UDC 378.091:[372.881.111.1:81'243]
DOI https://doi.org/10.24919/2308-4863.4/31.214405

Inna SHKARBAN,
orcid.org/0000-0002-3450-910X
Candidate of Philological Sciences,
Associate Professor at the Foreign Languages Department
of the Faculty of Law and International Relations
Borys Hrinchenko Kyiv University
(Kyiv, Ukraine) inna_shkarban@ukr.net

TEAM WORKING IN FOREIGN LANGUAGE LEARNING THROUGH A CHALLENGE-BASED VIRTUAL HIGHER EDUCATION ENVIRONMENT

The article focuses on the concept definition and criteria establishment for optimizing of team working project activity of students in the process of foreign language learning in non-linguistic specialties through a Challenge-Based virtual higher education environment. Under modern global labor market demand the graduate's ability to team project activity is seen as an indispensable employability skill resulting from formative interdisciplinary training of a competitive professional via higher educational practice courses. Due to theoretical and empirical analysis of the methodological provisions of A Challenge-Based Learning the following optimizing criteria were systematized: 1) personality-oriented, including psychological and competence levels of readiness of teachers and students to shift from traditional lecturer-instructor to facilitator interaction, on the one hand, and improving the quality of the regulatory mechanism of student's reflection, on the other hand, due to productive changes in the motivation sphere, cognitive development, communicative competence formation, group dynamics and team cohesion modifiers; 2) content-operational, that is a holistic methodological complex for defining the project proposal, research planning, time management, implementation and peer-to-peer assessment, collaborative resolution of conflicts of interest, progress monitoring, qualitative evaluation and reflection; 3) formative-diagnostic, embodied not only in a final product presentation, implementation and sharing, but in reflexive axiological diagnostics of team interaction progress. The author's views on the competence approach to team project working as potentially optimizing the development of cognitive, axiological, linguistic and communicative activities of students are presented. A Challenge-Based Learning is exemplified as a collaborative team learning experience to reinforce brainstorming, research skills and intellectual communication in the process of foreign language learning in non-linguistic specialties via virtual higher education environment.

Key words: *team working activity, virtual learning environment, A Challenge-Based Learning, competence approach, information and communication technologies.*

Інна ШКАРБАН,
orcid.org/0000-0002-3450-910X
кандидат філологічних наук,
доцент кафедри іноземних мов
факультету права та міжнародних відносин
Київського університету імені Бориса Грінченка
(Київ, Україна) inna_shkarban@ukr.net

КОМАНДНА ДІЯЛЬНІСТЬ У ПРОЦЕСІ ВИВЧЕННЯ ІНОЗЕМНОЇ МОВИ ЧЕРЕЗ ВІРТУАЛЬНЕ ОСВІТНЄ СЕРЕДОВИЩЕ ВНЗ ЗА ІННОВАЦІЙНОЮ МЕТОДИКОЮ «НАВЧАННЯ НА ОСНОВІ ВИКЛИКІВ»

У статті досліджено зміст і критерії оптимізації командної проєктної діяльності з вивчення іноземної мови студентами немовних спеціальностей за інноваційною методикою «Навчання на основі викликів» у віртуальному освітньому середовищі вищого навчального закладу. Встановлено, що за умов підготовки конкурентоспроможного фахівця на глобальному ринку праці здатність до роботи в команді є передумовою досвіду формувальних міждисциплінарних університетських практик. Завдяки теоретико-емпіричному аналізу методологічних положень інноваційної методики «Навчання на основі викликів» систематизовано критерії ефективності командної взаємодії, що охоплює: 1) особистісно-орієнтаційний рівні, зокрема психологічний і компетентнісний рівні готовності викладачів та студентів до здійснення переходу викладацької практики з лекторсько-наставницького типу до фасилітаторської взаємодії, з одного боку, та підвищення якості регулятивного механізму студентської рефлексії, з іншого боку, стосовно продуктивних змін у сфері мотивації, сфері пізнавальної діяльності, комунікативної компетентності, групової динаміки та факторів згуртованості; 2) змістовно-операційний, власне цілісний дієвий методологічний комплекс з означення проєктної пропозиції, планування досліджень, управ-

ління часом, впровадження та взаємооцінки, колаборативного розв'язання конфлікту інтересів, моніторингу прогресу, якісної оцінки та рефлексії; 3) формувально-діагностичний, результатом якого є не лише презентація, впровадження та поширення кінцевого продукту, а й рефлексивна аксіологічна діагностика прогресу командної взаємодії. Викладено авторський погляд щодо компетентнісного підходу до реалізації командної проєктної роботи, продуктивним результатом якої визначено розвиток і вдосконалення когнітивної, аксіологічної, мовної та комунікативної діяльності студентів. Інноваційну методику «навчання на основі викликів» практично унаочнено навчальним досвідом командної взаємодії в процесі вивчення іноземних мов на нелінгвістичних спеціальностях через віртуальне освітнє середовище.

Ключові слова: *командна діяльність, віртуальне освітнє середовище, інноваційна методика «навчання на основі викликів», компетентнісний підхід, інформаційно-комунікаційні технології.*

Formulation of the problem. A virtual learning environment (VLE) has recently become a global focus of educators worldwide. The specific functionality associated with an implementation of electronic educational technology, e-learning, learning platform or learning management system concerns a range of integrated web-based applications and resources to support and enhance educational delivery and management to provide teachers and students of a higher educational establishment with information, tools and resources. A nowadays shift from traditional teacher-centered learning to student-centered educational model, where the student is seen as an active doer involved in educational process, has grounded the rise of a variety of student-centered methods, i.e. problem-based learning, discovery learning, inquiry-based learning, project-based learning, case-based instruction, and just-in-time teaching. A Challenge-Based Learning (CBL) is a collaborative learning experience which reinforces brainstorming, teamwork cooperation, time management, research skills and intellectual communication in solution and release implementation, evaluation and sharing. Thus, team working activity develops employability skills in open, online, distance and flexible higher education learning environment.

Research analysis. Theoretical and methodological foundations of team working and project group activity have been thoroughly studied in the scientific works of D. Livingstone, K. Lynch, M. Yorke, E. Polat, O. Liber, F. Forman, S. Bodnar, M. Vornyk, T. Karayeva, V. Titova, V. O. Kalamazh etc. However, analysis of scientific literature gives grounds to state that conceptual and applied aspects of the team working activity in foreign language learning through a challenge-based virtual higher education environment have not been sufficiently developed.

The purpose of the article is to analyze the concept of team working project activity of students in the process of foreign language learning in non-linguistic specialties through a challenge-based virtual higher education environment, to outline the main components of psychological readiness of students to team work collaboration, to substantiate the system of criteria and indicators of the effectiveness of team working activity, the system of pedagogical and psychological conditions of a challenge-based virtual higher education environment during a foreign language learning in non-linguistic specialties.

The main material. Much is claimed for group work activity in cognitive gain, stimulating intellectual collaborative communication, providing well-balanced critical evaluation of material, changing attitudes and increasing students' tolerance of people involved into the group project development. Successful educational methods and techniques for using team-based learning are empirically studied in a variety of settings (Teaching with Team Projects in Higher Education, 2016: 1–7).

O. Liber highlights that formal "chalk and talk" teaching is a low productive method highly opposed to further students' effective learning experience, which definitely demands students' preparedness for the complex variable environments after completing their degrees (Liber, 1994: 185). Thus, there is a growing interest in the pedagogical methodology research in integration of discipline-specific knowledge and approaches university courses are generally based on with practical competence skills which may be of students' use in the workplace (Livingstone, Lybch, 2000: 325).

Taking into account F. Forman's two analytical perspectives on group learning: 1) individualistic emphasizing cognitive performance and considering the social context as an educational environment variable, and 2) sociocultural defining learning as a process by which "a newcomer is integrated into a community of practice" (Livingstone, Lybch, 2000: 326–327), team work activity presents a challenge for higher education. Therefore, there is evolving necessity to differentiate between concepts of "group work" and "team work". Although some of the scientific investigations use these terms interchangeably, we adhere to the consideration of J. Whatley and C. Nerantzi that a team project is considered successful in case the group of individuals evolve from being a group of people with different aims to a team with a common purpose (Teaching with Team Projects in Higher Education, 2016: 9).

Among effective team working organization principles Ukrainian and foreign scientists focus on:

1) student-centeredness as students' autonomy, collaborative cooperation, reflection of both the product and the work process and responsibility;

2) facilitative role of the teacher as a collaborator in learning, i.e. leveraging the power of students, seeking new knowledge alongside students, modeling positive habits of mind and new ways of thinking and learning;

3) tackling real-world problems using a multidisciplinary approach, i.e. emphasis on authentic real-world challenges to develop skills of complex problems solving through integration of various tools and methods of active learning, interdisciplinary resources, activities, knowledge, skills from different areas etc. (Kalamazh, 2019: 6–7).

Hence CBL mirrors the same XXI century employability educational context stating as guide intents: 1) working in collaborative groups; 2) applying commonly used in daily life technology; 3) meeting real-world challenges through a multidisciplinary approach; 4) sharing the research findings and outcomes with the world community. Similarly, common methodological ground could be claimed in team working activity through CBL cascade stages as follows: the essential question; the challenge; guiding questions, activities, and resources; determining and articulating the solution; taking action by implementing the solution; assessment; solution publishing and sharing it with the world. Teacher's facilitating standpoint is in hands-on connection of multidisciplinary standards-based content with real-life reflection, collaboration and intellectual cooperation experience giving students structure, support, checkpoints, and the right tools to get their work done successfully, while allowing them enough freedom to be self-directed, creative, and inspired (Challenge Based Learning: A Classroom Guide, 2020: 3-5).

To summarize, indicators of the effectiveness of team working activity can be grouped as the following:

1) personality-oriented, namely the psychological and competence level of teacher-students' readiness to implementation of team working activity as a key factor of successful interaction, given that team project training requires a major shift in teaching practice from a lecturer to a facilitator as soon as students' involvement into effective team work collaboration (motivation sphere, cognitive-operation sphere, communicative competence, group dynamics and cohesion factors);

2) content-operational, that is a holistic methodological complex of the experiential team working learning experience through the challenge proposal, research planning, time management, implementation and evaluation stages, resource base analysis, problem solving progress monitoring, assessment and reflection strategies;

3) formative-diagnostic revealed in cognitive, axiological, linguistic and communicative competence development through team working activity.

Cognitive sphere is intensified through general and special educational skills development as ability to navigate in the information space, namely gather, analyze, evaluate, assess, imply, interpret and systematize knowledge, highlight the main idea, draw conclusions and generalizations in data or resource selection process.

Axiological component supposes self-reflection and evaluation skills development, for example linguistic guesswork in case of misunderstanding or language tools shortage, ability to get out of a communication gap due to explication, periphrases, exemplification; predict the consequences of decisions made and ability to transfer knowledge and skills to a new situation; value orientations, feelings and emotions; flexibility in the selection of communication means to overcome various barriers in interpersonal interaction polyglot space, ability and willingness to engage in foreign language communication.

Communicative competence development in the process of foreign language learning in non-linguistic specialties through a challenge-based virtual higher education environment is seen in linguistic and communicative skills mastering, that is proper academic vocabulary choice, lexical and grammar coherence and cohesion, register, modality, style, content structure and context understanding. Team working activity empowers ability to lead a discussion, defend claims on the supported evidence, limit, narrow, expand or develop the topic, carry out a dialogue, find a compromise with the interlocutor, read and understand the content of authentic texts of different genres and types.

In this regard, there is growing educators' interest in team collaborative learning through Challenge-Based higher educational environment. However, despite quiet obvious solid theoretical perspective for team project activity being an important component of undergraduate university courses, there is still some skepticism as to whether the theoretical benefits are to succeed in practice.

Extensive reflective diagnostic papers clearly indicate team-based learning drawbacks in constructivist, experiential, and situational manner. The most noticeable failures lie in psychological students' readiness premises: in motivation sphere,

i.e. insufficient focus on success, orientation for a formal graded achievements; in the cognitive-operational sphere, i.e. an average low level of general reflexive skills, creative thinking skills as flexibility, the ability to produce compelling ideas, contrastive and corroborative skills, dynamism, ingenuity, brainstorming input into project development; as well as in metacognitive interaction skills, i.e. group climate diagnosis and interaction mastery, distribution of group roles and tasks, time management, problem solving, ways to get feedback, personal responsibility for the result, metacognitive awareness, ability to apply metacognitive planning strategies, monitoring and evaluation in a subject-specific professional foreign language communication (Kalamazh, 2019: 16–19).

Nevertheless, research shows that well-constructed team work with a clear rationale and conviction of the process value leads to a greater retention and understanding of what is going on. The positive comments appear to focus on the occasions when individual and group interests coincide (Livingstone, Lybch, 2000: 331–342). Given the demand among employers for graduates who successfully operate in teams, it is important to engender a positive response from students for team working. Students' self-reflection on team development model as high adaptive rewarding tool, a coherent assessment of their team work experience serves as a conduit to reduce skills gap if they are to be equipped for dealing with such situations in their future team working surrounding.

Team working activity of students in the process of foreign language learning in non-linguistic specialties proves beneficial in the following ways: 1) it encourages questioning, discussion and debate, therefore, advances motivation to learn by raising interest levels; 2) students are actively engaged in learning by doing; 3) situational context makes students to communicate and take account of different views of others safeguarding against being isolated serving as a reasonable retention strategy; 4) it develops students' transferable skills of collaboration, team working, negotiation, listening, organization, leadership and evaluation; 5) once it stimulates creative thinking through brainstorming, involvement in discussion and debate of different perspectives on the approach to a particular task, then it enhances student satisfaction of their learning experience and promotes confidence and self-esteem, providing a solid experiential platform to nurture independent and lifelong learning. Therefore, well-structured and managed team working activity provides students with a set of transferable employability skills and diagnostics for critically examining their subject, which are important components of global working surrounding.

Nowadays both practitioners and academes seek for creation an engaging and attention holding learning opportunity through lens of resourcefulness. In this regard, a virtual learning environment proves successful instructional platform levered with the infusion of technology into the fabric of higher institutions focused on the most effective way to deliver course content to learners. Team working through a challenge-based virtual higher education environment proceeds utilizing available digital technologies and applications based on flexible, open, online educational practices aimed at learning beyond institutional boundaries, recognizing continuous life-learning, skills mastering and self-development opportunities.

Figure 1 "Team Project Framework through A Challenge-Based Virtual Learning Environment" reflects implementation of information and communications technologies (ICT) through structural stages of team project organization via free access Internet platforms and applications and practical ways of mentoring the second year students of the first (bachelor) level on the one-week team project "Ancient Civilizations" while delivering the compulsory university course "First Foreign Language (English)" in non-linguistic specialties, namely 032 "History and Archeology".

The content-operational component of information competence is specified, in particular by: 1) information-cognitive, which involves mastering knowledge and skills of cognitive processes development: sustained attention, speed of information processing, cognitive flexibility and control, multiple simultaneous attention, working memory category formation, pattern recognition and inductive thinking due to concept mindmapping, time management and infographic organizers like MindMeister, LucidChart, Easel.ly, Padlet, Google Calendar, Google Maps Timeline, Pinterest etc.; 2) information-methodical, which centers around mastering knowledge and skills by means of contemporary ICT, i.e. an idea presentation and sharing via social networks YouTube, Facebook, Instagram, Wiki, Wixcom, forum discussion via Google Charts, Blogger, e-learning Moodle platform Forum resource etc.; 3) information-computer, which focuses on mastering knowledge and skills in using contemporary potential information technologies (IT) for information competence forming via a microdidactic complex method of organizing information assimilation which supposes reproductive, productive and creative levels of tasks completion complexity.

In the research, the CBL method discussed as an algorithm of actions aimed at contextual foreign

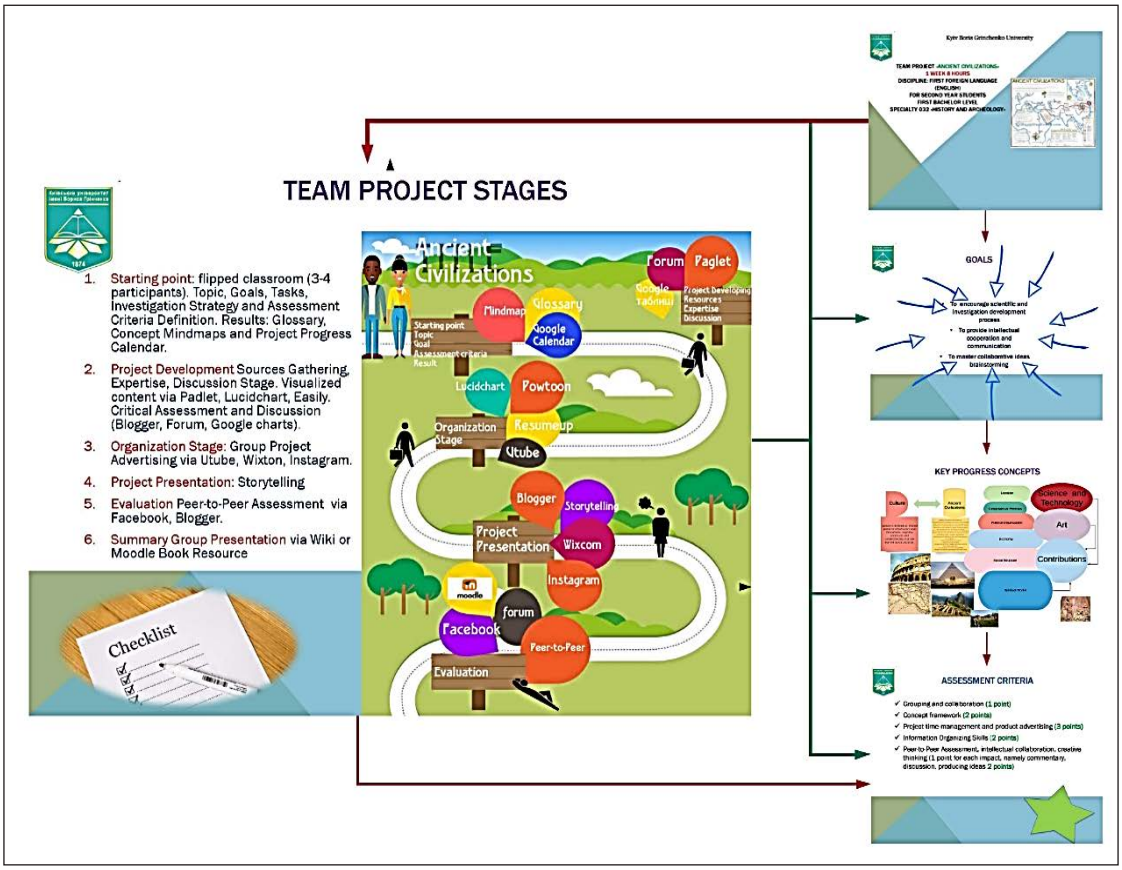

Figure 1. Team Project Framework through A Challenge-Based Virtual Learning Environment

language learning to form IT and ICT competence, which involves students mastering knowledge, skills, abilities, gaining employability team working experience based on fulfilling orientational, procedural, diagnostic stages. Team working project activity of students in the process of foreign language learning in non-linguistic specialties through a challenge-based virtual higher education environment contains appropriate technological steps, provides for students' educational activities when studying professional disciplines, doing independent work; undergoing various types of foreign language practical training, introducing appropriate methods and modes that provide for the formation of IT competence and a control-result block ICT competence actively involving students in quasi-professional activities in order to form positive motivation and methodical experience in further professional activity, fulfilling contextual learning; improving the content of educational disciplines and educational methodical materials, methods, modes and techniques of the educational process at higher education establishments. The following criteria are defined: a personal criterion i.e. attitude to systematically using ICT in professional activity; interest in using ICT and attention; need to master and analyze ICT; a content criterion defined as formed knowledge of cognitive fundamentals of using ICT in methodological activities types and opportunities of contemporary ICT; an operational criterion based on formed skills of teaching methods of cognitive development and mastering contemporary and potential ICT; and an axiological criterion as ability to gain professional self-motivation, methodical reflection and improvement by means of ICT.

Conclusions. The conceptual model for optimizing effectiveness of team project students' activity during foreign language learning in non-linguistic specialties of higher education institutions is developed with the following distinguished components: conceptual and purpose-oriented, functional, structural and step-by-step, or diagnostic. Theoretical and empirical data about the team project working activity of students as a collaborative whole entity involved in the solution of a specific team project task proved a distinct metacognitive and reflexive character in the immediate development sector. As a result of the aimed theoretical and empirical research, the peculiarities of psychological readiness of students of nonlanguage specialties of higher education institutions in terms of the implementation of team project activity during a foreign language learning in the context of moti-

vational, cognitive-operational, communicative, self-regulatory components have been disclosed. The results of the empirical verification of the conceptual model for increasing the effectiveness of team project activity by introducing the relevant program for students of non-linguistic specialties are presented and analyzed. The emphasis should be made on an operational criterion based on formed skills of teaching methods of cognitive development and mastering contemporary and potential ICT via a challenge-based virtual learning higher education environment which has not yet been fully revealed.

BIBLIOGRAPHY

1. Каламаж В.О. Психологічні чинники ефективності групової проектної діяльності студентів ЗВО у процесі вивчення іноземної мови : автореф. дис. … канд. психол. наук : 19.00.01. Луцьк, 2019. 23 с.
2. Challenge Based Learning: A Classroom Guide. 2020. Apple Inc. URL: https://www.apple.com/ca/education/docs/Apple-ChallengedBasedLearning.pdf.
3. Liber O. Managing resource based learning. *Group and Interactive Learning* / Eds.: H.C. Foote, C.J. Howe, A. Anderson, A.K. Tolme & D.A. Warden. Southampton : Computational Mechanics Publications, 1994. P. 183–186.
4. Livingstone D., Lybch K. Group Project Work and Student-centred Active Learning: two different experiences. *Studies in Higher Education.* 2000. Vol. 25. № 3. P. 325–345.
5. Teaching with Team Projects in Higher Education / Eds.: J. Whatley, C. Nerantzi. Santa Rosa, California : Informing Science Press, 2016. 215 p.

REFERENCES

1. Kalamazh V. O. Psykholohichni chynnyky efektyvnosti hrupovoyi proektnoyi diyal'nosti studentiv ZVO u protsesi vyvchennya inozemnoyi movy [Psychological factors of the effectiveness of a group project activity of students in higher educational institutions in the process of learning a foreign language]. : avtoref. dys. … kand. psykhol. nauk : 19.00.01. Luts'k, 2019. 23 p [in Ukrainian].
2. Challenge Based Learning: A Classroom Guide. 2020. Apple Inc. URL: https://www.apple.com/ca/education/docs/Apple-ChallengedBasedLearning.pdf.
3. Liber O. Managing resource based learning. *Group and Interactive Learning* / Eds.: H.C. Foote, C.J. Howe, A. Anderson, A.K. Tolme & D.A. Warden. Southampton: Computational Mechanics Publications, 1994. P. 183–186.
4. Livingstone D., Lybch K. Group Project Work and Student-centred Active Learning: two different experiences. *Studies in Higher Education.* 2000. Vol. 25. № 3. P. 325–345.
5. Teaching with Team Projects in Higher Education / Eds.: J. Whatley, C. Nerantzi. Santa Rosa, California : Informing Science Press, 2016. 215 p.