

Review research paper

DEVELOPMENT OF FUTURE TEACHERS' PROJECT COMPETENCE TO DESIGN LEARNING PROCESS OF GE, ESP, LSP

Marianna Kniazian, Olena Khromchenko, Larisa Sushchenko

Odesa I. I. Mechnikov National University, Ukraine; Zaporizhzhia National University, Ukraine,

Abstract. *The article discusses the problem of the formation of future teachers' project competence to design learning process of General English (GE), Language for Specific Purposes (LSP) and English for Specific Purposes (ESP). We used the questionnaire to identify the interest of the third-year students in learning GE, methods, as well as factors which influence the study of GE at Odessa I. I. Mechnikov National University. The methods of expert assessment and self-assessment were used to identify the level of project competence, based on such indicators, as the ability to determine the current level of language and professional training of students, their interests and skills; the ability to single out relevant information and communication technologies that are optimal for teaching GE, ESP and LSP in each group of students; the ability to differentiate methods to enhance the interest of students, create a positive emotional atmosphere in the classroom; the ability to determine the prospects for the development of personal and professional qualities of students; the ability to select the best methods for each student to study GE, ESP, LSP using on-line, e-learning. The data reflects levels of formation of project competence. In order to form this competence of future teachers, we have developed the project activities and creative tasks, aimed at the formation of skills and knowledge about the organization of learning process of GE, LSP and ESP.*

Key words: *project competence, design, learning process, future teachers*

1. INTRODUCTION

Today's challenges, including strengthening of the role of distance learning, the need to develop and implement effective methods of teaching English under these conditions, taking into account the individual needs of pupils and students, have highlighted the problem of preparing students for project activities. The intensification of project activities is also explained by the introduction of modern scientific approaches, author's programs, innovative methods of teaching GE, ESP, LSP. Future teachers try to discover everything pedagogically valuable for themselves in the latest experience; to comprehend and diagnose didactic and educational expediency, rationality and value of the latest methods. Thus, the formation of project competence of future teachers is currently one of the most

Submitted January 30th, 2021, accepted for publication March 20st, 2021

Corresponding author: Olena Khromchenko. Odessa National Mechnikov University, Department of English Grammar, Ukraine | E-mail: okne4morh@gmail.com

important to ensure highly effective teaching. That is why we set a goal to explore the problem of developing project competence of future teachers.

It should be emphasized that the concept of “competence”, in addition to professional knowledge and skills, also includes such qualities as initiative, cooperation, sociability, ability to work in a group, to learn, think logically, select and use information, evaluate the effectiveness of activities. Project competence includes the ability to receive and process information, to make optimal use of acquired knowledge in professional activities interaction; self-assessment. Considering the scientific position of N. Redchenko that “a project activity allows students to act as authors and initiators, strengthen their creative endeavors, broaden their outlook and develop their language skills” (2016: 6203), the ability of students to design and test their own techniques in practice of teaching GE, ESP, LSP in various types of educational institutions is also important.

At the same time, scientists point out that project activities allow enhancing the students’ motivation to learn English and promote social and professional values (Castañeda, 2014; Tarnopolsky, 2012). In addition, A. Kotkovets underlines that the project activity “fosters the development of language skills in an integrated manner, similarly to the way they are used in real communication” (2014: 66). We fully share the scientific positions that project activities promote more dynamic formation of students’ professionally important competencies, in particular, intercultural communicative competence (Redchenko, 2016), the vocational students’ productive competences (Jalinus, Nabawi & Mardin, 2017), self-development competence (Kniazian & Khromchenko, 2019). Furthermore, project method is a significant vehicle for learning ESP in professional training of future designers (Lee, 2009), musicians (Borisova & Letkina, 2019), engineers (Kotkovets, 2014), economists (Mushynska & Kniazian, 2019), geographers (Ke, 2010) and other specialists.

The project method is of paramount importance in the professional training of future teachers, as well as their pedagogical activity. B. Condliffe, J. Quint, M. G. Visher rightly insist on changing the teacher’s role in the classroom in context of project-based learning. Notably, attention is drawn to the fact that “it requires that teachers modify their roles (from directors to facilitators of learning)” (2017). In this regard, a teacher of foreign languages is required to apply a variety of personal qualities and skills in their project activities. M. Aksela and O. Haatainen rightly conclude that these activities actualize “learning responsibility, goal setting, independence, and discipline...” (2019: 11).

Summarizing the above scientific positions, as well as basing on the design features of the GE, ESP, LSP learning process, we have the opportunity to assert that the project competence reflects the system of knowledge and skills in diagnosing the features of the current and future development of each student (Ke, 2010), the specific properties of interaction and communication in the student team (Condliffe et al, 2017), modern methods and technologies of teaching foreign languages (Tarnopolsky, 2012), techniques of professional self-development using ESP (Kniazian & Khromchenko, 2019). Accordingly, the components of project competence are diagnostic, organizational, and prognostic.

The diagnostic component of the project competence provides for the identification of individual abilities and motivation of each student during the learning GE, ESP, LSP, namely the character of the person’s embodiment of his or her unique potential and how the student develops himself or herself in the educational, professional, social, and cultural spheres. Scrupulous attention is paid to the study of the hierarchy of value orientations and needs of the student, on the basis of which it becomes possible to determine the trajectory of his or her further self-development as a professional. The study of the

features of students' creative activity, the individual learning style allows designing the optimal conditions (stress-free environment in the classroom, effective teamwork) and teaching methods of GE, ESP, LSP and, thus, predict and achieve success in mastering all types of speech activity. Thus, we have identified such important skills related to the diagnostic component of students' project competence as ability to determine the current level of language and professional training of students; ability to determine students' interests and abilities.

It should be emphasized that the organizational component reflects the skills to select and develop effective methods to teach GE, ESP, LSP. A future teacher should grasp the development of a pedagogical phenomenon globally, see several options for its development at once, and creatively modify the educational process. The subject of the activity is the search for new options for combining known methods, as well as the design of their own methods, taking into account the originality of the intellectual activity of students, the experience of their creative activity. It is important to orient future teachers to research the methods of developing students; individual culture in the course of team activities. Effective teamwork produces a creative educational space, contributes to the continuous interchange of experience, working collaboratively the students have the opportunity to assess the multifunctionality of their influence on other people. Thus, the most important abilities were such as ability to choose from existing information and communication technologies that are optimal for teaching GE / ESP / LSP; ability to differentiate methods to enhance the interest of students, to create a positive emotional atmosphere in the classroom.

The prognostic component of the project competence orients future teachers to identify the prospects for the development of the personality of each student. Analysis, synthesis and generalization of the results of the actual development of the student and the student collective as a whole helps the future teacher to see the paths of their subsequent development and self-development in many ways. The activities of the future teacher provide for forecasting possible changes in the trajectory of professional training of each student, ways of developing their personal qualities, disclosing "tomorrow's personality", on the basis of which to design methods of self-study GE, ESP, LSP using on-line, e-learning. Forecasting allows for a propaedeutic assessment of the student's success and, accordingly, makes the necessary adjustments in the design of the learning process. Accordingly, the most significant abilities are the following: ability to determine the prospects for the development of personal and professional qualities of students; ability to sort out the best methods for each student to study GE / ESP / LSP using on-line, e-learning.

2. METHODOLOGY

We organized experimental work in which the third-year students who, after receiving a bachelor's degree, entered the master's program of Odessa National I. I. Mechnikov University, took part. At the beginning of our research 155 students were involved, 98 students entered the master's program and continued to participate in the experimental work. The experiment lasted from 2017 to 2020.

We put forward the assumption that the effectiveness of the formation of competence in the design of the GE, ESP, LSP learning process is ensured by means of a two-stage experiment, at the first stage of which it is necessary to organize the project activities of the third-year and fourth-year students in the course of their study of GE, at the second

stage – to offer the master’s degrees students the creative tasks for independent development of projects for training ESP and LSP (German / French / Spanish).

The following experimental tasks were set:

- to identify the interest of the third-year students in studying GE, methods, as well as factors influencing the study of GE at the university;
- to diagnose the level of competence formation in the design of the learning process GE, LSP (German / French / Spanish) and ESP among third-year students;
- to organize a pedagogical experiment for three years (from 2017 to 2020), namely: to develop stages of organization of project work of the third year and fourth year students; to offer master’s degree students creative tasks that involve the development and testing of their own teaching projects for GE, ESP, LSP;
- to diagnose the final level of competence formation in the design of the learning process GE, LSP (German / French / Spanish) and ESP among master’s students.

To conduct the research we used such empirical methods as questionnaire, methods of expert assessments and self-assessments. The quantitative and qualitative analysis of the obtained results was applied using the methods of mathematical statistics.

In order to learn the volitional sphere of the student, their interest and motives for learning GE, we conducted interviews with the third year students. They were asked to respond to questions using a 5-point scale, from excellent (5) to poor (1) (Table 1).

Table 1 Questions to identify students’ motivation to study GE

Questions		
1. Which factors motivate you to study?	2. Which methods of teaching and learning do you prefer?	3. Which factors influence your attitude to the studying of GE at University?
1a) I want to receive higher education;	2a) discussions;	3a) its relevance to the future profession;
1b) I want to gain profound knowledge;	2b) question and answer sessions;	3b) positive emotional atmosphere in the language classroom;
1c) I want to get a good job;	2c) workshops;	3c) engaging tasks;
1d) I do not want to get bad marks;	2d) creative tasks;	3d) personality of the teacher;
1e) I want people to respect me.	2e) lectures.	3e) I like studying languages.

For the purpose of exploring the dynamics of the development of students’ competence of designing the learning process of GE, ESP and LSP (German / French / Spanish) experts (teachers of Odessa I. I. Mechnikov National University) assessed interviews with 155 third-year students and 98 graduate students – future teachers in various educational institutions. In particular, the experts had to assess the level of formation of this competence according to indicators that reflect the components of this competence, namely: the ability to determine the current level of language and professional training of students, their interests, capacities; the ability to choose from existing information and communication technologies that are optimal for teaching GE, ESP and LSP in each separate group of students; the ability to differentiate methods to enhance the interest of students, create a positive emotional atmosphere in the classroom; the ability to determine the prospects for the development of personal and professional qualities of students; the ability to select the best methods for each student to

study GE, ESP, LSP using on-line, e-learning. The same complex of skills was assessed by the students (undergraduate and graduate) themselves. We used the grading scale that assumes a score from excellent (5) to poor (1).

3. RESULTS

The questionnaire aims to explore students' learning motives (Table 2). According to the obtained results, the leading motives for teaching of university students are professional (I want to get a good job) and cognitive motives (I want to gain profound knowledge): 28% and 27%, respectively.

Table 2 Results of third-year students' questionnaires about the interest of studying GE

Questions					
1. Which factors motivate you to study?		2. Which methods of teaching and learning do you prefer?		3. Which factors influence your attitude to the studying of GE at University?	
Students' answers (%)					
1a)	22,0	2a)	25,0	3a)	40,0
1b)	27,0	2b)	13,0	3b)	29,0
1c)	28,0	2c)	21,0	3c)	31,0
1d)	04,0	2d)	22,0	3d)	0,00
1e)	19,0	2e)	19,0	3e)	0,00

The third and fourth places hold the pragmatic motive (I want to receive higher education) (22%) and the motive for personal prestige (I want people to respect me) (19%), respectively. The motive for avoiding failures (I do not want to get bad marks) took the last step (4%). This motive has a negative impact on students' achievements.

The results of the interview indicate that the dominant factor in the attitude of students to the subject is its professional orientation (relevance to the future profession) (40%).

The second and third places occupy engaging tasks (31%) and positive emotional atmosphere of the lesson (29%). Taking into account the data, we concluded that favorable attitude to the subject, and the positive motives, professional orientation of classes contribute to the development of project competence of students.

Table 3 illustrates project competence diagnostic results before the start of the forming experiment (before the experiment – BE) and after it was carried out (after the experiment – AE). Based on the data presented in table 3, it is obvious that the number of students with higher levels of competence formation in the design of the English language teaching process increased significantly in comparison with the initial cut. For example, before the experiment, there were almost no students whose skill “ability to determine the current level of language and professional training of students” would be assessed as excellent, but at the same time, a low level of formation of this skill was found in 23% of students in GE and 44% of students in the ESP and LSP. After conducting a forming experiment, the number of high-level undergraduates increased significantly, for example, in the aspect of teaching GE, they became 45%, ESP – 51% and LSP – 53%. The same trend is observed in terms of the formation of other abilities, for example, the number of students whose skills “ability to choose from existing information and communication technologies that are optimal for

teaching GE / ESP / LSP” were formed at a high level increased from 14% to 46% (GE), from 0% to 53% (ESP), from 0% to 49% (LSP).

Table 3 Project Competence Diagnostic Results before and after the forming experiment (in %)

Grading scale:	Diagnostic component						Organizational component						Prognostic component					
	Ability to determine the current level of language and professional training of students						Ability to choose from existing information and communication technologies that are optimal for teaching GE / ESP / LSP						Ability to determine the prospects for the development of personal and professional qualities of students					
	GE		ESP		LSP		GE		ESP		LSP		GE		ESP		LSP	
	B	AE	B	AE	B	AE	B	AE	B	AE	B	AE	B	AE	B	AE	B	AE
1	23	0	44	0	44	0	21	0	46	0	48	0	24	0	23	0	34	0
2	33	0	47	0	46	0	28	0	47	0	43	0	35	0	40	0	36	0
3	18	4	9	2	10	4	17	2	7	2	9	5	20	10	35	9	29	8
4	16	51	0	47	0	43	20	52	0	45	0	46	12	49	2	45	1	45
5	10	45	0	51	0	53	14	46	0	53	0	49	9	41	0	46	0	47
Grading scale:	Ability to determine the student' interests, capacities						Ability to differentiate methods to enhance the interest of students, create a positive emotional atmosphere in the classroom						Ability to select the best methods for each student to study GE / ESP / LSP using on-line, e-learning					
	GE		ESP		LSP		GE		ESP		LSP		GE		ESP		LSP	
	B	AE	B	AE	B	AE	B	AE	B	AE	B	AE	B	AE	B	AE	B	AE
	E		E		E		E		E		E		E		E		E	
1	31	0	39	0	49	0	34	0	43	0	45	0	35	0	43	0	43	0
2	40	0	46	0	45	0	36	0	47	0	48	0	38	0	42	0	45	0
3	21	2	11	0	6	2	12	4	10	1	7	4	25	3	15	8	12	5
4	8	50	3	39	0	40	12	49	0	58	0	49	2	47	0	46	0	44
5	0	48	1	61	0	58	6	47	0	41	0	47	0	50	0	46	0	51

In parallel with this, the percentage of students whose skills were rated as “excellent” has increased after the experiment, for example, regarding the skill “ability to determine the prospects for the development of personal and professional qualities of student” there were 9% of students with this level, it became 41% (GE). Using the methods of mathematical statistics, we evaluated the average result for each level of development of project competence in GE, ESP, LSP (Table 4).

Table 4 Average results of the formation of project competence in GE, ESP, LSP (in %)

Level	GE		ESP		LSP	
	Before the experiment	After the experiment	Before the experiment	After the experiment	Before the experiment	After the experiment
1.	28,0	0,0	39,7	0,0	43,8	0,0
2.	35,0	0,0	44,8	0,0	43,9	0,0
3.	18,8	4,2	14,5	3,3	12,3	4,7
4.	11,7	49,6	1,0	46,7	0,0	44,5
5.	6,5	46,2	0,0	50,0	0,0	50,8
Total	100,0	100,0	100,0	100,0	100,0	100,0

As it can be seen from Table 4, before the beginning of the experimental work, two-thirds of the students had a low level of development of project competence in GE

(35,0%), very low level – 28,0%. However, after completing the experimental work, half of the students already had a high level (49,6%), and a very high level – 46,2%.

The third-year students predominantly had a low level of project competence in ESP (44,8%) and very low level (39,7%) However, after the introduction of the stages of project activities and creative tasks, percentage of students with a very high level of this competence has increased significantly (50,0%). At the same time, there were no students with a low or very low level of formation of this competence.

As in the case with GE and ESP, project competence in LSP was formed at a very low level in 43,8% of students, at a low level - in 43,9%. But at a high level, it was not formed in any student. After the experimental work a very high level of this competence was revealed already in half of the students (50,8%).

These obtained results indicate the need to introduce specially designed projects and creative tasks into the process of GE, ESP, LSP, which allow achieving a higher level of development of students' project competence.

4. DISCUSSION

In order to ensure the effective formation of the project competence of undergraduate students, we organized experimental work, which lasted three years. First of all, we offer the following stages of organizing project work: preparatory, technological and reflective.

During the preparatory stage students learn theoretical material, discuss the structure of the project, make a work plan, collect and analyze information. Future professionals are invited to perform the following tasks: study the theoretical material on the topic of project work; make a list of theoretical sources; make a detailed plan-summary on the topic of the research.

At the technological stage students consolidate theoretical knowledge, discuss intermediate results. Variants of tasks of this stage are: develop exercises for the formation of skills of past tenses (at least 3 exercises); make a plan of an original fairy tale, story, etc. Describe in detail the place and time of the action, the heroes of the fictional story. Create and design your fairy tale or story using the past tenses of the English language (at least 4-5 pages).

The final stage of students' project work is reflective. At this stage students are asked to complete the following tasks: prepare for the presentation of your project; analyze the work done: students must evaluate their own work, explain the importance for them of a particular type of work. They find out what goal has been achieved, what skills have been improved.

Based on the presented results we elaborated the set of project tasks for the third-year students of GE. As part of the course "Practical English Grammar" we suggest implementing the project-based activities for the third-year students of the English department of full-time study on the design of the following themes: "Comparative Analysis of the Use of the Past Simple Tense and the Present Perfect Tense in Modern Dialogic Speech", "Comparative Analysis of Past Simple and Past Continuous Tense in Modern English".

According to our observations, these activities have a positive impact on the formation, first of all, of the organizational and prognostic components of project competence.

At the stage of professional training of master's degree students we offered creative tasks. These tasks aimed at developing projects for teaching GE, ESP, LSP were such as organizing

online / offline collective brainstorming, discussions, student scientific and practical conferences with graduate students. For example, a collective brainstorming session “My innovations in teaching GE, ESP, LSP” was held, the purpose of which was to highlight the various issues of innovation in teaching GE, ESP, LSP using the potential of e-learning. This task had a significant impact on the formation of ability to choose from existing information and communication technologies that are optimal for teaching GE, ESP, LSP. In order to develop the abilities related to the diagnostic component students interviewed teachers of higher educational institutions on the problem of increasing the effectiveness of training GE, ESP, LSP. Special attention was paid to the experience of introducing information and communication technologies; students analyzed the results obtained, identified directions for solving this problem which made it possible to form the prognostic component of project competence. Besides, a competition was organized, according to the results of which the most effective innovative teaching methods GE, ESP, LSP were selected and a kind of “bank of creative pedagogical ideas” was organized. In the process of teaching practice, students were asked to develop press conference programs, during which it was supposed to meet with GE teachers. Future lecturers developed questions on topical issues of motivating students to study GE, developing and implementing methods and technologies to organize educational activities for the first year students. Particular attention was paid to the discussion and analysis of innovative methods and technologies that teachers use to prepare students for independent mastery of GE, ESP, LSP, which is especially relevant in the context of the global crisis caused by the pandemic. An on-line discussion on the Structure of Modern ESP Textbooks was organized. In particular, textbooks on “English for navigators / economists / lawyers” were analyzed. Students studied the structure of various textbooks, principles and requirements for the presentation of the content of information of a linguistic and sociocultural nature, made up a typology of exercises for the formation of skills in listening, speaking, reading, and writing. Based on the knowledge gained, they developed their own version of the ESP textbook for a specific level of language proficiency (A1 - C2). This approach made it possible to ensure a higher level of formation of all components of project competence, since future teachers had to diagnose the level of knowledge of students, develop and implement their own exercises, make a forecast of probable difficulties and methods, how to effectively avoid them.

The research perspectives are seen by us in the further development of the system of creative activity of undergraduate and graduate students. Scientific discussions regarding the use of cloud technologies for the formation of project competence of teachers in secondary and higher education will have a great impact on the formation of project competence.

5. CONCLUSION

In the recent years the problem of the formation of future teachers’ project competence has become especially important. The project competence reflects the system of knowledge and skills in detecting the features of the development of each student, the specific properties of interaction and communication in the student team, modern methods and technologies of teaching foreign languages. We have developed a system of interrelated components of this competence (diagnostic, organizational, and prognostic). We carried out a study that involved determining the level of formation of these components of the project competence of students. A low level of this competence was found in GE, ESP, LSP. In order to increase the level of

project competence, we developed the stages of project activities (preparatory, technological and reflective) and creative tasks (organization of online / offline collective brainstorming, discussions, student scientific and practical conferences, development of questions on topical issues of motivating students to study GE, ESP, LSP, implementation of methods and technologies for organizing educational activities of first year students) which, as evidenced by the results of diagnostics, contributed to the formation of future teachers' project competence.

REFERENCES

- Aksela, M., Haatainen, O. 2019. "Project-Based Learning (PBL) in Practice: Active Teachers' Views of its' Advantages and Challenges". In *Integrated Education for the Real World: 5th International STEM in Education Conference Post-Conference Proceedings*. Queensland University of Technology: 9-16. <https://researchportal.helsinki.fi/en/publications/project-based-learning-pbl-in-practise-active-teachers-views-of-i>
- Borisova, E., Letkina, N. 2019. "English for Professional Communication: A Project-Based Approach to Teaching University Students (a Case Study of Music Students)". *Integration of Education*. Vol. 23, No 4: 607-627. DOI: 10.15507/1991-9468.097.023.201904.607-627
- Castañeda, R. 2014. "English teaching through project based learning method, in rural area". *Cuadernos de Lingüística Hispánica*. No 23: 151-170. DOI: 10.19053/0121053X.2344
- Condliffe, B. Quint, J., Visher, M., Bangser, R. Drohojowska, S., Saco, L., Nelson, E., 2017. *Project-Based Learning. A Literature Review*. Working Paper. 78 pp. <https://eric.ed.gov/?id=ED578933>
- Jalinus, N., Nabawi, R., Mardin A. 2017. "The Seven Steps of Project Based Learning Model to Enhance Productive Competences of Vocational Students". *Advances in Social Science, Education and Humanities Research*. Vol. 102: 251-256. DOI: 10.2991/ictvt-17.2017.43
- Ke, L. 2010. "Project-based College English: An Approach to Teaching Non-English Majors". *Chinese Journal of Applied Linguistics (Bimonthly)*. Vol. 33, No 4: 99-112. <http://www.celea.org.cn/teic/92/10120607.pdf>
- Kniazain, M., Khromchenko, O. 2019. "The ESP Lecturers' Self-Development Competence in Higher Educational Context". *The Journal of Teaching English for Specific and Academic Purposes*. Vol. 7 No 3: 385-393. doi.org/10.22190/JTESAP1903385K
- Kotkovets, A. 2014. "An Integrated-Skills Approach to Learning a Foreign Language through the Use of the Project Method". *Advanced Education*. Vol 2: 66-73. DOI: <https://doi.org/10.20535/2410-8286.39736>
- Lee, N. 2009. "Project methods as the vehicle for learning in undergraduate design education: a typology". *Design Studies*. Vol 30 No 5: 541-560. doi:10.1016/j.destud.2009.03.002
- Mushynska, N., Kniazian, M. 2019. "Social Innovations in the Professional Training of Managers under the Conditions of Knowledge Economy Development". *Baltic Journal of Economic Studies*. Vol. 5 No. 2: 137-143. doi.org/10.30525/2256-0742/2019-5-2-137-143

- Redchenko, N. 2016. "Project Activities as a Form of English Language Teaching Based on the Interdisciplinary Approach to Form Intercultural Communicative Competence". *International Journal of Environmental & Science Education*. Vol. 11, No 13: 6203-6211. <https://files.eric.ed.gov/fulltext/EJ1115513.pdf>
- Tarnopolsky, O. *Constructivist learning approach: to teaching English for specific purposes*. London: Walter de Gruyter, 2012: 146.