

ВІДОМОСТІ ПРО АВТОРА

САВЧЕНКО Віталій Вікторович – старший викладач кафедри технологічної освіти Уманського державного педагогічного університету імені Павла Тичини.

Наукові інтереси: розвиток математичної компетентності учнів базової школи в процесі вивчення технології обробки деревини на уроках трудового навчання.

INFORMATION ABOUT THE AUTHOR

SAVCHENKO Vitaliy Victorovich – Senior Lecturer at Technology Education Department Pavlo Tychyna Uman State Pedagogical University.

Scientific interests: development of mathematical competence of basic school students in the process of studying wood processing technology in labor training lessons.

Стаття надійшла до редакції 08.02.2025 р.

УДК 372.881.1

DOI: 10.36550/2415-7988-2025-1-217-233-238

СТЕЦЬКО Ірина Іванівна –

кандидат педагогічних наук, кафедра іноземних мов та інформаційно-комунікаційних технологій ЗУНУ

ORCID: <https://orcid.org/0000-0001-5093-9516>

e-mail: irenas7217@gmail.com

НИЧКО Оксана Яромирівна –

кандидат філологічних наук, кафедра іноземних мов та інформаційно-комунікаційних технологій ЗУНУ

ORCID: <https://orcid.org/0000-0002-9650-606X>

e-mail: oksananychko@gmail.com

ШИЛІНСЬКА Інна Феодосівна –

кандидат педагогічних наук, кафедра іноземних мов та інформаційно-комунікаційних технологій ЗУНУ

ORCID: <https://orcid.org/0000-0002-0700-793X>

e-mail: inna.shylynska2012@gmail.com

**ВИКОРИСТАННЯ МОДЕЛІ ІНВЕРСИВНОГО НАВЧАННЯ НА ЗАНЯТТЯХ
З ІНОЗЕМНОЇ МОВИ ДЛЯ СТУДЕНТІВ-ПЕРЕКЛАДАЧІВ**

У даному дослідженні розглядається концепція перевернутого навчання, її впровадження та вплив на викладання та навчання, зокрема на заняттях з англійської мови для студентів-перекладачів. Спираючись на нещодавні дослідження, стаття підкреслює переваги перевернутих класів, зокрема покращену мотивацію студентів, кращі результати екзаменаційних тестів та підвищення задоволеності результатами викладачів. Дослідження показують, що модель інверсивного навчання сприяє розвитку критичного мислення, комунікативних навичок завдяки інтеграції новітніх технологій та інтерактивних методологій. Стаття акцентує роль реверсивного навчання у сприянні самостійності, зміцненні базових знань і підтримці різноманітних потреб студентів. Автори простежили, що хоча цей метод не замінює традиційне навчання, він пропонує гібридний підхід, який максимізує взаємодію в аудиторії. Навчальні техніки свідчать про те, що при ефективному застосуванні реверсивний метод покращує результати та ефективність навчання студентів, трансформує його у життєздатну модель сучасної освіти. У науковій розвідці виявлено також інтеграцію підходу перевернутого класу у викладанні навчальної теми про ідентичності та особистості, наголошено на студентоцентрованому навчанні, критичному мисленні та цифровій взаємодії, використанні часових та лексичних конструкцій у дискусіях та рефлексивних вправах. Розробка заняття включає численні активності, а саме: рольові ігри, групові презентації та позакласні завдання, для поглиблення розуміння студентами теми що вивчається через інтерсекційність, саморефлексію та критичний аналіз. Авторами зазначено, що етап підведення підсумків у зворотному навчанні сприяє самооцінці та постановці цілей, покращує здатність студентів синтезувати концепції та застосовувати їх у контексті реального життя. Структура заняття передбачає інтерактивні обговорення, рольові ігри та рефлексивні вправи, щоб допомогти студентам проаналізувати ідентичність крізь призму взаємозв'язку, включаючи такі ключові фактори теми заняття, як стать, раса та соціально-економічний статус. Студенти знайомляться, обговорюють та опановують ключові граматичні та лексичні структури, одночасно поглиблюючи своє розуміння ідентичності та теорії особистості. Цей підхід сприяє автономії, креативності та командній роботі, одночасно покращуючи лінгвістичні та аналітичні навички. Дослідження підкреслюють ефективність змішаного навчання в освіті іноземних мов, сприяючи активній участі та самостійному навчанню, сприяючи незалежному мисленню, командній роботі та лідерським навичкам. Основна увага приділяється рефлексивному навчанню, коли студенти аналізують своє самосприйняття, що розвивається, за допомогою вказівок з боку викладача і зворотного зв'язку учасників навчального процесу. Крім того, роль викладача перетворюється з інструктора на фасилітатора, який спонукає студентів до навігації цифровими інструментами, дослідницькими методологіями та аналітичними завданнями. Інноваційна навчальна техніка підкреслює перехід від пасивного навчання до активного підходу, керується студентами, отримання знань яких стає більш персоналізованим і ефективним.

Ключові слова: перевернуте навчання, змішане навчання, навчання перед заняттями, активне навчання, критичне мислення, спільне навчання, відеолекції, навчання у власному темпі, взаємонавчання (навчання у співпраці з однолітками), обговорення у класі, студентоцентричний підхід.

STETSKO Iryna Ivanivna –

Ph. D. in Pedagogy, Candidate of Pedagogical Sciences, Associate Professor at the Department of Foreign Languages and Information and Communication Technologies in

West Ukrainian National University

ORCID: <https://orcid.org/0000-0001-5093-9516>

e-mail: irenas7217@gmail.com

NYCHKO Oksana Yaromyrivna –

Ph.D. in Philology, Candidate of Philological Sciences, Associate Professor at the Department of Foreign Languages and Information and Communication Technologies in West Ukrainian National University
ORCID: <https://orcid.org/0000-0002-9650-606X>
e-mail: oksananychko@gmail.com

SHYLINSKA Inna Feodosivna –

Ph.D. in Pedagogy, Candidate of Pedagogical Sciences, Associate Professor at the Department of Foreign Languages and Information and Communication Technologies in West Ukrainian National University
ORCID: <https://orcid.org/0000-0002-0700-793X>
e-mail: inna.shylinska2012@gmail.com

FLIPPED LEARNING TECHNOLOGY APPLICATION IN FOREIGN LANGUAGE CLASSES FOR STUDENTS-TRANSLATORS

This study examines the concept of flipped learning, its implementation, and its impact on teaching and learning, particularly in English language classrooms for students-translators. Drawing from recent research, the paper highlights the advantages of flipped classrooms, including enhanced student motivation, improved test scores, and increased teacher satisfaction. Studies suggest that the FC model fosters critical thinking, communication skills, and personalized learning through the integration of technology and interactive methodologies. The research further explores the role of reversed learning in fostering self-directed learning, reinforcing foundational knowledge, and supporting diverse student needs. While the method is not a replacement for traditional instruction, it offers a hybrid approach that maximizes classroom interaction and engagement. Findings suggest that when implemented effectively, the flipped classroom enhances both student learning outcomes and instructional efficiency, making it a viable model for modern education. The study as well explores the integration of the inverted classroom approach in teaching identities and personalities emphasizing self-directed learning, critical thinking, and digital engagement, use of target tenses and lexical units in discussions and reflective exercises. The lesson design incorporates pre-class activities, in-class role-playing, group presentations, and post-class assignments to deepen students' understanding of identity through intersectionality, self-reflection, and critical analysis. The debriefing stage in reversed learning fosters self-assessment and goal-setting, enhancing students' ability to synthesize concepts and apply them to real-life contexts. The lesson structure involves interactive discussions, role-playing, and reflective exercises to help students analyze identity through the lens of intersectionality, including factors such as gender, race, and socio-economic status. Students engage in pre-class readings and discussions, in-class collaborative activities, and post-class follow-ups, reinforcing key grammatical and lexical structures while deepening their understanding of identity and personality theories. The approach cultivates autonomy, creativity, and teamwork while enhancing linguistic and analytical skills. The research underscores the effectiveness of blended learning in foreign language education, promoting active engagement and self-directed learning, fostering independent thinking, teamwork, and leadership skills. A key focus is on reflective learning, where students analyze their evolving self-perception through guided prompts and peer feedback. Additionally, the role of the teacher evolves from an instructor to a facilitator, guiding students in navigating digital tools, research methodologies and analytical tasks. It emphasizes the shift from passive learning to an active one, student-driven approach, where knowledge acquisition becomes more personalized and effective.

Key words: *flipped/inverted/reversed learning, blended learning, pre-class learning, active learning, critical thinking, collaborative learning, video lectures, self-paced learning, peer instruction, classroom discussion, student-centered approach.*

Statement of the problem. In recent years, the education system has shifted from a teacher-focused, behavioral approach to a more student-centered model, where students actively engage in the learning process. The primary goal of this shift is for students to independently seek and acquire knowledge, rather than simply receiving information directly from the teacher.

Analysis of the latest research and publications. Flipped classroom learning has garnered significant attention in educational research, leading to numerous studies that explore its implementation and effectiveness. R. Musallam's research works involve students learning foundational knowledge of a lesson at home, with in-class time used to deepen understanding, apply concepts, and develop critical thinking skills [15]. Recent Horizon reports recognize flipped classrooms as significant advancements in educational technology. They emphasized the evolving role of educators and highlighted that academics may be expected to adopt various teaching models, including flipped classrooms [8]. Al-Samarraie, Han argues that in the flipped teaching method the instructor provides various learning resources, such as guided readings, lecture videos, slides, and practice problems, to help students learn the material independently [19]. I. Kostka and H. Marshall state that one key objective

of flipped learning is to foster communication among students in active learning and meaning negotiation [10]. M. Weurlander, M. Cronhjort, and L. Filipsson demonstrate that students can apply their learning in unique and innovative ways and highlight that this type of interactive learning encourages students to work actively on their own, with peers, and with their teachers throughout the course [23]. K. Fulton examines how flipped learning supports collaboration by maximizing the use of class time for interaction and application [6]. B. Rehder B, T. Nelson, T. Gureckis trace the method as self-paced, self-directed, self-regulated learning, focusing on independent learning of foundational content [7], [16], [17].

Purpose of the research. The aim of this research is to analyze the concept of flipped learning, explore the use of FC model and its impact on teaching and learning in classrooms with students-translators. To achieve this aim, the following research objectives were defined to mention but a few: analysis of the points of view of different researches on the problem of flipped learning/teaching, examination of the benefits of flipped learning methods in education process and finally practical application of key flipped learning technology techniques into English language practice classes.

Presentation of the main content. Flipped teaching emerged as an instructional approach in 2004 to address the need for providing instruction to students unable to attend class for various reasons [15]. Initially, traditional in-class lessons were recorded and made accessible for students to view outside of class, while class time was dedicated to completing homework. Over time, this method has evolved into what is now called flipped teaching.

Flipped teaching is a distinctive approach that promotes a shift in classroom culture, aligning 21st-century learning styles with technology and collaborative academic practices. This synergy relies on two main factors: an instructor who implements the flipped teaching strategy effectively and competently, and students who are open to engaging with this method [21]. Over the past three decades, flipped classroom designs have been explored in various subjects, particularly in higher education. University courses typically require a high level of commitment from students, who are usually motivated adults, as they have often chosen their fields of study [14].

According to Kari M. Arfstrom, cofounder of the Flipped Learning Network, flipped learning is all about creating opportunities for active engagement. It's "a pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter". A 2014 survey by the Flipped Learning Network revealed that 78% of teachers had flipped at least one lesson, and 96% of those who tried it would recommend the approach to others. This suggests that flipped learning encourages educators to modernize traditional teaching methods and incorporate new technologies, such as video and screencasts, into their classrooms. The Flipped Learning Network also found that 67% of instructors observed improved student test scores after implementing the flipped model, while 80% reported increased student motivation [9].

According to K. Mattis the flipped classroom is not intended to replace traditional one-way, monologue-based education but rather to combine traditional time on task with interactive communication between the teacher and students, often including preparatory work before class. This approach aims to engage students both inside and outside of school, even during their free time. When students find the learning process challenging, there are typically two reasons: they either lack prior knowledge or preparation, or they need to collaborate and discuss the assignment with others in class. The researcher suggests that a lack of experience and knowledge is less significant than the time spent in class working with the teacher and peers, which is the key factor determining success or failure. She argues that flipped classrooms can benefit both classroom learning and educational outcomes [12].

A. Sahin, B. Cavlazoglu, and Z. Ynus argue that flipping the classroom impacts more than just student test scores. First, younger generations of students are more supportive of using technology in education compared to previous generations. Second, students view flipped classrooms not as additional time on task

but as an opportunity to do homework during class. Being well-prepared benefits both students and teachers, as teachers receive affirmation when students are ready for class. Third, when students are given an easy way to prepare, their understanding of the subject can become both broader and deeper, enabling them to tackle more challenging tasks with greater ease [18].

M. Segolsson, A. Hirsh, and J. Bäcklund conducted a qualitative study on flipped classrooms in compulsory schools and found overwhelmingly positive results for most students. These benefits included improvements in their working methods and the development of skills that supported their teaching and learning in the classroom [20].

J. Bishop and A. Verleger reviewed research on flipped classrooms but found limited studies focusing on students' perspectives, particularly regarding their learning outcomes. While student perceptions of the flipped classroom were somewhat mixed, they were generally positive. Students tended to prefer in-person lectures over video lectures but favored interactive classroom activities over traditional lectures [2].

Classroom flipping can be divided into two main parts. First, the teacher prepares by deconstructing the material that needs to be learned [13]. In this phase, the teacher decides how students will prepare before the main class or lecture, focusing on how to incorporate relevant concepts and theory to motivate students to engage with the material. The second phase involves checking that students have completed the preparatory work, usually done independently at home without teachers or peer discussions. This shift from a monologic approach to one that fosters elaborative discussions and collaborative work among students is generally well-received [3, p. 8].

After-class work aligned with course objectives can foster self-determination and boost intrinsic motivation. Instructors can enhance motivation by offering flexible learning opportunities, such as varying the timing of practice assignment deadlines or providing choices for practice activities. These assignments should help students see the relevance of what they are learning and give feedback on their progress towards achieving the course goals. Additionally, after-class work should offer feedback on students' strengths and areas for improvement, along with opportunities for further practice [1].

It is worth mentioning, that in the flipped classroom model, instructors may need to reconsider traditional approaches to learning assessment. A variety of formative and summative assessment methods can offer valuable feedback to both faculty and students. These assessments can occur during interactions between peers and instructors. Additionally, self-assessments embedded in pre-class online modules allow students to assess their understanding of the material before attending class. Active learning activities can provide real-time formative assessments, offering immediate feedback to faculty about any misconceptions or knowledge gaps. The flipped classroom aims to foster higher-order thinking in students, so graded assessments should offer opportunities for students to demonstrate the growth of these skills. Student assessment should align with

course objectives and core principles while providing feedback for both instructors and students [1].

Based on the relevance and significance of this issue, we consider it opportune to view the key aspects of using flipped learning technology in foreign language classes with students-translators. In our opinion, the use of flipped classroom techniques provides greater flexibility for both the student and the teacher in the process of learning the material. The individual pace of the flipped classroom technology, learning at one's own tempo, does not limit the student in time, using a learning tool – a gadget and an appropriate online platform to receive and complete tasks, thereby solving the problem of time shortage and contributing to personal self-education. Successful learning of new material becomes much more flexible, students' motivation increases, as they get the opportunity to familiarize themselves with new educational material at home, independently, finding answers to specific questions in textbooks, manuals, and Internet resources. Students learn to analyze educational information, structuring and correcting it for further practical use.

In the article, we would like to suggest flipping the English language class on the topic "Human Identity. Description of Identity" ("Identities") for 2nd-year students of the specialty "Business Communications and Translation" based on the textbook "High Note", which covers 10 topics for oral and written communication. We expect, that a flipped classroom approach will provide greater flexibility and make the learning process more engaging for both students and teachers. The materials of the above-mentioned manual are distinguished by the richness of the material presentation, the extensive number of classroom and extracurricular types of work, the presence of authentic texts and communicative tasks of an interactive nature, audio, video and Internet sources, which allows and encourages the implementation of various forms and methods of work on the same issues.

The initial stage of the inversion method, *motivational-reinforcing* involves a pre-recorded video material/video instruction for students to watch at home. It is important to select the video material in such a way that it highlights the relevant lexicogrammatical content and socio-cultural context. Namely, we will illustrate and actuate with students such lexical units as: *absent-minded, forward-looking, high-spirited, highly-strung, kind-hearted, laid-back, like-minded, narrow-minded, streetwise, strong-willed, thin-skinned, tight-fisted*; idiomatic expressions (including those used to describe identities) *get a kick out of, be not that into, be in line with, what makes us tick, click with, say a lot about us, be nuts about, plump for, set great store by a cold fish, a dark horse, a go-getter, a mover and shaker, a smart Alec, a smart cookie, a soft touch*; sociocultural aspect of personality development: *destiny, disposition, hereditary, imply moulded, nurture offspring, oversimplification, proponents, trait, vulnerability etc.*

Thus, the student receives high-quality electronic educational content: video, electronic educational resource/reference notes for studying new material at a convenient time. At this stage, the formation of competencies and comprehension of the acquired

experience through theory takes place. **Pre-Class Activities (Flipped Part): to be completed before the live class session.** **1. Reading Assignment:** Provide students with scholarly articles or chapters from advanced psychology and sociology texts. Example readings: "Erikson's Stages of Psychosocial Development", "The Big Five Personality Traits: Development, Measurement, and Theory". **2. Video Lecture:** Create or curate an in-depth video lecture (15-20 minutes) explaining advanced concepts such as identity formation, intersectionality, and various personality theories. Example video: "In-Depth Analysis of Identity and Personality Theories". **3. Flipped grammar part:** Videos/Readings: Share a video or article explaining perfect and perfect continuous tenses with examples related to personal traits and life experiences. Grammar Practice: Include short online quizzes or worksheets focusing on form and usage (e.g., "I have lived here for five years" vs. "I have been living here for five years"). **4. Critical Reflection Questions:** Students should answer complex reflection questions to demonstrate their understanding and prepare for class discussions. Example questions: How do Erikson's stages of development influence one's identity? Discuss the impact of culture on the formation of identity and personality. **5. Discussion Board:** Create an online forum where students can post their thoughts and respond to peers' reflections before the class. Encourage thoughtful, academic discourse. **6. Grammar reflection Prompts:** Ask students to think about their own identities and answer questions like: What have you achieved in your life so far that shapes who you are? What activities have you been doing lately that reflect your personality? The theoretical part of this educational material forms basic concepts of new information in students' minds and aims to support further knowledge acquisition on this topic.

The next stage is *evaluation process*, demonstration of experience that involves joint activities of the teacher and students, where the learning time in the classroom is used for group work. The function of the teacher changes into a translator, a consultant, a coordinator, who helps to apply the acquired knowledge in practice. The classroom turns into a studio in which students are no longer passive observers, but those who create, collaborate, implement in practice what they learned from lectures and studied outside the classroom. Knowledge is exchanged, a "discussion field" is created. Students will discuss the content of the previously viewed video lecture using the method of answering questions specifically posed by the teacher, using case-based role-playing technology in mini-groups, create a map of their identity with a layering of the features of individual socio-cultural aspects and subsequent intergroup discussion of the results of such cooperation, prepare presentations/independent research projects in mini-groups, and complete a written assignment. **In-Class Activities: Warm-Up Discussion (15 minutes):** Begin with a deep dive into the pre-class materials, fostering an engaging and critical discussion. Prompt: "How do the theories you read about apply to real-life scenarios or historical figures?" **Case Study Analysis (25 minutes):** Divide students into groups and assign each group a case study of a historical or contemporary

figure to analyze their identity and personality using the theories studied. Each group presents their analysis, followed by a class discussion. **Identity Mapping Exercise (20 minutes):** Students create a detailed identity map that incorporates multiple layers of their identity (e.g., cultural, social, personal, intersectional aspects). Share maps in small groups and discuss the influences on their identities. **Role-Playing Scenarios (25 minutes):** In pairs, students role-play complex scenarios that require deep understanding and navigation of different personality traits and identities. Example scenario: "An interaction between individuals with conflicting cultural identities and how they navigate this in a professional setting." **Personality Interviews (Pair Work).** Objective: Discuss identities and personalities using the target tenses. Instructions: Pair up students and provide interview prompts like: "What activities have you been enjoying lately?" , "What habits have you developed that reflect your personality?", "Have you ever done something that changed how you see yourself?", Students record responses and share highlights with the class. **Group Presentation: Identity and Intersectionality (30 minutes):** Each group presents an analysis of how identity is influenced by intersectionality, including gender, race, socio-economic status, and other factors. Groups should incorporate their findings from pre-class and in-class activities, supported by academic references. **6. Wrap-Up and Reflection (15 minutes):** Summarize the key points discussed during the lesson. Ask students to write a reflective essay on how their understanding of identity and personality has evolved through this course. Use prompts: "I have always valued...", "Recently, I have been trying to...", "One thing I have achieved that defines me is...". Peer feedback can follow, focusing on grammar and ideas. So, the student learns to connect diverse learning problems in discussions, debates, games, experiments. He learns at his own pace, develops innovative communication technologies and classroom partnership skills.

The final stage of the lesson - *debriefing* - summarizing the lesson. This is the stage at which the teacher usually asks to reflect on what aspects of the lesson were effective or ineffective, collects students' feedback and suggestions, and finally summarizes and encourages further independent and deeper study of the material. At the end of the lesson, students reflect on what they learned to help determine progress in achieving the set goal. This reflection allows students to better understand their strengths and weaknesses, and encourages them to set achievable learning goals for future practical lessons; it also helps the teacher understand whether the goals of the lesson are attained and whether the types of learning activities at all stages of the inversion method are effectively thought out. **Reflective Questions: Conceptual Understanding:** *What new insights did you gain about the nature of identity and personality from the pre-class materials? How do the various theories of identity and personality complement or contrast with each other?* **Application and Analysis:** *In what ways did the pre-class readings and videos enhance your understanding during the in-class activities? Provide an example from the role-*

playing scenarios that illustrated the application of a particular personality theory. **Personal Reflection:** *How has your understanding of your own identity and personality changed after this lesson? Reflect on the identity mapping exercise. Which elements of your identity did you find most significant?* **Critical Thinking:** *How do cultural and societal contexts influence the formation of identities and personalities? Use examples from the case studies discussed. Discuss the relevance of Erikson's stages of psychosocial development in contemporary society.* **Synthesis and Evaluation:** *How can the concepts learned in this lesson be applied to real-life scenarios in both personal and professional contexts? What potential biases did you identify in the personality theories studied, and how might these affect their applicability?* **Feedback and Improvement:** *What aspects of the flipped classroom approach did you find most effective for your learning? How could this lesson be improved to better facilitate understanding and engagement?*

Conclusions. The flipped educational technique is one of the models of blended/hybrid learning, as a result of globalization and digitalization of the world. This is a kind of educational art, an element of creative education, or rather a complete rethinking of conducting classes based on increasing one's own level of knowledge with mandatory educational warm-ups – training exercises. An important role is assigned to the teacher as a coordinator, mentor, facilitator, trainer, who collects materials, plans, motivates, monitors, moderates and instructs students, helps them master practical knowledge and actively participates in organizing the process of collective solution of educational problems. The use of this innovative teaching/learning technology in foreign language classes makes it possible to change the educational approach from passive to active perception of educational material, the assimilation of knowledge becomes personal and reproducible, reflective and creative, educational relationships grow into subject-subject, as wide opportunities open up for increasing interest in collective group/project work, thereby stimulating the acquisition of additional knowledge and its effective consolidation. Consequently, students turn into emotionally positive, more independent and free in learning, develop their ingenuity, leadership qualities, learn to work in a team, form self-esteem of their own knowledge gaining. We see further research in this field in the development of new educational communication tools, creating innovative learning resources, and refining teaching strategies to enhance task preparation and student motivation. We hope, that continuous improvements will support ongoing educational experiments and innovations.

REFERENCES

1. Adam, M Persky, Jacqueline, E McLaughlin. (2017). The Flipped Classroom – From Theory to Practice in Health Professional Education. *Am J Pharm Educ.* Aug;81(6), p.118. URL: [https://www.ajpe.org/article/S0002-9459\(23\)02421-X/fulltext](https://www.ajpe.org/article/S0002-9459(23)02421-X/fulltext).
2. Bishop, J. L., and A. M. Verleger. (2013). "The Flipped Classroom: A Survey of the Research." *ASEE national conference proceedings* 30. pp.1–18. URL: https://www.researchgate.net/publication/285935974_The_flipped_classroom_A_survey_of_the_research.

3. Brunzell, E., and M. Horejsi. (2013). "Flipping Your Classroom in One Take." *The Science Teacher* 80(3).p.8.

4. Edwards, L., Roberts, R. Highnote 5. (2020). *Student's book with Active Book*. Pearson Education Ltd., 322 p.

5. Framework for 21st Century Learning - The Partnership for 21st Century Skills. (2010). *The Partnership for 21st Century Skills*. URL: <http://www.p21.org/overview/skills-framework>.

6. Fulton, K. (2012). The flipped classroom: Transforming education at Byron High School. *T H E Journal*, 39(3), pp.18–20. URL: <http://search.ebscohost.com>.

7. Gureckis, TM, Markant, DB. (2012). Self-directed learning: a cognitive and computational perspective. *Persp Psychol Sci*. 7(5):464–481. URL: doi: 10.1177/1745691612454304.

8. Johnson, L.; Adams, Becker, S.; Estrada, V.; Freeman, A. (2015). *The NMC Horizon Report: Higher Education Edition*. URL: <https://files.eric.ed.gov/fulltext/ED559357.pdf>.

9. Kari, M. Arfstrom. What's the Difference Between a Flipped Classroom and Flipped Learning? URL: <https://edtechmagazine.com/k12/author/kari-m-arfstrom-phd/Extension-of-FLipped-Learning-Lit-Review-June-2014.pdf>.

10. Kostka, I., & Marshall, H. W. (2017). Flipped Learning in TESOL: Past, Present, and Future. In Perren, J., Kelch, K., Byun, J., Cervantes, S., & Safavi, S. (Eds.), *Applications of CALL Theory in ESL and EFL Environments*. Hershey, PA: IGI Global, pp. 223–243.

11. Love, B., A. Hodge, N. Grandgenett, and A. W. Swift. (2013). "Student learning and perceptions in a flipped linear algebra course." *International Journal of Mathematical Education in Science and Technology*, pp.317–324. Retrieved from: doi:10.1080/0020739X.2013.822582.

12. Mattis, K. V. (2015). Flipped classroom versus traditional textbook instruction: Assessing accuracy and mental effort at different levels of mathematical complexity. *Technology, Knowledge and Learning: Learning mathematics, science and the arts in the context of digital technologies*, 20(2), pp. 231–248. URL: <https://doi.org/10.1007/s10758-014-9238-0>.

13. Mazur. (2013). "The Flipped Classroom Will Redefine the Role of Educators." March 13. *The EvoLLution*. URL: https://evollution.com/revenue-streams/distance_online_learning/audio-flipped-classroom-redefine-role-educators-10-years.

14. McLean, S., S. M. Attardi, L. Faden, and M. Goldszmidt. (2016). "Flipped classrooms and student learning: Not just surface gains." *Advances in Physiology Education*". pp. 47–55. Retrieved from: doi:10.1152/advan.00098.2015.

15. Musallam, R. (2010). The effects of using screencasting as a multimedia pre-training tool to manage the intrinsic cognitive load of chemical equilibrium instruction for advanced high school chemistry students (Doctoral dissertation, The University of San Francisco). URL: http://www.flipteaching.com/assets/Dissertation_Musallam.pdf

16. Nelson, TO, Leonesio, RJ. (1988). Allocation of self-paced study time and the "labor-in-vain effect." *J Exp Psychol Learn Mem Cogn*. 14(4). pp. 676–686. URL: doi: 10.1037//0278-7393.14.4.676.

17. Rehder, B, Hoffman, AB. (2005). Eyetracking and selective attention in category learning. *Cogn Psychol*. 51(1). pp.1–41. URL: doi: 10.1016/j.cogpsych.2004.11.001.

18. Sahin, A., B. Cavlazoglu, and Z. E. Ynus. (2014). "Flipping a College Calculus Course: A Case Study." *Educational Technology and Society*. 18 (3). Pp. 142–153. URL: <https://eric.ed.gov/?id=EJ1070083>.

19. Samarraie, H, Shamsuddin, A, Alzahrani, AI. (2020). A flipped classroom model in higher education: a review of the evidence across disciplines. *Educ Tech Res Dev* 68, pp.1017–1051. URL: doi: 10.1007/s11423-019-09718-8.

20. Segolsson, M., Å. Hirsh, and J. Bäcklund. (2017). "The Flipped Classroom and Student Learning at Compulsory School in Sweden: A Longitudinal, Qualitative Study." *Journal of Education and Practice* 8 (18). pp. 77–86. URL: <https://www.iiste.org/Journals/index.php/JEP/article/view/37664>.

21. Strayer, J. F. (2007). The effects of the classroom flip on the learning environment: a comparison of learning activity in a traditional classroom and a flip classroom that used an intelligent tutoring system (Doctoral dissertation, The Ohio State University). URL: <http://etd.ohiolink.edu/sendpdf.cgi/Strayer%20Jeremy.pdf?osu1189523914&dl=y>.

22. Wang, J. Research on the Flipped Classroom + Learning Community Approach and Its Effectiveness Evaluation-Taking College German Teaching as a Case Study. URL: <https://www.mdpi.com/2071-1050/16/17/7719>.

23. M. Weurlander, M. Cronhjort, L. Filipsson. (2018). Improved engagement and learning in flipped-classroom calculus Teaching Mathematics and its Applications: An International Journal of the IMA, Volume 37, Issue 3, September. pp. 113–121. URL: <https://doi.org/10.1093/teamat/hrx007..>

ВІДОМОСТІ ПРО АВТОРІВ

СТЕЦЬКО Ірина Іванівна - кандидат педагогічних наук, кафедра іноземних мов та інформаційно-комунікаційних технологій ЗУНУ.

Наукові інтереси: інноваційні методи навчання іноземної мови у вищій школі, міжкультурна комунікація.

НИЧКО Оксана Яромірівна – кандидат філологічних наук, кафедра іноземних мов та інформаційно-комунікаційних технологій ЗУНУ.

Наукові інтереси: порівняльне літературознавство, літературознавча імагологія, перекладознавство, методика викладання іноземних мов.

ШИЛІНСЬКА Інна Феодосівна – кандидат педагогічних наук, кафедра іноземних мов та інформаційно-комунікаційних технологій ЗУНУ.

Наукові інтереси: формування компетентності інтерпретації і перекладу у студентів ІТ-спеціальностей; лексико-граматичні особливості перекладу науково-технічних текстів; лексико-семантичні особливості комп'ютерного дискурсу.

INFORMATION ABOUT THE AUTHORS

STETSKO Iryna Ivanivna – Ph. D. in Pedagogy, Candidate of Pedagogical Sciences, Associate Professor at the Department of Foreign Languages and Information and Communication Technologies in West Ukrainian National University.

Scientific interests: innovative methods of teaching a foreign language in higher education, intercultural communication.

NYCHKO Oksana Yaromyrivna – Ph.D. in Philology, Candidate of Philological Sciences, Associate Professor at the Department of Foreign Languages and Information and Communication Technologies in West Ukrainian National University.

Scientific interests: comparative literature, literary imagology, translation studies, methods of teaching foreign languages.

SHYLINSKA Inna Feodosivna – Ph.D. in Pedagogy, Candidate of Pedagogical Sciences, Associate Professor at the Department of Foreign Languages and Information and Communication Technologies in West Ukrainian National University.

Scientific interests: formation of interpretation and translation competence in students of IT specialties; lexical and grammatical peculiarities of translation of scientific and technical texts; lexical-semantic features of computer discourse.

Стаття надійшла до редакції 08.02.2025 р.