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USE OF THE GO-LAB CLOUD SERVICE FOR THE FORMATION OF RESEARCH COMPETENCE

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High-quality training of teachers in general and informatics in particular is a requirement of the modern information society. There is a growing need for the training of informatics teachers who are able to navigate well in the changing information space, be "on the wave" of educational and scientific innovations, are ready to creatively apply the acquired knowledge and skills in pedagogical activities, strive for professional and personal self-development and self-realization, have critical thinking skills, are prepared for the organization of cognitive research activities and cooperation, take an active research position.

Natural and man-made calamities, which have recently disturbed Ukraine, pose new challenges to modern education. That is why it is timely to train future informatics teachers who are able to independently conduct research and organize students' research activities, arouse their interest in research and encourage participation in research activities by their own example. This trend actualizes the modernization of approaches to the professional training of future informatics teachers, one of the goals of which is the formation of their research competence.

The analysis of modern research made it possible to find out that research competence in various aspects was considered in their works by modern domestic and foreign scientists, in particular O. Antonova, O. Babkova, O. Budnyk, O. Vashulenko, Yu. Volynets, S. Wongwanich, T. Timofeeva, D. Traiwicithkun, I. Tyagai, L. Udompong, O. Khomenko and others.

The standards of the New Ukrainian School [1] are based on the "Recommendations of the European Parliament and the Council of Europe on the formation of key competences of lifelong education", but will not be limited to them. Unlike the Recommendations, which define 8 groups of competences, NUS contains 10 key competences: communication in the state (and native, if different) languages; communication in foreign

languages; mathematical competence; basic competences in natural sciences and technologies; information and digital competence; the ability to learn throughout life; initiative and entrepreneurship; social and civic competence; awareness and self-expression in the field of culture; environmental literacy and healthy life. These competencies are interrelated, equally important, acquired during the study of various subjects at all stages of education and contain common skills, in particular:

- the ability to read and understand what is read;
- the ability to express an opinion;
- orally and in writing;
- critical thinking;
- the ability to logically justify a position;
- show initiative;
- to create;
- ability to solve problems, assess risks and make decisions;
- the ability to constructively manage emotions;
- apply emotional intelligence;
- the ability to cooperate in a team [2].

In order for the student of education to master the specified skills and be able to realize himself, a specialist is needed who possesses these competencies and will help in their acquisition. One of the main tasks of a teacher, in particular of informatics, is the formation of the research competence of the student, which will contribute to the mastery of key competences.

In the conditions of distance learning, it is cloud services that help in the formation of research competence. In particular, the Go-Lab platform.

The Go-Lab ecosystem is an educational platform for distance and blended learning of STEAM subjects [3], which today contains the largest collection of virtual / remote laboratories, more than a thousand exploratory learning environments (ILS), as well as educational programs and tools (Fig. 1).

The screenshot shows the top navigation bar of the Go-Lab website with links for 'Лабораторії', 'програми', 'Пробли', 'Авторство', 'Підтримка', 'Преміум', 'про', 'Новини', and a search icon. Below the navigation is a blue banner with the heading 'Екосистема спільного використання та створення' and an illustration of two students. The main content area features a yellow call-to-action bar: 'Вперше в Go-Lab? Відведіть нашу сторінку швидкого запуску, щоб дізнатися про платформу!'. Below this are four cards: 1. 'Лабораторія електричних ланцюгів' (Electrical Circuit Lab) with a circuit diagram and text: 'У лабораторії Electrical Circuit Lab студенти можуть створювати власні електричні схеми...'. 2. 'Gravity Force Labs' with an image of a red apple and text: 'Є дві подібні лабораторії, які ви можете побачити, якщо створите свій сайт'. 3. 'Rate Of Photosynthesis Lab (H5)' with a beaker and text: 'Ця лабораторна робота є скороченою версією H5 на основі Flash'. 4. 'Блокнот для гіпотез' (Hypothesis Scratchpad) with an 'IF THEN' diagram and text: 'Блокнот Hypothesis Scratchpad допомагає учням формувати гіпотези.' Each card is labeled 'ЛАБОРАТОРІЯ' or 'ДОДАТОК' at the bottom.

Fig. 1. The Go-Lab ecosystem

The educational platform provides for the use of its tools both directly in the classroom and in the conditions of distance (mixed) learning

The Go-Lab ecosystem enables various forms of digital communication – synchronous and asynchronous communication in virtual space when solving educational tasks.

Thus, the use of the Go-Lab cloud service helps to form research competence, which is a holistic, integrative quality of the individual and combines knowledge, abilities, skills, experience of the researcher, value attitudes and personal qualities and is manifested in the readiness and ability to carry out research activities through research training for the purpose of obtaining new knowledge through the application of methods of scientific knowledge, the use of a creative approach in goal setting, planning, decision-making, analysis and evaluation of the results of research activities. The use of cloud services helps to form research competence in the conditions of distance learning.

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2. Khomenko O. V. Research activities in Ukrainian language and literature classes as a means of forming key student competencies.

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**APPLICATION OF INFORMATION TECHNOLOGIES DURING
THE TRAINING OF SPECIALISTS FOR BODIES
OF THE NATIONAL POLICE OF UKRAINE**

**ЗАСТОСУВАННЯ ІНФОРМАЦІЙНИХ ТЕХНОЛОГІЙ
ПІД ЧАС ПІДГОТОВКИ ФАХІВЦІВ ДЛЯ ОРГАНІВ
НАЦІОНАЛЬНОЇ ПОЛІЦІЇ УКРАЇНИ**

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Наразі інформаційні технології набули поширення в усіх сферах людської діяльності. Виникла й стрімко розвивається потужна індустрія отримання, систематизації та поширення інформації. Кількість працівників в інформаційному секторі у більшості країн світу неухильно збільшується. Інформація набуває значення одного з найбільш затребуваних державних ресурсів.

Суттєві зміни відбуваються і в діяльності правоохоронних органів. Зокрема на основі інформаційних технологій упроваджуються потужні інформаційно-пошукові системи, удосконалюється система управління та інформаційно-аналітичного забезпечення Національної поліції, розробляються нові методи збирання й аналізу інформації, розширюються можливості спеціальних технічних засобів тощо. Водночас сучасними інформаційними технологіями оснащується й кримінальне середовище [1].