

## FLIPPED LEARNING AS AN INNOVATIVE APPROACH TO TEACHING ENGLISH IN HIGHER EDUCATION

### «ПЕРЕВЕРНУТЕ НАВЧАННЯ» ЯК ІННОВАЦІЙНИЙ ПІДХІД ДО ВИКЛАДАННЯ АНГЛІЙСЬКОЇ МОВИ У ЗАКЛАДАХ ВИЩОЇ ОСВІТИ

*The demand for the introduction of the latest technologies into the learning process necessitates the search for new methods and approaches to teaching that would increase the motivation and interest of learners, meet their needs, and help balance the time spent on the class instruction and time devoted to practical activities, which is a critical factor in language acquisition. Flipped learning (FL) offers exactly these advantages. The purpose of the article to analyze the key features and procedures for designing an effective English language flipped classroom in higher education and outline possible challenges for its implementation. For this purpose, several published studies showcasing flipped classes in ESL implemented in higher education institutions of Ukraine and the world were selected. The analysis of the stages and procedures of arranging flipped learning in English classes allowed us to identify elements that influence the success of the flipping experience (virtual and physical space, assessment tools, availability of relevant interactive tasks to apply the acquired knowledge). Research has demonstrated that the teacher's personality plays a pivotal role in arranging learning activities in the flipped classroom: incorporating FL requires on the part of the teacher deep understanding of the steps and procedures of defining the teaching objectives, designing the educational material, creating pre-class and in-class activities. The author emphasises the necessity to adhere to procedures in implementing the approach. It is recommended to flip certain topics, not the entire course. FL is proven to facilitate the organization of students' autonomous self-study, therefore it is possible to redesign the self-study so that it complies with the university's regulations and aligns with the FL approach. The possible problems with implementing FL include technical (connection, closure of platforms, expired links), financial, and personal-psychological factors (time management, motivation, etc.).*

**Key words:** *flipped learning, teaching approaches, higher education, ESP, motivation, self-study.*

*Впровадження новітніх технологій в навчальний процес зумовлює необхідність пошуку нових методів та підходів до навчання та викладання, які б сприяли*

*зростанню мотивації та інтересу здобувачів, відповідали їхнім потребам, сприяли збалансуванню часу на виклад матеріалу та часу присвяченого практичній діяльності, що є критично важливим фактором для опанування мови. Перевернуте навчання (ПН) пропонує саме такі переваги. Метою статті є проаналізувати ключові особливості та принципи побудови ефективного англійського перевернутого класу у вищих навчальних закладах та окреслити можливі виклики на шляху його впровадження. Для цього обрано декілька опублікованих досліджень з даної проблематики з кейсами впроваджених «перевернутих класів» з іноземної мови у вищих закладах України та світу. Дослідження етапів та методики організації ПН на заняттях іноземної мови дозволило виділити важливі елементи, що впливають на успішність досвіду з «перевертанням» навчання (організація доступного віртуального та фізичного простору, інструменти для оцінювання кожного етапу роботи, наявність релевантних інтерактивних завдань для актуалізації вивченого матеріалу тощо). Виявлено, що особистість викладача відіграє важливу роль в організації навчальної діяльності в перевернутому класі – впровадження ПН у навчальний процес вимагає від викладача глибокого розуміння кроків, етапів і процедур визначення цілей навчання, відбору навчального матеріалу, створення доаудиторних і аудиторних завдань. Наголошено на необхідності дотримуватись принципів впровадження даного підходу; рекомендовано перевертати окремі теми, а не увесь курс. Доведено, що ПН, за умови відповідності нормативним положенням університету, повинно задовільнити особливості організації самостійної роботи студентів, індивідуальну самостійну роботу студента можна реорганізувати відповідно до принципів перевернутого підходу. Серед можливих проблем впровадження ПН виділено технічні (зв'язок, закриття платформ, видалення покликань), фінансові та особистісно-психологічні фактори (організація часу, мотивація тощо).*

**Ключові слова:** *перевернуте навчання, підходи до навчання, вища освіта, ESP, мотивація, самонавчання.*

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**The problem statement and its connection with important scientific or practical tasks.** Mastering language proficiency is an important factor for successful employment and career promotion. Despite ESL being introduced into the school curriculum as a compulsory subject from the first year of primary school in Ukraine, many learners still struggle with achieving the desired level for comfortable communication. This is often due to a lack of modern educational materials, poor financial stimuli, and lack of foreign-language spaces for polishing communicative skills. A choice of inappropriate teaching styles

may also lead to discouraging the student from learning the subject. A substantial decrease in hours for class time instruction [6, p. 324; 3, p. 635] is a determining cause of poor language acquisition. At the Department of Public Management and Administration, first-, second, and third-year students have 66, 66, and 92 hours respectively for autonomous self-study, which is significantly more than the overall time allocated for class instruction (54, 54, and 88 hours). Furthermore, checking autonomous self-study tasks is not included in the teacher's workload and is to be assessed during module tests or examinations, which

does not motivate students to complete self-study tasks diligently [3]. Moreover, the traditional one-size-fits-all methods of teaching English no longer address the students' diverse needs and professional goals [23] due to their teacher-centered character and exclusion of social-emotional and personalized learning opportunities. The changes in the societal values, industrial developments and advancements in technology have led to review of existing approaches to foreign language teaching. The recent pandemic and war accelerated the implementation of innovative digital educational technologies and gave impetus to the emergence of modern innovative teaching methods and strategies.

In this context, flipped learning can be viewed as an effective approach to teaching English, especially concerning the topics allocated to self-study. Thanks to its innovative mechanism of transferring theoretical material to homework and exercises to the classroom, this approach helps develop 21<sup>st</sup>-century skills (critical thinking, the ability to learn through life, interpersonal competence) [2; 6; 13; 18], especially at undergraduate and post-graduate levels.

Although flipped learning (FL) has gained increased popularity over the past two decades abroad, (especially in China and then in the USA and Europe) [25], it is still a relatively new teaching methodology for Ukrainian higher education institutions and only a few incorporated it into the teaching practice [2; 4; 5; 6; 20].

#### **Analysis of recent studies and publications.**

The flipped learning approach started gaining popularity and received substantial attention from the scholars around the world in the early 2000s [17; 20] but there was still little scientific evidence on its use. Since the 2010s, flipped learning has become the research focus in the technologically advanced countries—the USA (Brame, Habegger), Europe (Marshall, Kostka), China (Hugh, Li, Ni, Zhu), Taiwan (Cheng) and South Korea (Lee, Wallace). As flipped learning was primarily viewed as a lecture flipping tool, most research works at the time were devoted to STEM subjects like physics, geology, nursing, and fewer could be found in the field of humanities (philosophy, literature, languages, etc).

The first theoretical foundations and practical procedures for flipping the learning process were discussed and substantiated by groups of educators and researchers from the Academy of Arts and Sciences [7], Harvard University [16; 19], the coalition of Flipped Learning Global Initiative (later – Flipped Learning 3.0 Universities) [5], the Flipped Learning Network association [15] etc.

The students' engagement and enhancement of knowledge in flipped classrooms became the research objective of K. O'Connell, M. B. Gilboy, J. Habegger, A. K. Smith. The impact of flipped learning on memorization process was thoroughly studied by W. Zhu.

The in-depth analysis of tools, LMS platforms, resource materials for flipped classroom and flipped courses was conducted by M. Baig and E. Yadegari-dehkordi [10], J. O'Flaherty and C. Phillips [23]. The process of implementing flipped classrooms in higher education ESL courses was explored by H. Alsowat, C. Bredow, A. Cheung, L. Kostka, H. Marshall, F. Li, A. Ni, P. Roehling, A. Sweet and others.

In Ukraine the issue of implementing technology-enhanced teaching methods and approaches has been raised in works by Dolgopol O., Kiryanova O., Naumenko A., Stoliarenko O., Zubenko O. The feasibility of using flipped learning approach for higher education learners was examined by Demydenko T., Kuzmina O. (for engineering courses), Yalova K., Yaschyna. The implementation of FL into the English language courses was covered by Honchar N., Hostischeva N., Kharchenko T., Kolomiets O., Konoplianyk L., Korniytska Y., Kulykova L., Melknykova K., Lopatynska I., Riabukha T., Shovkovyi V., Zaiarna I. and others.

**Outline of previously unresolved issues.** The overview of research works and meta-analyses [12; 22; 25] justify the efficacy of using flipped learning approach to teaching English, emphasizing that in foreign languages the academic outcomes were the greatest [24]. However, researches point out that it is necessary to give more consideration to designing flipped classes and try to find the most effective method for improving the learning process. They stress that it is significant to integrate technological, pedagogical, and content knowledge when designing flipped English classes [22].

**The purpose of the article** to analyze the key features and procedures for designing an effective English language flipped classroom within higher education and outline possible challenges for its implementation.

The **tasks** of the study are to identify the differences between the terms “flipped learning” and “flipped classroom”; to describe the stages and procedures (steps) for introducing flipped learning into language teaching; to examine the tools, materials and infrastructure used for implementing flipped classrooms; to define the challenges in incorporating flipped learning.

**Research methods.** To reach the objectives of the article the methods of comparative and systematic analysis were used. The comparative analysis of the literature and scientific articles on the topic of flipped learning allowed defining the key procedures in arranging the flipped learning and the systematic review helped delineate problems that may occur.

**Results and discussion.** Today, with the majority of educational establishments implementing the policy of human-centered education, more modern communicative approaches with learner-centered instruction have been adopted in the higher education system

with the focus on providing learners with sufficient content for meaningful communication and active engagement. Teaching a foreign language in the digital age requires educators to rethink the choice of the approaches to learning, methods, strategies and techniques to positively impact language acquisition. These approaches and methods must meet the diverse needs and goals of learners and increase their interest in the subject and raise awareness of the importance of life-long learning.

In the reviewed literature FL is most often referred to as an approach, but it sometimes can be termed as “a flipped classroom model” [8; 22] or “flipped strategy”, “flipped pedagogy” [16; 19], or flipped method [8]. This interchangeable use of terms may cause some confusion [9]. However, the proponents of FL suggest differentiating between FL and flipped classroom [9], where a flipped classroom is seen as an occurrence of students studying the assigned lectures or working on the videos produced by a teacher with the following class discussion, while FL is “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” [15]. In the article, we refer to the flipped learning as a teaching approach within which a number of methods can be used by a teacher and a flipped classroom is a separate academic class.

With the dissemination of FL, the Academy of Active Learning Arts and Sciences issued a more detailed definition of FL stating that it is a educational model that inverts the traditional classroom by presenting certain theoretical concepts and tasks before class and allowing teachers to reach out to each student and guide them through active, practical, innovative learning to application of knowledge [7]. It embraces any learning strategy which is active in nature. Although there are specific variations in how FL is implemented in practice, its main purpose is to shift the burden of class instruction [12] and provide more opportunities for interaction and exposure to English [21]. We suppose that the definition of flipped learning can be further specified as an andragogical approach as it fits the unique needs of adult learners, encourages them to stay interested in the subject and is most often incorporated into courses for more senior learners as they are considered more capable of taking responsibility for organizing their own learning, are more tech-savvy and depend less on teacher's instructions.

The analysis of research works shows that methodologically, the flipping process consists of three key stages: pre-class activities, in-class activities, post-class activities. FL is a complex approach to teaching that requires careful orchestration of each stage: the teacher should ensure that every aspect of the process

is well-planned and executed to achieve the desired learning outcomes. It requires on the part of the teacher to have a thorough understanding of the necessity to conduct a flipped lesson, to be properly prepared and have access to specific educational materials such as articles, educational videos, textbooks, quizzes or tests, and a suitable channel for supplementary guidance [6, p. 329; 25] for those who need it.

Flipping requires developing clear guidelines for learners regarding their work with the material, awareness of objectives they learn and thoughtful elaboration of both pre-class (annotated or plain videos, texts, presentations, podcast/vodcasts) and in-class activities (discussion questions, pair and group activities, case studies, simulations etc.). Analyzing the underlying principles and rules of flipping [6; 7; 19], we assume that the preparation to the FC must include the following key steps:

*Step 1: setting objectives and goals for a flipped class.* This step requires clear consideration of students' needs, backgrounds [19], their preferences and prior knowledge [25] as well as a teacher to understand the reasons for flipping a class. The most appropriate reasons for flipping are classes that require a substantial amount of time for case-studying, project-based activities, debates and discussions or collaborative work. The Derek Bok Center for Teaching and Learning of Harvard University, which specializes in innovative approaches in education, emphasizes [16] that an educator must identify the objectives of class rigorously and align them with the content of teaching material as this leads to creating an efficient flipped experience.

At this step it is also important to mention one of four pillars of flipped learning – an appropriate learning environment [15] or learning infrastructure [10]. It encompasses both a virtual space for sharing pre-class activities and a physical classroom for in-class activities that must facilitate flexible interaction of students and a teacher. The flippers in Ukraine [1; 2; 5; 6; 20] and abroad [8; 17; 22] give preference to virtual spaces on Google Workspace, Moodle, MOOC courses, Edmodo, BigBlueButton [10] or other university LMS platforms) where learners can have a free easy access to any flipped learning materials at a convenient time but be reached out by the teacher and interact with their peers. At Ivano-Frankivsk National Technical University of Oil and Gas, flipped environment can be organized on Moodle or Google Classroom. Until its closure in 2022, the students of Public Management and Administration had access to flipped activities on Edmodo [3], an interactive online education platform.

*Step 2: designing teaching content.* This step includes selecting content, designing in-class activities for personalized active learning, pre-class assessment activities and more complex post-class activities.

The first and foremost requirement for flipped learning materials is that they must align with teaching objectives and focus on learning points [2; 6], embrace the learner's prior knowledge and have follow-up comprehension question banks [20, p. 4; 25]. The material should be easily accessible by the students and easily manageable outside of the class. The material should be appropriate for students with different levels of English [5] and not too long to be properly assessed and managed during the available class time. The majority of research works on flipped learning in ESL/ESP suggest that video, vodcast/podcasts, either created by teachers or taken from the internet, should be logical and short, between 10 and 30 minutes long [6; 18; 20] or even shorter – 5–10 minutes [9].

In the context of teaching English, it is recommended to flip less communicative learning activities [18] like reading, grammar, vocabulary and listening [2; 6; 8; 18] as these aspects of the language are the most time consuming during the class time and their prior acquisition will foster livelier class engagement and cultivate the development of higher-order thinking.

The analysis of the studies [4; 5; 6; 20] showed that pre-class assignments mostly include TED talks [5]; ready-made educational, instructional video and authentic audio recordings from British Council Learning English website [4; 20] (listening or grammar skills); authentic online articles (reading comprehension), and platforms like Quizlet, Memrise, Baamboozle for mastering vocabulary, which are then followed by assessment activities (Step 3): making mind maps; answering comprehension questions, doing online tests or quizzes on Kahoot, MasterTest, Wizarme, Quizziz [20], Wordwall, Liveworksheets [3], even preparing questions related to the material.

*Step 3: checking on student's activity and possible difficulties.* The Flipping Kit issued by the Harvard Kennedy School of Governance [19] marks including engaging pre-class assessment tools as an important step in successful flipping.

The assessment, which occurs prior to in-class time, is believed to serve two purposes: 1) to help students check whether they understand the material and whether their preparation is sufficient [19; 25] and 2) to allow teachers to monitor the students' interaction with the assigned pre-class activities, give/receive feedback to/from students, identify possible knowledge gaps in advance of the class and to better adjust the in-class activities to address these gaps. Moreover, it helps teachers identify those who ignore their pre-class learning commitments and may attend unprepared.

At the same time, the findings of other meta-analysis [24; 25] demonstrate that pre-class quizzes and tests may be less effective and produce poorer academic results than in-class quizzes and assessments. It is explained by the shift of student's focus from

trying to understand the course material to trying to do the pre-class assessment test well. Nevertheless, we believe that in the field of language acquisition, interactive online assessment tools can be beneficial as they keep learners more focused, and are usually welcomed by students [3].

All analyzed studies showed that pre-class assignments include assessment activities. Some examples of pre-assessment tools can be in the form of threaded questions where each student from the group needs to provide their response or even short video recordings, posted to Flipgrid [3; 20], Harmonize or Voxpoxs [4], to ignite deeper discussions in class. It is also necessary for pre-class assignments to be timely graded. In addition, graded assessment at the in-class stage must be done as well.

*Step 4: applying the acquired knowledge.* Incorporating open-ended questions or discussion points that facilitate the development of higher order thinking should be characteristic of this step. At this point, the task of the teacher is to engage students into active learning through a range of activities and forms of work: peer discussions, group-inquiry learning, teamwork etc. Some researches [16; 19] point out that it is more important to decide what activities to incorporate at the in-class stage than what material to prepare for students' pre-class stage and the choice of the pre-class material should be grounded on the in-class activities as their purpose is to deepen the knowledge of the previously learnt material.

Flipped in teaching a second language in higher education can be incorporated as a conventional or partial (micro) flipping. In the conventional model, a traditional flip occurs: theoretical material (grammar, vocabulary, listening or writing) with follow-up tasks (making mind maps, answering comprehension questions, doing tests or quizzes, preparing questions related to the material, etc.) is performed by the learner independently according to the teacher's instructions at home. In the classroom, the acquired knowledge is updated and consolidated. Knowledge retention takes place through completing exercises as a class or in pairs or teams.

In the reviewed literature, some researches [11; 13] distinguish between three modes of flipped learning: conventional (or flip 101 [18]), mastery, or in-class flip, while others complement this list with micro-flip (partial), group-based flip, flipped teacher, and even discussion- and debate-flipped learning [14]. With respect to language, we consider group-based, discussion and debate flipped types to be ways to arrange the activities at all three flipped learning stages depending on the curriculum, learning objectives and type of incorporated activities.

Mastery model of FL can work better for tasks that require learners to search for information from a variety of sources, process it, and then present it to other learners. Thanks to the FL mechanism, this type of

tasks, depending on the objectives and content of the discipline, can be assigned as individual tasks or collaborative work, and at the stage of class time, students can be divided into groups to either consolidate the collected information and present it to participants from other groups, or share their own information with other participants within the group and perform joint exercises or develop a joint solution to a problem. It is important that the tasks proposed by the teacher at this stage allow students to use the knowledge acquired at the previous stage, which contributes to knowledge retention. The role of the teacher in this process is to stimulate and support the discussion.

Thanks to its flexibility, technologic integrity, FL can be adapted for part-time students, but only partially, as the teacher needs sufficient time to fully administer all module topics (especially at the pre-class stage). Thus, it is best to use flipped classes for a series of topics from the course to see how well flipping is perceived by the learners and how it enhances students' productivity, motivation and knowledge and also if teacher manages to flip the class effectively.

*Step 5: reflecting on the results of flipping.* It is essential for a teacher to carry out a survey on the effectiveness of the flipped class in order to find out its strong and weak points [16], its success in terms of students' learning outcomes and engagement. Such reflection should help to improve the construction of following flipped classrooms.

Figure 1 illustrates the schematic relation between the steps involved in the arrangement of flipped learning and their corresponding stages. As we can see, the most time consuming stage is pre-class stage.

The studies [1; 10; 20] show students' interest in flipped learning, an increase in students' engagement, motivation and class attendance. It must be noted that FL is closely related to active learning strategies and the obvious gamification of the flipped learning process might be the factor that appeals to students most.

The analysis of the implemented flipped classes helped us outline the possible challenges for teachers and students as shown in Table 1.

According to some researchers [2; 17; 24], higher education institutions should refrain from full transition of academic disciplines to flipped learning: while the approach has shown positive trends, its long-term outcomes have not been sufficiently studied, particularly with regard to student motivation.

The financial aspect can also be a challenge for implementing FL efficiently into the educational process, especially in conditions of total resource economy. Almost all of the proposed tools for content creation and assessment check (step 2) [Kno] offer only some basic features of their products for free or set limits: in number of participants (the free version of Kahoot allows hosting events for only 40 participants for school educators; if a teacher is registered as a

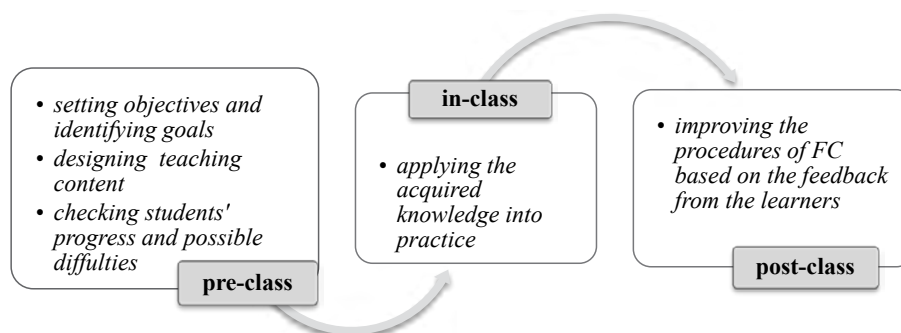


Fig. 1. Relation of stages and steps in flipping a class

Table 1

Possible challenges in the flipping process

| Challenges for teachers   | Challengers for students  |
|---|---|
| <i>technological</i>  |   |
| - creating videos if appropriate material is not available,<br>- unavailability of resources due to poor connection, power cuts, expired links or closure of online platforms (Edmodo and Jamboard) | - failure to use the digital educational tools;<br>- poor connection, power cuts, expired links |
| <i>personal-psychological</i>   |   |
| - unprepared or poorly prepared students;<br>- fear of being replaced by AI   | - poor time management and organizational skills;<br>- inability to learn autonomously          |
| <i>financial</i>  |   |
| - no financial incentive for redesigning courses or classes;<br>- need to pay a subscription for using digital tool   |   |

higher education teacher, the limit is 10 participants per quiz), choice of tools (Kahoot, Quilet, Quizizz, Miro), or the amount of data storage (Wordwall – 5 free activities; Liveworksheets – 30 day storage of submitted works). Many of these platforms provided an unrestricted version during Covid.

**Conclusions and further research.** In recent future flipped learning may become one of the mainstream pedagogical approaches to teaching disciplines in various spheres thanks to its flexibility, economic-profitability, and technological underpinning.

The analysis of research works on implemented flipped learning in the higher education system allows us to state that preferences that FL brings (an increase in students' motivation, eagerness to learn and better academic performance, releasing time for in-class active learning; integration into teaching extramural students; humanizing the education process; making student's autonomous self-study topics more interactive and engaging) outweigh the challenges it imposes (time-consumption for creating a flip; lack of financial support etc.). The studies demonstrated that the role of the teacher remains essential in arranging and conducting the flipped classroom. Integrating FL demands the teacher to possess a profound comprehension of teaching goals, crafting educational content, and designing pre-class and in-class assignments.

The identified above challenges should be addressed by a teacher prior to designing the flipped course. Special consideration must be given to the choice of activities, external digital tools used for assessment and interactive collaboration, especially those used outside of university LMS and their possible integration into the educational platform), learner's readiness to take charge of their learning as well as to teacher's willingness to manage the flipped class at all three stages and provide students with necessary additional support, give them timely assessment and feedback.

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