodical instructions for performing independent work, terminology dictionary on the topic are available at the link - <http://194.44.152.156/course/view.php?id=6>

3. TASKS FOR SUMMATIVE ASSESSMENT

3.1.1. List of tasks for summative assessment:

Module 1

Creation of the Model of GCSL with Concept Map – 15 points

Writing a paper work on the suggested topic – 20 points

Development and presentation of the example of the use of one innovative pedagogical technologies at a primary school lesson (“English”, “I Explore the World”) – 15 points (15+20+15=50=10%)

Module test 1 – 10%

Module 2

Creation of one’s own Kahoot as the fragments of lessons for primary school students – 15 points

Creation of 5 game-cards “Guess Who?” as the fragment of a theme at the lesson (“I Explore the World”, “English”) for primary school students – 15 points

Creation a fragment of the lesson “I Explore the World” for primary school students using Flipgrid Video-conferencing platform – 15 points (15+15+20=50=10%)

Module test 2 – 10%

Students’ independent work - 20%

Exam - 40%

The evaluation system consists in the following activities, indicating the weight of each one for the final mark:

Module test 1 (10%) and Module test 2 (10%) for evaluating GC 2, CS 1.

Creative work preparation and presentation on Module 1 (10%) and Module 2 (10%) for evaluating GC 3, SC 2, SC 3.

Independent work preparation (20%) for evaluating GC 3, CS 3.

Evaluation of the GC1 is realised through working at all of the specific competences.

A final exam in which all generic competences are evaluated through specific competences (40%).

SA 1. Module 1 (Creative work: a model of geocultural scientific literacy with Concept Map, a written work on a suggested topic, presentation of the developed fragment of any lesson for primary school students based on the chosen innovative pedagogical technology) - 10%

SA 2. Test on Module 1 - 10%

SA 3. Module 2 (creation of Kahoot as the fragments of lessons for primary school students, create 3 game-cards “Guess Who?” as the fragment of a theme at the lesson (“I Explore the World”, “English”) for primary school students, create a fragment of the lesson “I Explore the World” for primary school students using Flipgrid Video-conferencing platform) - 10%

SA 4. Test on Module 2 - 10%

SA3. Students’ independent work - 20%

SA4. Exam - 40%

Total – 100 %

3.2. Test tasks (if available).

3.3. Additional creative tasks (if any).

3.4. The order of carrying out formative assessment (list of questions for formative assessment):

1. Definition and conceptualization of the concept of geocultural scientific literacy

2. 10 key competences of the New Ukrainian School and understanding of reflection of geocultural scholarly literacy in its conception.

3. Effectiveness of the use of innovative pedagogical teaching technologies in primary school.
4. Peculiarities of using innovative pedagogical technologies of "flipped learning", technology "peer assessment", problem-oriented learning, project technology, technology of building a mind map (card intelligence), interactive technology, network and multimedia technologies.
5. Analyze any technology as an example of a lesson fragment for primary school students (different from what was presented at the practical class).

6. The use of innovative learning tools at primary school: purpose, efficiency, challenges.
7. Online service Kahoot - a tool for partner interaction and formative assessment of knowledge of students.
9. Practical skills to use the Kahoot tool in primary school school (create Kahoot, different from what was presented at the practical class).
10. Methodology for creating educational content for primary school students using the Kahoot tool.
11. Possibilities of using the game-cards "Guess Who?" in primary school.
12. Methodology for creating educational content for primary school students using game-cards "Guess Who?"
13. Flipgrid Video-conferencing platform and introduce its teaching opportunities for studying STEAM subjects in primary school.
14. Methodology for creating educational content for primary school students using Flipgrid Video-conferencing platform
15. Describe (demonstrating practical examples) the use of Flipgrid Video-conferencing platform at the lesson of "I explore the world" or "English.
16. The problem of Girls in STEAM – Flipgrid Video-conferencing platform as the means of promoting STEAM learning at primary school.
17. Famous Ukrainian and English or American scientists and their scientific achievements or inventions.
18. Geocultural information about Ukraine, Great Britain and America (the USA) which can be integrated in the subjects "I Explore the World" or /and "English" with the help of video communication on Flipgrid platform.

4. LIST OF RECOMMENDED LITERATURE (INCLUDING ELECTRONIC RESOURCES)

Basic:

1. Близнюк Т.О. Geocultural scientific literacy: concept and methodological recommendations. Навчально-методичний посібник з Геокультурної наукової грамотності. Івано-Франківськ, Видавець Кушнір Г.М., 2019. 45 с.
2. Близнюк Т., Слюсарчук Т. Формування цифрової компетентності молодших школярів (на матеріалах уроків англійської мови). Навчально-методичний посібник.– Івано-Франківськ, Видавець Кушнір Г.М., 2019. – 90 с.
3. Закон України «Про вищу освіту» від 1 липня 2014 року № 1556-VII. [Електронний ресурс]. Режим доступу: <http://zakon3.rada.gov.ua/laws/show/1556-18>
4. Закон України «Про освіту» (Відомості Верховної Ради (ВВР), 2017, № 38-39, ст.380). – [Електронний ресурс]. – Режим доступу: <http://zakon5.rada.gov.ua/laws/show/2145-19>
5. Закон України «Про загальну середню освіту». – [Електронний ресурс]. – Режим доступу: <http://mon.gov.ua/activity/education/zagalna-serednya/normativno-pravova-baza1.html>
6. Концепція впровадження медіаосвіти в Україні (нова редакція). 21.04.2016. [Електронний ресурс]. Режим доступу: http://ms.detector.media/mediaprosvita/mediaosvita/kontseptsiya_vprovadzhennya_mediaosviti_v_ukraini_nova_redaktsiya/
7. Національна стратегія розвитку освіти в Україні на 2012–2021 роки. [Електронний ресурс] Режим доступу: http://www.meduniv.lviv.ua/files/info/nats_strategia.pdf
8. Нова українська школа. Концептуальні засади реформування середньої школи. [Електронний ресурс]. – Режим доступу: <http://mon.gov.ua/%D0%9D%D0%BE%D0%B2%D0%B8%D0%BD%D0%B8%202016/12/05/konceptsiya.pdf>
9. Нова українська школа: poradnik dla vchytelja / za zag. red. Бібік Н. М. К.: ТОВ «Видавничий дім «Плеяди», 2017. 206 с.
10. Стратегія розвитку інформаційного суспільства в Україні (від 15 травня 2013 р. № 386-р.). [Електронний ресурс]. Режим доступу: <http://zakon5.rada.gov.ua/laws/show/386-2013-%D1%80>
11. Цифрова адженда України – 2020. Концептуальні засади (проект). [Електронний ресурс]. Режим доступу: <https://ucci.org.ua/uploads/files/58e78ee3c3922.pdf>
12. Blyznyuk Tetyana. Defining and conceptualizing geocultural scientific literacy. Journal of Vasyl Stefanyk Precarpathian National University. Scientific edition. Series of Social and Human Sciences. – Vol.6, №1, 2019.- p. 43-49. Index Copernicus International.
13. Blyznyuk Tetyana. Educational innovations and technological advancement in English language teaching: training teachers for NUS. Scientific-pedagogical journal “Educational Horizons”. – 2019. – № 2 (23). – P. 19-21.
14. Cajkler, W. and Wood, P. (2016) Lesson Study and Pedagogic Literacy in Initial Teacher Education: Challenging Reductive Models, British Journal of Educational Studies, 64(4), 503-521. (in English)
15. Edwards, T. 2007. “Geocultural literacy, part 1”, *Multilingual*, volume 18, issue 90: 29-31. Available at: www.multilingual.com (in English)

16. Edwards, T. 2007. "Geocultural literacy, part 2", *Multilingual*, volume 18, issue 90: 29-31. Available at: <https://www.technical-communication.org/career-education/geocultural-literacy-part-2.html>
17. EFA Global Monitoring Report 2006: Literacy for Life by EFA Global Monitoring Report team at UNESCO:EFA Global Monitoring Report 2006: Literacy for Life. November 2006. Comparative Education Review 50(4):711-714
18. Hirsch, E. D. Jr. (2001). Cultural Literacy. Available at: www.projectcitizen405.com/Background/culliter.pdf (in English)
19. Polistina, K. (2009). Cultural literacy: Understanding and respect for the cultural aspects of sustainability. [www.greenbooks.co.uk/Book/108/The-Handbook-of-Sustainability.html]
20. Semikin M.O. Cross-cultural literacy of a modern teacher: a methodological aspect / M.O. Semikin // Scientific herald of Melitopol State Pedagogical University. Series: Pedagogy. - 2013. - No. 2. - P. 84-91. (in Ukrainian)
21. Using rubrics to assess student learning outcomes at the program level. Office of institutional research and assessment. July 2017. Available at: <https://oira.unc.edu/files/2017/07/Developing-and-Using-Rubrics.pdf>
22. Order of the Cabinet of Ministers of December 14, 2016 № 988-r "On approval of the Concept of implementation of the state policy in the field of reforming general secondary education" New Ukrainian school "for the period up to 2029"

Additional:

1. Дичківська І. М. Інноваційні педагогічні технології : посібник / І. М. Дичківська. – 2-ге вид., допов. – Київ : Академвидав, 2012. – 352 с.
2. Гуревич Р. С. Інноваційні освітні технології в навчальному процесі ВНЗ / Р. С. Гуревич // Зб.наук. пр. Сучасні інформаційні технології та інноваційні методики навчання у підготовці фахівців: методологія, теорія, досвід, проблеми. – Випуск 36. – Київ-Вінниця: ТОВ фірма «Планер», 2013. – С. 7-12.
3. Лист МОН від 27.06.2019 № 1/9-414 "Деякі питання щодо створення у 2019/2020 н.р. безпечного освітнього середовища, формування в дітей та учнівської молоді ціннісних життєвих навичок".
4. Лист ІМЗО від 22.08.2019 № 22.1/10-2876 "[Методичні рекомендації щодо розвитку STEM-освіти у закладах загальної середньої та позашкільної освіти у 2019/2020 навчальному році](#)"
5. Морзе Н., Василенко С., Гладун М. Шляхи підвищення мотивації викладачів університетів до розвитку їх цифрової компетентності. Open educational e-environment of modern University, № 5 (2018). Режим доступу: <http://openedu.kubg.edu.ua/journal/index.php/openedu/article/view/164#.XIEXqSgzblV>
6. Наказ МОН України від 20.04.2018 № 407 "Про затвердження типової освітньої програми закладів загальної середньої освіти I ступеня"
7. Олійник В. Інтерактивні технології у початковій школі / Валентина Олійник, Олена Сергієнко // Сучасна школа України. – 2013. – № 3(255). – С. 9–42.
8. Постанова КМУ від 21.02.2017 №87 "[Про затвердження Державного стандарту початкової освіти](#)" (застосовується з 1 вересня 2018 р. для учнів, які навчаються за програмами дванадцятирічної повної загальної середньої освіти).
9. Постанова Кабінету Міністрів України від 24.07.2019 № 688 "[Про внесення змін до Державного стандарту початкової освіти](#)".
10. Розпорядження Кабінету Міністрів України від 13.12.2017 №903-р "[Про затвердження плану заходів на 2017-2029 роки із запровадження Концепції реалізації державної політики у сфері реформування загальної середньої освіти «Нова українська школа»](#)".
11. Наказ Міністерства освіти і науки України від 23.03.2018 №283 "[Про затвердження Методичних рекомендацій щодо організації освітнього простору Нової української школи](#)".

12. Наказ МОН № 1272 від 08.10.2019 року [Про затвердження типових освітніх програм для 1-2 класів закладів загальної середньої освіти](#)
13. Наказ МОН № 1273 від 08.10.2019 року [Про затвердження типових освітніх програм для 3-4 класів закладів загальної середньої освіти](#)
14. Романюк І. Упровадження інноваційної освітньої діяльності у навчальному закладі / Ірина Романюк // Практика управління закладом освіти. – 2016. – № 2. – С. 23–33.
15. Andretta, S. (Ed). (2007). *Change and challenge: information literacy for the 21st century*. Adelaide: Auslib Press.
16. De Jong, T., Lazonder, A.W., Pedaste, M., & Zacharia, Z.C. (2018). Simulations, games and modelling tools for learning. In F. Fischer, C. E. Hmelo-Silver, S. R. Goldman & P. Reimann (Eds.) *International Handbook of the Learning Sciences*, Oxford: Routledge.
17. Monitoring of the Integration of Ukrainian Higher Education System into European Higher Education and Research Area: Analytical Report (Ed. T.V. Finikov, O. I. Sharov). Kyiv, 2014, 130 – 143. (in English)
18. Pahl, K. & Rowsell, J., (2012). *Literacy and education: The new literacy studies and teaching literacy* (2nd Ed.), US, SAGE Publications Ltd. [www.sagepub.com/upmdata/47591_Pahl_ve_Rowsell_chapter.pdf]

Other:

19. Методичні рекомендації для розроблення профілів ступеневих програм, включаючи програмні компетентності та програмні результати навчання / пер. з англ. Національного експерта з реформування вищої освіти Програми Еразмус +, д-ра техн. наук, проф. Ю.М. Рашкевича. Київ: ТОВ «Поліграф плюс», 2016, 80 с.
20. Fry H., Ketteridge S., Marshall S.. *A handbook for teaching and learning in higher education*// London: Kogan Page, 2000.
21. Luis Fernandes (2016). How to have an effective whole-school approach to digital tools in education? *School Education Gateway*. Available at: https://www.schooleducationgateway.eu/en/pub/viewpoints/experts/how_to_address_the_challenges.htm] (In English)
22. Martin, A. and Rader, H. (Eds.) (2003). *Information & IT literacy: enabling learning in the 21st century*. London: Facet Publishing.
23. Official Journal of the European Union (2006). Recommendation of the European Union and of the Council of 18 December 2006 on key competences for lifelong learning (2006/962/EC). Disponible (30/12/2006) en <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:394:0010:0018:en:PDF> (In English)
24. Papaevripidou M., Zacharia Z.C. *Using Teachers' Inquiry-oriented Curriculum Materials as a Means to Examine their Pedagogical Design Capacity and Pedagogical Content Knowledge for Inquiry-based Learning*, 2017.
25. Smuschenko I. A. Cross-cultural literacy as an integral component of foreign language education of students of economic profile / I.A. Smuschenko // *Scientific Notes of the National University of Ostroh Academy. Series: Philology.* - 2014. - V. 42. - P. 313-316. (in Ukrainian)
26. Spitzer, K. L., Eisenberg, M.B. and Lowe, C. A. (1998). *Information literacy: essential skills for the information age*. Syracuse, N.Y.: ERIC Clearinghouse on Information and Technology, Syracuse University. (ED 427 780). Retrieved 13 July 2003 from <http://ericit.org/toc/infoliteracytoc.shtml>

5. APPENDICES (IF NECESSARY)

5.1 Glossary

1. Accelerator-company or plan that helps new companies or organizations to grow quickly and become successful
2. Access to - the means or opportunity to approach or enter a place; obtain or retrieve (computer data or a file)
3. Acquisition – the process of getting something
4. Alumni - men and women who have completed their studies, esp. at a college or university
5. Application – 1) an official request for something, usually in writing; 2) a computer program that is designed for a particular purpose; 3) a way in which something can be used for a particular purpose
6. Acquire - o get or buy something
7. Attachment – 1) an extra piece of equipment that can be added to a machine; 2) computer file that is sent together with an email message
8. Assist in – help with something
9. Availability - the quality of being able to be used or obtained; the state of being otherwise unoccupied; freedom to do something
10. BYOD – bring your own device
11. Capability - the power or ability to do something; the extent of someone's or something's ability; a facility on a computer for performing a specified task
12. Capacity the maximum amount that something can contain or produce
13. Collaborate – to work with someone else for a special purpose
14. Community – the people living in one particular area or people who are considered as a unit because of their common interests, social group, or nationality
15. Competence – the ability to do something well
16. Competency – an important skill that is needed to do a job
17. Comprehension – the ability to understand completely and be familiar with a situation, facts, etc.
18. Concern – 1) to cause worry to someone; 2) to be important to someone or to involve someone directly
19. Core competences – a skill that is necessary to be able to do a particular activity or job
20. Creative - producing or using original and unusual ideas
21. Criterion (Criteria) – a standard by which you judge, decide about, or deal with something
22. Critical thinking – the process of thinking carefully about a subject or idea, without allowing feelings or opinions to affect you
23. Cross-cultural - involving two or more different countries or cultures
24. Culture - the way of life, especially the general customs and beliefs, of a particular group of people at a particular time
25. Databases - a structured set of data held in a computer, especially one that is accessible in various ways; organized collection of data, generally stored and accessed electronically
26. Digital - using or relating to digital signals and computer technology
27. Digital age – the present time, when most information is in a digital form, especially when compared to the time when computers were not used
28. Digital native – a person who is very familiar with digital technology, computers, etc. because they have grown up with them
29. Electronic resources are materials in digital format accessible electronically. Examples of e-resources are electronic journals (e-journal), electronic books (e-book) online databases in varied digital formats, Adobe Acrobat documents (. pdf), WebPages, etc
30. Environment – the conditions that you live or work in and the way that they influence how you feel or how effectively you can work
31. Handbook – a book that contains information and advice about a particular subject
32. Handle complex information – cope with difficult or complicated material

33. ICT – information communication technologies
34. Inquiry – the process of asking a question
35. Gateway - a device used to connect two different networks, especially a connection to the Internet; a changing learning environment
36. Learning outcomes – a result or effect of an action
37. Literacy – 1) the ability to read and write; 2) knowledge of a particular subject, or a particular type of knowledge
38. Media – the internet, newspapers, magazines, television, etc., considered as a group
39. Millennials – relating to a millennium or to the year 2000
40. Motivation - enthusiasm, need or reason for doing something
41. Multicultural – 1) including people who have many different customs and beliefs; 2) relating to a number of different cultures, esp. to the traditions of people of different religions and races
42. Multi-faceted phenomenon - something with many features or perspectives to consider
43. Multisided - having a lot of different features or characteristics
44. Network - collection of computers, servers, mainframes, network devices, peripherals, or other devices connected to one another to allow the sharing of data
45. Online survey – an online research method used for collecting data from a predefined group of respondents to gain information and insights into various topics of interest
46. Overburden - to make someone or something work too hard or carry, contain, or deal with too much
47. Plagiarism – is the representation of another author's language, thoughts, ideas, or expressions as one's own original work
48. Relevance – the degree to which something is related or useful to what is happening or being talked about
49. Scientific - relating to science, or using the organized methods of science
50. Skills – an ability to do an activity or job well, especially because you have practised it
51. Societal values – values, relating to or involving society
52. Soft skills - people's abilities to communicate with each other and work well together
53. Sophisticated – 1) having a good understanding of the way people behave and/or a good knowledge of culture and fashion; 2) intelligent or made in a complicated way and therefore able to do complicated tasks.
54. Space – the area around everything that exists, continuing in all directions
55. Special - relating to the position, area, and size of things
56. Tool - something that helps you to do a particular activity
57. Versatility – the quality of being versatile, able to change easily or to be used for different purposes