THE SCOPE OF THE RESEARCH CARRIED OUT ON THE PHENOBL APPROACH AND COGNITIVE SKILLS

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Annotation: *The following article provides information about scholars researching Phenomenon-based learning (PBL) in education and cognitive skills development. Several scholars have explored its effectiveness, theoretical underpinnings, and practical applications. It also presents a rubric for assessing higher-order cognitive competence.*

Keywords: *Phenomenon-based learning, cognitive skills, stem subjects, Engage, explore, discover technique, rubric for Higher-order cognitive skill assessment*

Pasi Sahlberg, Pasi Silander, Pasi Mattila, Leena Husu, Jari Lavonen, Tomi J. Lehtinen, Kirsi Tirri, Kari Smith, Eeva Kallio, Maria Mäkelä, Mika Kallio, Asta Raami, Kirsti Lonka, Surattana Adipat, Vasileios Symeonidis, Johanna F. Schwarz, Pirita Seitamaa-Hakkarainen, Nijole Ciuciulkiene, Ilona Tandzegolskiene-Bielaglove, , Torbjørn Eftestøl, Eşref Akkaş, Cevat Eker, Donna L. Fields and T.J. Kennedy, Makenzie A. Johnson, Hung Phi Nguyen, Gaia Mazzola are the foreign researchers that investigated educational effects and outcomes of the implementing the PhenoBL approach in educational settings.

Khusanova Kh. Kh was a local researcher whose focus was the development of productive language skills of higher-school pupils via the use of Phenomenon-based learning.

Russian scholars, such as Tatiana S. Makarova, Evgenia E. Matveeva, Maria A. Molchanova, and Elena A. Morozova, researched the use of phenomenon-based learning in teaching languages.

B. Ualikhanova, G. Ormanova, D. Berdaliyev, N. Mussakhan, and B. Anas researched the use of phenomenon-based learning in teaching STEM subjects.

Research into higher-order cognitive skills has been a prominent focus in education and psychology. Higher-order cognitive skills typically involve critical thinking, problem-solving, analysis, synthesis, and evaluation, which are key to developing students' ability to understand and apply knowledge beyond rote memorization.

Several researchers have significantly contributed to studying higher-order cognitive skills, including those from educational psychology, cognitive science, and pedagogy. Some of the key researchers in this area are:

Benjamin Bloom, Jean Piaget, Lev Vygotsky, Robert Sternberg, Anderson and Krathwohl, David Perkins, John Hattie, Roger Schank, Howard Gardner, Diana Laurillard whose research works have significantly shaped contemporary understanding of higher-order cognitive skills in education and psychology through their diverse approaches, blending theory with practical applications and also provided valuable insights into how to foster higher-order cognitive skills in learners across various educational contexts. They have influenced both theoretical understandings of cognitive development and practical approaches to teaching and learning.

In Uzbekistan, several researchers have made contributions to the study of cognitive skills, particularly in the fields of psychology, education, and cognitive development.

L. R. Zaripov, G.A. Amanova, D. Y. Xudoyberganov, J.A. Mardonkulov, A.A. J.S. Otepbergenov, K. Kudratov, contributed to the understanding of cognitive skills within the specific cultural and educational context of Uzbekistan**.**

The analysis of national and foreign researchers' work has shown that no attempts have been made to research the development of higher-order cognitive competencies through the usage of a Phenomenon-based learning approach, more specifically with second-course students specialized in the English language.

The research aims to formulate a methodology for developing English

learners' higher-order cognitive competencies by implementing a phenomenon-based learning approach.

The tasks of the research:

The development of the methodology to enhance the higher-order cognitive competencies of language learners through the usage of a Phenomenon-based learning approach based on Engage, explore, discover technique (EED)

The development of phases as a practical implementation of the methodology for developing higher-order cognitive competencies in English language learners by implementing the phenomenon-based learning approach;

the development of educational-experiential journals as a practical realization of methodology enhancing the development of higher-order cognitive competencies through the usage of a Phenomenon-based learning approach;

the development of a system of practical tasks and exercises to form higher-order cognitive competencies by implementing the phenomenon-based learning approach for 2nd-course students learning the English language;

conducting a comparative analysis of the traditional learning approach and phenomenon-based learning approaches in English language learning in terms of the topic under study;

Rubric- **Higher-Order Cognitive Competency Assessment Rubric**

Taking into account national characteristics and based on the principles of consistency, communication, situationality, and consciousness, the journal of "HOCC" (Higher-order cognitive competencies)" has been developed aimed at developing higher-order cognitive competencies such as analytical in which a learner can analyze, appraise, calculate, categorize, compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, question, and test. Evaluative skills empower learners to articulate and defend their judgments through the use of supporting data. This process involves assessing the value of various ideas and objects, making well-informed decisions, and expressing viewpoints grounded in an understanding of values. A central question within this dimension is: Can the student effectively justify their position or decision?

The objectives related to evaluative skills encompass the ability to appraise, argue, assess, choose, compare, defend, estimate, judge, predict, rate, select, support, value, and evaluate.

Furthermore, creativity skills are integral to this process as well. Creating involves the ability to synthesize information in innovative ways by combining facts or elements into a new structure or presenting alternative solutions. This process demands creativity and originality to produce a distinct product. It requires the student to piece together a cohesive whole from various components. A key consideration is whether the student can generate a new product or perspective.

The objectives associated with this skill include arranging, assembling, collecting, composing, constructing, designing, developing, formulating, managing, organizing, planning, preparing, proposing, setting up, and writing.

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