







# Expanding Opportunities for Professional Development through the Use of Integrated Teaching

Svitlana V. Bodnar<sup>1</sup><sup>a</sup>, Viktor V. Koval<sup>2</sup><sup>b</sup>, Nataliia V. Stuchynska<sup>3</sup><sup>c</sup>, Tetiana M. Lesina<sup>4</sup><sup>d</sup>,  
Larysa V. Filippova<sup>3</sup><sup>e</sup> and Antonina V. Kichuk<sup>4</sup><sup>f</sup>

<sup>1</sup>*Odesa Institute of Trade and Economics of Kyiv National University of Trade and Economics, 6 Inglezi Str., Odesa, 65070, Ukraine*

<sup>2</sup>*National Academy of Sciences of Ukraine, 54 Volodymyrska Str., Kyiv, 01030, Ukraine*

<sup>3</sup>*Bogomolets National Medical University, 13 Shevchenko Blvd., Kyiv, 01601, Ukraine*

<sup>4</sup>*Izmail State University of Humanities, 12 Repina Street Str., Izmail, 68601, Ukraine*

**Keywords:** Integrated Teaching, Non-Linguistic Schools, Knowledge, Foreign Language Proficiency.

**Abstract:** The article highlights the problem of introducing integrated teaching the students majoring in economics in the educational process of Ukrainian tertiary non-linguistic schools. It presents the peculiarities of the immersion into a foreign language environment arising from the acquisition of the professional knowledge in a foreign language. Some strategies for integrated teaching are suggested: 1) systematic repetition of the linguistic and professional material; 2) use of each language unit, which is under study, in its maximum possible linguistic and professional environments and in the connection with the previously learned material; 3) implementation of a major subject (Microeconomics) and a foreign language (English) integration in the educational process of Ukrainian tertiary schools. The programme duration was 4 months. A total of 90 students majoring in economics participated in the programme of integrated teaching. After the completion of the programme the students' professional knowledge and foreign language proficiency were assessed and their feedback collected and analyzed. Data were obtained from pre-and-post assessment tests of language and professional proficiency. Results indicated the effectiveness of the suggested educational strategies, the use of which provided a possibility of the transition from training period to a real professional communication.

## 1 INTRODUCTION


The current stage of the society development is characterized by a rapid flow of information in many previously existing areas of knowledge, as well as in the “newly-born” scientific fields. Providing students with knowledge of new discoveries in these fields of science, technology and production, without violating young people's interests in studying the fundamental laws of nature, society and humanity development, which were included in the curricula of the past, can't be implemented because of the impossibility of aca-


demical hours increase at universities.


Therefore, the way to resolve the contradiction between the constantly-increasing flows of information and the lack of time for its mastering, the scholars see in the process of merging adjacent areas of knowledge into one subject integrity. It will allow students achieving the highest level of skills development in two activities: a professional activity and a foreign language speech activity. Moreover, this idea is being deepened and updated nowadays due to the growing need in highly-qualified specialists who should be able to implement their professional skills in a foreign language.


The choice of this direction of study is based on the Conceptual Principles of State Policy for the English language development in Ukrainian higher education establishments from 13.07.2019 which emphasize the importance of English for enhancing people's educational and professional opportunities

<sup>a</sup> <https://orcid.org/0000-0002-9890-327X>

<sup>b</sup> <https://orcid.org/0000-0003-2562-4373>

<sup>c</sup> <https://orcid.org/0000-0002-5583-899X>

<sup>d</sup> <https://orcid.org/0000-0002-7923-2247>

<sup>e</sup> <https://orcid.org/0000-0001-7836-4355>

<sup>f</sup> <https://orcid.org/0000-0002-2657-661X>

(mon.gov.ua, 2019). In our opinion, such an organization of professional training in English should contain an invariant component in order to take into account the following: the content of the professional discipline; the level of professional knowledge of this discipline and the proficiency in English as a means of teaching it; definite methodological actions of integrated teaching two disciplines; the previous foreign-language linguistic experience of learners.

There are many research works examining the specifics of integrated teaching implementation at education systems in different countries: Poland (Czura et al., 2009; Leshchenko et al., 2018; Papaja, 2013), Germany (Dallinger et al., 2018; Hallet, 2015), Denmark (van Kampen et al., 2020); Spain (Ardeo, 2019; Marsh, 2013; Merino and Lasagabaster, 2018); Latin America (McDougald, 2016); North America (Maguire-Fong and Mangione, 2016); India (Doraisamy and Radhakrishnan, 2013); Kazakhstan (Dontsov and Burdina, 2018); China (Xiao, 2016). But despite the fact that all education systems have their own specific features of integrated teaching implementation, all scholars stress that such integrated technique works successfully in every educational environment.

It should be stressed that nowadays in the world there are more and more English undergraduate programmes for the students who would like to increase their competency in a foreign language and a major subject offered by European Universities. These programmes turned out to be not only popular but became a strategic means of education internationalizing.

The research "English-language Bachelor's programmes: internationalization of European higher education" conducted by the European Association for International Education (EAIE) and the Study Portals (Sandstrom, 2018) in 2017 showed that 33% out of 2317 respondents indicated education in a foreign language as a priority area of internationalization of University educational programmes. However, the number of English-language undergraduate programmes varies greatly across countries. EAIE has studied 19 European countries and analyzed: the number of English-taught bachelor's programmes (ETB); the number and percentage of higher educational institutions (HEIs) offering ETBs in each country to see if the programmes were limited to a few institutions or were more widespread; share of HEIs offering ETBs. According to the obtained data, the leading countries which have English-language undergraduate programmes are the following: Turkey (545 programmes), the Netherlands (317), Denmark (159), Switzerland (134), Poland (131), France (95). The

smallest number of English-language undergraduate programmes is in Romania (32).

Among the most common areas where the education is taught in English are the following: business, management, social sciences and engineering. If to compare the quantity of the countries which offer professional programmes in English, then the leaders are the following countries: the Netherlands (42), France (41), Poland (40), Switzerland (35), Turkey (32), Denmark (23). The smallest number of universities is again in Romania (8). A different picture emerges when we assess the relative share of universities offering English-language education. In Switzerland almost all universities offer programmes in English, so this country can be called the place with a maximum degree of penetration of English-language education. Then Turkey has 94%, the Netherlands and Denmark follow having 75% and 70% of such universities respectively. The lowest percentage of universities offering professional education in English is in Poland (14%), France (13%), Romania (9%).

Thus, from figure 1 it is seen that in spite of different number of universities offering ETB and the English-taught bachelor's programmes in the above-mentioned countries, integrated teaching is rather popular in European higher education institutions. And the students willingly enrol into them preferring to study not only in the economically stabilized countries such as: Switzerland, the Netherlands, Denmark but also in the countries with low income, for example, Romania or in the economically unstabilized countries, for example, Turkey, only to have a chance to master their profession in a foreign language and to have more chances to integrate into the world community.

Concerning such well-developed European country as Germany, the first programmes of integrated teaching in English appeared in 1990s through the dominance of the English language in international communication. Germany has adopted the subject centred curriculum approach with emphasis on learner-centred tasks in instruction. In the subject-centred curriculum, courses are divided as separate subjects or disciplines but interdisciplinary approaches are also enabled. Nowadays integrated teaching in English is being implemented in many secondary schools in Germany, and a growing number of studies seem to confirm it as a valuable addition to more traditional programmes of language teaching.

The course is intended as an introduction to this field of teaching certain school subjects (providing examples from a range of subjects, e.g. geography, history, politics and biology) through the medium of English. It is estimated that 20000 secondary school

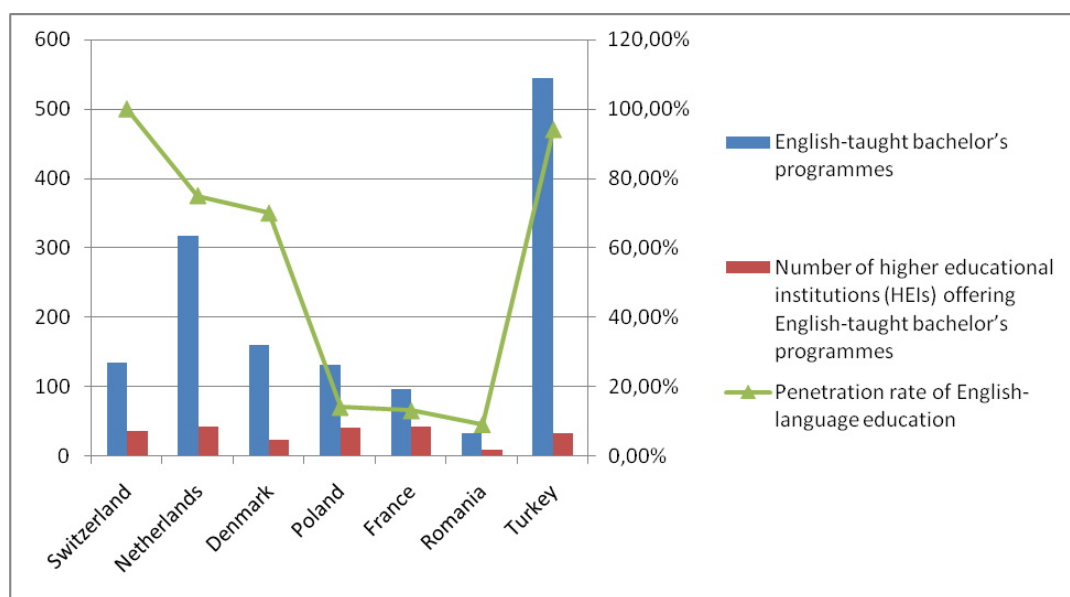


Figure 1: Integrated teaching penetration into European higher education.

students study content subjects in a foreign language. But such great introduction of integrated teaching can be found only in secondary schools (Grenfell, 2002). Speaking about universities, we can say that there are currently only a limited number of undergraduate English-language programs at top universities in Germany. Due to the scarce nature of these programs, if a student really wants to study at a leading university, he may have to be a little bit flexible on his choice of program.

According to the data of QS World University Ranking 2020 ([www.topuniversities.com](http://www.topuniversities.com), 2021), there are only 9 leading universities in Germany which offer a bachelor-level degree program taught in English allowing international students to study for a Bachelor of Arts (BA) or a Bachelor of Science (BSc), depending on their major, among them there are such universities as: Universität Freiburg, Frankfurt School of Finance and Management, Karlsruhe Institute of Technology, Georg-August-Universität Göttingen which have a strong international reputation.

So, we can indicate that the decisions in educational policy always have their own effect in different countries. That's why the content and language integration is applied in different countries in different ways. There is no model for export. Despite a great popularity of integrated teaching in the world, Ukrainian Universities don't participate in the international competition offering ETBs to students and still have curricula where major subjects and a foreign language are taught according to different syl-

labi, not having interdisciplinary connections. Regrettably, there is a small number of tertiary schools in Ukraine, which not only suggest integrated learning but also implement it into practice. To our mind, such situation occurs in tertiary schools in Ukraine due to the following points: lack of teachers who are literate in three domains: a major subject, a foreign language and a teaching integrated strategy that confirms the idea of He and Lin (He and Lin, 2018) stating that for content and language integrated teaching a special kind of teacher with integrated content knowledge and knowledge about language should work (He and Lin, 2018); absence of subject textbooks in a foreign language adapted for non-native speakers and pedagogical guidelines how to teach parallel non-linguistic and linguistic disciplines; students' insufficiency of the prior linguistic experience. Smit and Dafouz (Smit and Dafouz, 2012) state that process of integrated learning / teaching will become better in the future, as a new generation of students and teachers mastering in foreign languages appears in higher education.

The tendency of different subjects integration into one unity has already been under consideration of Ukrainian scholars. There are research works examining the content and language integrated teaching for future: ecologists (Kordonova, 2014), psychologists (Petrova et al., 2020), engineers (Popel, 2015), technical students (Martín del Pozo, 2015), economists (Kostetska et al., 2020; Luchaninova et al., 2019), medical students (Bhardwaj et al., 2015), mathematicians (Martínez and Dominguez, 2018; Lazorenko, 2016), physicians (Merzlykin et al., 2018), seafar-

ers (Litvinenko, 2015; Primina, 2017) etc. However, in all these works the accent was done mainly on some English teaching points: how to make presentations of technical equipment; how to make oral professionally-oriented speech; how to read drug prescriptions or sailing directions. It did not solve the existing contradiction between the needs of the University graduates to use English to acquire new knowledge in the professional sphere and communicate in fluent English beyond the environment of integrated learning and their real language proficiency.

We consider that the achievement of such task will be mostly facilitated by the procedural integration of professional and foreign language activities. According to Tarnopolsky (Tarnopolsky, 2018), integration is a process that ensures parallel acquisition of knowledge from certain non-linguistic disciplines together with the acquisition of the target language and the skills of communicating in it. Integrated teaching is defined by Snow et al. (Snow et al., 1989) as training in which the emphasis shifts from isolated language teaching for professional communication, to association, integration, language acquisition with the study of special disciplines (Spanos, 1989). As for procedural integration, we, following the ideas of Martynova (Martynova, 2016) and Nenkov et al. (Nenkov et al., 2017), regard it as the synthesis of teaching processes of different subjects, the contents of which are not merged into a single unity, but must be learned during one educational process at the same period of time and with the pedagogical efforts of the same teachers. Its dual-focused character is considered to be a challenge both for teachers and students as it represents a combination of learning a major subject context and a foreign language.

However, you should keep in mind that one of the subjects under study should not have its own semantic content in order not to conflict with the subject that carries the main semantic load. It needs mentioning that any professional subject and a foreign language can form a methodical symbiosis. And as a result of this symbiosis, a natural foreign language environment arises. The major subject is taught in a foreign language.

All elements of the teaching process, namely: the introduction of a new material, the interpretation of new concepts, the perception of the lecture topic and its note-taking, the key points understanding, implementation of practical actions based on the perceived and comprehended lecture information, revision of the lecture content, performance of creative tasks on the basis of the acquired knowledge are carried out in a foreign language.

Thus, in the procedural integration, a foreign lan-

guage environment is created not for performing individual educational activities, but for acquiring educational and professional knowledge and developing on its basis the corresponding skills by means of a foreign language. Therefore, we consider it advisable to analyse this aspect in detail.

The *aim* is to define and characterise the strategies of integrated teaching a major subject and a foreign language to students majoring in economics at Ukrainian tertiary non-linguistic schools. The tasks are:

- 1) to study the existing ways of integrated teaching and determine their advantages and disadvantages;
- 2) to offer the methodological strategies for integrated teaching a major subject and a foreign language to students majoring in economics;
- 3) to determine the integrated teaching stages;
- 4) to evaluate the effect of integrated teaching a major subject and a foreign language on the education outcome achieved by students.

## 2 METHODS

The research involved the following scientific methods: the comparison and system analysis of psychological, pedagogical, methodological sources, education process monitoring, pilot integrated training students majoring in economics at Ukrainian tertiary non-linguistic schools, work with the author's course for economists "Global economic problems of today and ways to solve them" (Baklanova et al., 2020), describing the experimental stages, processing the experimental data obtained, students' questioning. Thus, the relevance of the study is based on the needs to train future economists, capable to communicate fluently in English on the professional topics.

### 2.1 Participants

Following the author's integrated course for economists "Global economic problems of today and ways to solve them", the students have got an opportunity to create a stable basic professional vocabulary to be able to use each language unit, which is under study, in its maximum possible linguistic and thematic environments; to develop foreign language communicative and professional skills.

In order to prove the efficiency of the offered integrated course we chose 2-nd-year students majoring in finance who studied at Odesa Trade and Economics institute of Kyiv National University of Trade

and Economics and Odesa National Economic University. Before the experimental teaching the students were given the language tests to define their level of knowledge in English. The students, who were chosen for participating in the experiment, had the initial levels of the English knowledge proficiency B1-B2 according to CEFR (Council of Europe, 2001). A total of 90 students participated in the programme of integrated teaching.

The course lasted 1 semester (2018–2019) and had 56 hours of in-class activities along with 50 hours of out-of-class work. The classes were held 2 times a week. The work was conducted at the major subject classes according to the syllabus. But the teaching was done in the English language. As it is still an experimental research, it means that no extra time was added to the educational process. Thus, our intention was to save time for learning two disciplines simultaneously and to connect these disciplines reducing the gap between the professional subject and a foreign language which are usually taught separately in the Ukrainian Universities therefore the students are not always able to combine these two pieces of knowledge into one unity.

With the purpose of comparing the efficiency of different ways of teaching the professional English language all students were divided into two groups: experimental (our teaching strategies) and control (here the students learned their major subject in the native language and had English classes studying by course book “English for Economists” by Aghabekyan and Kovalenko (Aghabekyan and Kovalenko, 2004)). The difference in their studying was in the content and character of educational activities, educational texts and the balance of different kinds of work at the lesson.

At the beginning of the research work a structured questionnaire was used as an instrument for data collection. The purpose was to find out the students’ attitude to the integrated teaching course. 90 students of the 2-nd course were questioned.

There were 6 questions which included such items:

1. How do you understand the word “integration”?
2. Do you know what an integrated teaching means?
3. What subjects can be integrated?
4. Have you already had any experience of integrated teaching at university?
5. Would you like to attend integrated classes?
6. Is it important to have a good command of English to attend integrated classes?

On the basis of the questionnaire the following answers were obtained. As for the first question practically the students gave a bit different but correct answers how they understood the word “integration” in general. For example, “Integration is the act of bringing together smaller components into a single system that functions as one unity” (40%), “Integration is a process of combining or coordinating separate elements so as to provide a harmonious, interrelated whole” (30%), “Integration is the action or process of combining two or more things in an effective way” (15%), “Integration occurs when separate people or things are brought together” (10%). And 5% of respondents didn’t answer at all.

The second question about “integrated teaching” was understood by 70% of students and 30% were not sure that they were aware of this term. Some students referred to a way of connecting skills and knowledge from multiple sources and experiences (30%), The other part of students said that it meant applying skills and practice from different subjects (25%). The following respondents answered that it simply meant bridging connection between academic knowledge and practical work (10%). The smallest number of students pointed out that it was defined as the organization of teaching matter to interrelate the subjects which are frequently taught in separate academic courses or departments (5%).

Answering the third question the students mentioned different subjects, among them there were some foreign languages, for example, English and German or English and Spain (50%), music and literature (20%), music and fine arts (15%), literature and culture (10%), physics and astronomy (5%). Answering the fourth question all the students declared that they did not have such experience at University. But 5% of students mentioned that they had such an experience at school.

The fifth question confirmed the wish of the students to attend the integrated classes: 90% said that they would willingly attend such classes, 10% were indifferent. And the sixth question showed that all the respondents (100%) understood the importance of knowledge of a foreign language to attend integrated classes especially if the lectures are given in English.

Thus, on the basis of the questionnaire the conclusion about the students’ aspiration to have an integrated course of teaching at their University was drawn that proved the necessity of introducing the integrated teaching into the educational process.

## 2.2 Apparatus and Materials

The research was based on the author's integrated course "Global economic problems of today and ways to solve them" designed for the 2-nd-year students. The theoretical major discipline "Microeconomics" was the basis of it. It comprises such topics as: "Introduction to microeconomics; Market economy system; Supply and demand; The production of economic benefits; Production costs and profits; Market models; Labour market; Income distribution; Capital and Land Markets" which were specially prepared for students by the lecturer of this subject, translated into English and checked up by the native speaker. It has the same material on "Microeconomics" that the students learned at their professional classes but in a concise variant. As for the methodological point of view the course provided the constant use of the lexical material under study in various semantic aspects in speech that is repeated from text to text. New lexical units from the first theme were involved into the second theme, new lexical units from the second theme – to the third theme, etc. They were used in different contexts and in various derivative forms (for example, to compete – competition – competitor – competitive), thus ensuring their multiple repetition, that is considered obligatory for the complete mastering of lexical material, according to Martynova (Martynova, 2016) theory because it does not allow words to be forgotten. The speech material increases from text to text, both in volume and in content. New words from all the following topics are added to the general list of words and also begin to be repeated from lessons to lesson. Such organization of the speech material helps the effective memorization of the linguistic units under study, their relatively complete mastering and the possibility of their use in various types of speech activity.

## 2.3 Procedure

The integration of a major subject and a foreign language is recommended to be implemented at three stages of the educational process. It requires definite strategies to maximise the students' mastering at each stage.

Training at the first stage is aimed at mastering the foreign language vocabulary with the help of which the major subject is expressed in English. This step is proved by the words of Cenoz (Cenoz, 2015) who indicates that the language of the subject content should be accessible and understandable to provide mutual interaction. The parts of the subject content and the sequence of their learning are determined by the

teachers of the definite subject. Therefore, all foreign language activities in both the semantic and methodological aspects depend on the essence and scope of each part of the subject material under study. However, from the beginning of the integrated teaching, the knowledge of the foreign language means, with the help of which the subject content is expressed, is very limited, and the presentation of the professional information in a foreign language turns out to be impossible. That is why the speech potential of a foreign language at this stage is low. It corresponds only to the ability to perceive and comprehend the conceptual apparatus of the definite part of the theme, to explain the essence of the presented terminology and to demonstrate its understanding in mini-texts.

A foreign language dominates at this stage and is considered to be an educational objective. The professional subject is considered to be an educational means. Language units are extracted from the content of the major subject. At the language level, the units to learn are terms and set lexical and grammatical expressions. At the speech level, there are sentences with the help of which the concepts under study are interpreted, the essence of the laws under study is clarified, the meaning of any professional action is explained.

As for the methods of teaching, it is recommended to use the following ones at this stage:

- 1) presenting new professional concepts (for example, "expenditure, profits, revenue, bonus issue") using different techniques: a semantic concept map, multimedia presentation, explanation, demonstration the words use in different professional environments;
- 2) note-taking new concepts marking them with different colours;
- 3) defining new concepts;
- 4) comparing existing definitions of one concept given by different scholars;
- 5) explaining the difference in the formulations of one concept;
- 6) demonstrating the examples of use in different linguistic professional environments;
- 7) compiling semantic tables;
- 8) guessing the terminological riddles / crosswords;
- 9) writing the terminological dictations;
- 10) watching mini-video fragments selected by teachers where the new words are used in professional contexts.

The following visual aids must be obligatory used at this stage of teaching: tables, schemes, economic charts, multimedia.

Training at the second stage is aimed at perceiving and understanding the main content of the subject material under study presented in a foreign language. This professional material must not contain unfamiliar linguistic phenomena that allow students perceiving the material freely (the initial presentation of professional information occurs orally in the form of an interactive lecture). The integrated nature of such methodological actions is manifested in the simultaneous mastering of two subjects. On the one hand, students receive professional (major subject) knowledge, and on the other hand, they develop foreign language skills.

Thus, at the second stage, we have both educational and foreign language speech activities which act parallel. A foreign language and a subject of professional activity act both as an educational objective and educational means.

Educational activity as an objective is developing better at the expense of the subject knowledge, which is acquired by using a foreign language; and as a means, it presents a source of content for foreign language functioning. That is why the speech unit of teaching is a subject-oriented lecture material at the beginning, and then a written text, which, during the increase of the educational activities potential gradually reduces its level of adaptability to complete authenticity in the process of integrated teaching.

As for the synthesized methods of teaching, at the second stage it is recommended to use the following:

- 1) an oral presentation of foreign language lecture material;
- 2) note-taking of lecture material;
- 3) short answering to the questions on the text of lectures;
- 4) detailed answering to the questions on the text of lectures;
- 5) tests for understanding the material of the lecture;
- 6) reading a printed version of the text of the lecture;
- 7) writing down the main items of the lecture material;
- 8) analysis of the economic tables and diagrams;
- 9) having a talk on the content of the lecture;
- 10) watching a fragment of the recorded authentic version of the lecture from London Business School on the same topic.

The following visual aids must be obligatory used at this stage of teaching: tables of digital indicators of economic processes, schemes of economic processes, formulae for calculating economic efficiency, detailed plans of lectures (Baklanova et al., 2020).

Training at the third stage is aimed at the simultaneous development of skills for the practical application of professional and foreign language knowledge. The speech potential of a foreign language at this stage grows up to such an extent that it is used as a means of improving professional knowledge, as well as a means of using it in the practical training. At the same time, the students don't have to concentrate on the form of their thoughts but have to do it blindfolded. This fact, in its turn, allows having a complete focus on the content of the subject under study. Therefore, at this stage, a foreign language loses its targeted use. The educational activity, on the contrary, assumes the main accent. At this stage, two activities are equally implemented: educational – dominant and foreign-language – supporting. The educational action is planned, carried out and evaluated by means of a foreign language.

As for the synthesized methods of training at the third stage it is recommended to use the following:

- 1) searching new additional information on the topic under study, choosing the most important items and presenting them as a connected text;
- 2) describing textual and graphical information of economic indicators;
- 3) expressing opinions on a professional topic;
- 4) solving problem tasks and commenting on the process of their solutions;
- 5) modelling the real professional situations and their dramatizing;
- 6) preparing and presenting the report on the current economic situation in the country;
- 7) implementing the project tasks on the definite topic;
- 8) interviewing the representatives of financial structures;
- 9) conducting meetings with the leading specialists of the enterprises;
- 10) work with electronic cases based on the authentic documentation of the enterprises as a practical application of the obtained knowledge.

The following visual aids must be obligatory used at this stage of teaching: economic documents, graphs, tables, diagrams with digital information, video presentations, illustrating slides, electronic cases.

### 3 RESULTS AND DISCUSSION

The main indicators of the effectiveness of the offered strategies of integrating a major subject and a foreign language were the following: the quality of the foreign language proficiency, the quality of the professional economic knowledge mastering and the quality of the English speech development.

According to the results of the pedagogical experiment, we have found out that the students who were placed in the Experimental Group (EG), have achieved better results than the students of the Control Group (CG). They have progressed in developing their integrated skills and mastering:

- 1) professional terminology in English;
- 2) professional economic knowledge that corresponds to the content of their major subject;
- 3) fluency of the English-language speech (perceiving and understanding the English speech; producing a coherent, logical, lexically and grammatically correct English speech).

To measure the students' knowledge and skills, the assessment test was conducted. The following criteria were chosen: 1) linguistic (ability to produce adequately generally-used lexical units, economic terms / notions under study, terminological phrases and separate sentences on a certain professional topic and to find equivalents from their mother tongue) – maximum 30 points; 2) professional (the ability to understand and reproduce professional information in English according to the theme under study) – maximum 30 points, 3) communicative (the ability to communicate in English on the professional theme without preliminary preparation) – maximum 40 points. The indicators of assessment criteria of students' skills were measured by means of 100 scores according to the ECTS scale that uses gradation of A, B, C, D, E, F. The obtained data were analysed using Microsoft Excel.

The pre-test was held during class time at the beginning of the school year (September 2018). It was based on the English linguistic material and the professional topics that the students had learned the previous year according to their University curriculum. Ability to produce adequately the linguistic material under study was verified by means of translating the word combinations and sentences: a) from the English language into the mother tongue, that corresponds to receptive lexical knowledge; b) from the mother tongue to the English language, that corresponds to reproductive lexical knowledge. The following results were obtained: the average score of linguistic proficiency of the EG students was 50%, CG

students – 51%.

The presence of professional economic knowledge was verified by means of doing the professional tests in English: a) to choose the correct answer of the given ones, b) to choose the odd variant of 4 given items, c) to explain in English the given professional terms or phenomena. According to the second criterion, the average score of EG students was 35%, CG students – 36%.

The ability to communicate in English on the professional themes was tested by means of such tasks: 1) to answer the teacher's questions on the professional topic, using the correct English language material and showing the professional knowledge; 2) to describe in English the professional information which is presented in a diagram/graph; 3) to compose a short report on one of the themes under study and reproduce it in English (not more than 10 sentences). The answers of the students were fixed by means of recording and later examined by the researcher and his assistants. According to the third criterion, the average score of EG students was 40%, CG students – 42%.

Table 1: Pre-test comparing EG and CG results, %.

Group	Linguistic	Professional	Communicative
EG	50	35	40
CG	51	36	42

The pre-test indicated approximately the same initial level of EG and CG students' language proficiency skills and professional skills.

At the end of the research the post-test on the students' integrated skills in English to prove the validity of the offered teaching strategies, was conducted. The students of EG and CG performed the identical tasks on the topics which both groups learned during the semester. The results are shown in table 2.

According to the linguistic criterion, 75% of EG students demonstrated the ability to produce adequately the linguistic material under study and 60% of CG students did it. According to the second criterion, 78% of EG students demonstrated the ability to understand and reproduce English professional information according to the theme under study and only 45% of CG students succeeded in it. According to the third criterion, 77% of EG students demonstrated the English speech development and only 58% of CG students succeeded in it.

The tasks that the students fulfilled according to

Table 2: Post-test comparing EG and CG results, %.

Group	Linguistic	Professional	Communicative
EG	75	78	77
CG	60	45	58



the third criterion at the post-test:

- 1) to answer 5 teacher's questions on the professional topic "Market economy system", using the correct English language material and showing the professional knowledge;
- 2) to describe in English the professional information which is presented in the given: "Cash" = 25000 ("Payments for wages") + 3500 ("Receivable of accountable persons") + 500 ("Administrative expenses") = 29000;
- 3) to compose a short report on one of the themes under study and reproduce it in English, for example, "Give the analysis of the financial system in the USA, the United Kingdom and Ukraine".

Judging on the obtained results it can be stated that there were differences between pre-test and post-test among all the groups of the research. From the post-test results of table 2, it is evident that the coefficient of learning was greater than 0.7 (70%) in EG in all the criteria (they were the following: 1 – 75%, 2 – 78%, 3 – 77%).

While the coefficient of learning in CG in all the criteria was lower than 0.7 (70%) (they were the following: 1 – 60%, 2 – 45%, 3 – 58%). The obtained outcomes of EG proved the effectiveness of the integrated teaching and its positive influence on professional knowledge development and foreign language proficiency. That means, according to Bepalko's knowledge diagnostics, the test is considered passed when the coefficient is  $> 0.7$ . It is considered reliable (Bepalko, 1989). The summarized comparative results are presented in table 3.

These summarized comparative results show differences between pre-test and post-test among all the groups of the research and make it possible to draw a conclusion that integrated teaching the English language and a major subject to the students majoring in economics improves the students' foreign language communication skills and professional skills.

At the end of the semester, the final questionnaire concerning the students' attitude to the conducted integrated teaching course was carried out. There were 4 questions which included such items:

1. How can you evaluate the conducted integrated course? (positive / indifferent / negative)
2. What positive things can you name after studying?
3. Did you understand the major material in English?
4. What difficulties did you experience?

On the basis of the questionnaire the following answers were obtained. As for the first question, 95%

of students positively evaluated the integrated teaching technique (55% emphasized that they improved both language proficiency and professional knowledge; 23% stated that they started to understand the subject content much better; 9% said that they could easily make a professional report in English; 8% answered that they had already used English while interacting with foreign colleagues) and only 5% showed an indifferent attitude.

As for the second question, the positive things that students can name after studying are the following: increased motivation for learning English to understand the professional material in a foreign language (40%); dual-focused character of the teaching process (25%); unusual experience (20%); the feeling of self-perfection (10%); nothing interesting (5%).

As for the third question, the students gave such answers: I understood practically everything (15%), I understood the most part of the material (20%); I understood half of the material (40%); I experienced difficulties in understanding but I got the general ideas (20%); I understood practically nothing (5%).

As for the fourth question concerning experienced difficulties, the students mentioned such things: problems in listening to the material in a foreign language though in a written form I understood practically everything (45%), problems in quick writing the lecture in English (35%), problems in fluent answering in front of the group in a foreign language (20%).

Thus, the questioning also showed the effectiveness and the need of introducing integrated teaching into the educational process of Ukrainian tertiary schools. It should be noted that the final questionnaire acted only as a supportive means of proving the validity of the experiment and helped the researchers in evaluating the students' attitude to integrated teaching.

The obtained results give grounds to consider the developed strategies of integrated teaching both efficient and technological. Thus, during the experiment, the following strategies of the integrated teaching were set: 1) a systematic repetition of the linguistic and professional material; 2) the use of each language unit, which is under study, in its maximum possible linguistic and professional environments and in connection with the previously learned material in all kinds of speech activity; 3) the implementation of a major subject and a foreign language integration in the educational process of Ukrainian tertiary schools by means of three-stage work. At the first stage a foreign language dominates and is considered to be an educational objective; the subject of professional activity acts as an educational means. At the second stage a foreign language and a subject of professional

Table 3: Post-test comparing EG and CG results, %.

Group	Linguistic		Professional		Communicative	
	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
EG	40	75	35	78	40	77
CG	41	60	36	45	42	58

activity act equally as an educational objective and an educational means. At the third stage the professional activity completely dominates over the foreign language activity and a foreign language only supports the professional activity performing.

Analyzing the existing points concerning integration content, it should be noted that Taillefer (Taillefer, 2013) states that language and non-language content do not dominate of one over the other; it is in balance, so that students could share their efforts and interests equally but the language needed depends on the content. Cenoz (Cenoz, 2015) on the contrary indicates that cognition competence should prevail over linguistic competence. We partially agree with both statements because in our opinion, the aim of the foreign language learning is not identical during the whole education period: at the first stage of learning, a foreign language dominates and is considered to be a main educational objective, at the second stage – both a foreign language and a major subject are in balance and don't dominate of one over the other; at the third stage – the situation changes cardinally, the subject content becomes a main educational objective and a foreign language starts playing only a supportive role.

This idea is disclosed by Gierlinger (Gierlinger, 2007) who identifies three issues of language: the language of learning; the language for learning and the language through learning. It means that the communication and language learning go far beyond just learning grammar rules or vocabulary and have different objectives at different stages of education. We completely support this idea and proved its validity and reliability by the present research.

## 4 CONCLUSIONS

The detailed analysis of scientific literature shows that integrated teaching has become an integral part of modern educational tendencies both in Ukraine and in the world, offering a wide range of possibilities for students. Such method opens up a new horizon for improving the Ukrainian education system and attention to diversity, as it provides resources and teaching aids with enormous potential for enhancing non-linguistic students' training.

The integration of a major subject and a foreign language is recommended to be implemented at three stages of the educational process. It requires definite strategies to maximise the students' mastering at each stage.

Having analyzed the existing ways of integrated teaching, the following advantages of its use were found out: raising learners' linguistic and professional competence without spending extra time to teaching two different subjects; increasing students' motivation to learning foreign languages and reflections on their professional experience; developing learners' cognitive flexibility, communication skills, professional interaction proficiency, and thus enhancing future economists' employability for the labour market and their chances to integrate into the world community.

Speaking about the methodological strategies, the following ones were developed and introduced into practice: a systematic repetition of the linguistic and professional material; the use of each language unit, which is under study, in its maximum possible linguistic and professional environments and in connection with the previously learned material in all kinds of speech activity; the implementation of a major subject and a foreign language integration in the educational process of Ukrainian tertiary schools by means of three-stage work. At the first stage a foreign language dominates and is considered to be an educational objective. At the second stage a foreign language and a subject of professional activity act equally as an educational objective and an educational means. At the third stage the professional activity dominates over the foreign language and the latter one only supports it.

Despite a great popularity of integrated teaching in the world, Ukrainian Universities don't participate in the international competition offering ETBs to students and still have curricula where major subjects and a foreign language are taught according to different syllabi, not having interdisciplinary connections.

Evaluating the effect of integrated teaching by the obtained results it was noted that all the students of the experimental group got more than 70% of the average score of in all the criteria: linguistic (75%), professional (78%) and communicative (77%) demonstrating good listening and speaking skills, knowledge of economic terminology, the terms variation and com-

bination, skills of producing linguistic units at the level of the word, phrase and text within the scope of the material under study. The students were able to solve professional communicative tasks. In addition to mastering a foreign language, the students received profound professional knowledge in Microeconomics.

We see the perspectives of our future research in organizing the process of integrated teaching using computer-based learning technologies as a means of intensification of the teaching process.

## REFERENCES

- Aghabekyan, I. and Kovalenko, P. (2004). *English for Economists*. Phenix, Rostov-na-Donu.
- Ardeo, J. M. G. (2019). (In)compatibility of CLIL and ESP courses at university. *Language Value*. <https://www.e-revistas.uji.es/index.php/languagevalue/article/view/4774>.
- Baklanova, O., Petrova, M., and Koval, V. (2020). Institutional transmission in economic development. *Economic Studies*, 29(1):68–91.
- Bespalko, V. P. (1989). *Components of educational technology*. Pedagogy, Moscow.
- Bhardwaj, P., Bhardwaj, N., Mahdi, F., Srivastava, J. P., and Gupta, U. (2015). Integrated teaching program using case-based learning. *International Journal of Applied and Basic Medical Research*, 5(1):24–28.
- Cenoz, J. (2015). Content-based instruction and content and language integrated learning: the same or different? *Language, Culture and Curriculum*, 28(1):8–24.
- Council of Europe (2001). Common European Framework of Reference for Languages: learning, teaching, assessment.
- Czura, A., Papaja, K., and Urbaniak, M. (2009). Bilingual education and the emergence of CLIL in Poland. In Marsh, D., Mehisto, P., Wolff, D., Aliaga, R., Asikainen, T., Frigols-Martin, M. J., Hughes, S., and Langé, G., editors, *CLIL practice: Perspectives from the field*, pages 172–178. University of Jyväskylä. [https://research.nu.edu.kz/ws/portalfiles/portal/16933776/CLIL\\_Practice\\_Perspectives\\_from\\_the\\_Field.pdf](https://research.nu.edu.kz/ws/portalfiles/portal/16933776/CLIL_Practice_Perspectives_from_the_Field.pdf).
- Dallinger, S., Jonkmann, K., and Hollm, J. (2018). Selectivity of content and language integrated learning programmes in German secondary schools. *International Journal of Bilingual Education and Bilingualism*, 21(1):93–104.
- Dontsov, A. S. and Burdina, E. I. (2018). Educating teachers for content and language integrated learning in Kazakhstan: Developing positive attitudes. *Problems of Education in the 21st Century*, 76(2):140–158. <http://www.scientiasocialis.lt/pec/node/1117>.
- Doraisamy, R. and Radhakrishnan, S. (2013). The effectiveness of integrated teaching over traditional teaching among first year MBBS students: A preliminary Study. *Medical Journal of Dr. D.Y. Patil University*, 6(2):139–141. <https://www.mjdrdyu.org/article.asp?issn=0975-2870;year=2013;volume=6;issue=2;spage=139;epage=141;aualast=Doraisamy;t=6>.
- Gierlinger, E. M. (2007). Modular CLIL in lower secondary education: some insights from a research project in Austria. In Dalton-Puffer, C. and Smit, U., editors, *Empirical Perspectives on CLIL Classroom Discourse*, pages 79–118. Peter Lang Publishing, Frankfurt.
- Grenfell, M., editor (2002). *Modern languages across the curriculum*. Taylor and Francis, Routledge, New York.
- Hallet, W. (2015). Stephan BREIDBACH, Britta VIEBROCK (Hrsg.): Content and Language Integrated Learning (CLIL) in Europe. Research Perspectives on Policy and Practice. Frankfurt/M. [etc.]: Peter Lang 2013, 335 Seiten [54,95 €]. *Fremdsprachen Lehren und Lernen*, 44(2):136–139. <https://elibrary.narr.digital/article/99.125005/flul201520136>.
- He, P. and Lin, A. M. (2018). Becoming a “language-aware” content teacher: Content and language integrated learning (CLIL) teacher professional development as a collaborative, dynamic, and dialogic process. *Journal of Immersion and Content-Based Language Education*, 6(2):162–188.
- Kordonova, A. (2014). *Developing English Language Self-learning Skills in Students of the Humanities in Out-of-class Work*. PhD thesis, South-Ukrainian National Pedagogical University named after K. D. Ushynsky, Odessa, Ukraine.
- Kostetska, K., Khumarova, N., Umanska, Y., Shmygol, N., and Koval, V. (2020). Institutional qualities of inclusive environmental management in sustainable economic development. *Management Systems in Production Engineering*, 28(1):15–22.
- Lazorenko, L. (2016). *Learning English monologue speech future mathematicians using Web-Quest*. PhD thesis, Kyiv National University named after T. Shevchenko, Kyiv, Ukraine.
- Leshchenko, M., Lavrysh, Y., and Halatsyn, K. (2018). The role of content and language integrated learning at ukrainian and polish educational systems: challenges and implication. *Advanced education*, 9:17–25.
- Litvinenko, I. (2015). *Methods of teaching future technical students how to read in English by means of integration*. PhD thesis, Kyiv National University named after T. Shevchenko, Kyiv, Ukraine.
- Luchaninova, O., Koval, V., Deforz, H., Nakonechna, L., and Golovnia, O. (2019). Formation of communicative competence of future specialists by means of group work. *Revista ESPA-CIOS*, 40(41):11. <http://www.revistaespacios.com/a19v40n41/a19v40n41p11.pdf>.
- Maguire-Fong, M. and Mangione, L. (2016). *The Integrated Nature of Learning*. Best practices for planning curriculum for young children. California Department of Education, Sacramento. <http://web.archive.org/web/20210628081928/https://www.cde.ca.gov/sp/cd/re/documents/intnatureoflearning2016.pdf>.

- Marsh, D. (2013). *Content an Language Integrated Learning (CLIL). A Development Trajectory*. PhD thesis, Universidad de Córdoba, Córdoba. <https://helvia.uco.es/xmlui/handle/10396/8689>.
- Martín del Pozo, M. Á. (2015). Teacher education for content and language integrated learning: insights from a current European debate. *Revista Electrónica Interuniversitaria de Formación del Profesorado*, 18(3):153–168. <https://www.redalyc.org/articulo.oa?id=217042307013>.
- Martínez, J. M. and Dominguez, H. (2018). Navigating mathematics and language tensions in language immersion classrooms. *Teaching and Teacher Education*, 75:1–9.
- Martynova, R. (2016). *Psychological bases of the integrated process of teaching educational and foreign speech activity*. Osvita of Ukraine, Odessa.
- McDougald, J. S. (2016). CLIL approaches in education: Opportunities, challenges, or threats? *Latin American Journal of Content & Language Integrated Learning*, 9(2):253–266.
- Merino, J. A. and Lasagabaster, D. (2018). The effect of content and language integrated learning programmes' intensity on English proficiency: A longitudinal study. *International Journal of Applied Linguistics*, 28(1):18–30.
- Merzlykin, O. V., Topolova, I. Y., and Tron, V. V. (2018). Developing of key competencies by means of augmented reality at CLIL lessons. *CEUR Workshop Proceedings*, 2257:41–52.
- mon.gov.ua (2019). Conceptual Principles of State Policy for the English language development in Ukrainian higher educational establishments.
- Nenkov, N., Dyachenko, Y., Petrova, M., Bondarenko, G., and Pustovit, V. (2017). Intelligent and cognitive technologies in education of international economic relations students and human resource development: Methodology in language teaching and distance learning. In *5th International Conference on Sustainable Development*. [https://www.researchgate.net/publication/317552078\\_Intelligent\\_and\\_Cognitive\\_Technologies\\_in\\_Education\\_of\\_International\\_Economic\\_Relations\\_Students\\_and\\_Human\\_Resource\\_Development\\_Methodology\\_in\\_Language\\_Teaching\\_and\\_Distance\\_Learning](https://www.researchgate.net/publication/317552078_Intelligent_and_Cognitive_Technologies_in_Education_of_International_Economic_Relations_Students_and_Human_Resource_Development_Methodology_in_Language_Teaching_and_Distance_Learning).
- Papaja, K. (2013). The role of a teacher in a CLIL classroom. *Glottodidactica. An International Journal of Applied Linguistics*, 40(1):147–154.
- Petrova, M., Koval, V., Tepavicharova, M., Zerkal, A., Radchenko, A., and Bondarchuk, N. (2020). The interaction between the human resources motivation and the commitment to the organization. *Journal of Security and Sustainability Issues*, 9(3):897–907.
- Popel, O. (2015). *Methods of Teaching English Language Presentation of Technical Equipment to Future Engineers*. PhD thesis, South-Ukrainian National Pedagogical University named after K. D. Ushynsky, Odessa, Ukraine.
- Primina, N. (2017). *Teaching future seafarers reading sailing directions in English*. PhD thesis, South-Ukrainian National Pedagogical University named after K. D. Ushynsky, Odessa, Ukraine.
- Sandstrom, A.-M. (2018). *English-Taught Bachelor's Programs in Europe*. Number 96. <https://ejournals.bc.edu/index.php/ihe/article/view/10775>.
- Smit, U. and Dafouz, E. (2012). Integrating content and language in higher education An introduction to English-medium policies, conceptual issues and research practices across Europe. *Aila Review*, 25(2):1–12.
- Snow, M. A., Met, M., and Genesee, F. (1989). A conceptual framework for the integration of language and content in second/foreign language instruction. *TESOL Quarterly*, 23(2):201–217. <http://www.jstor.org/stable/3587333>.
- Spanos, G. (1989). On the integration of language and content instruction. *Annual Review of Applied Linguistics*, 10:227–240.
- Taillefer, G. (2013). CLIL in higher education: the (perfect?) crossroads of ESP and didactic reflection. *ASp*, 63(1):31–53.
- Tarnopolsky, O. (2018). Principled pragmatism, or well-grounded eclecticism: A new paradigm in teaching English as a foreign language at Ukrainian tertiary schools? *Advanced education*, 10(1):5–11.
- van Kampen, E., Meirink, J., Admiraal, W., and Berry, A. (2020). Do we all share the same goals for content and language integrated learning (CLIL)? Specialist and practitioner perceptions of 'ideal' CLIL pedagogies in the Netherlands. *International Journal of Bilingual Education and Bilingualism*, 23(8):855–871.
- www.topuniversities.com (2021). QS World University Rankings 2022. <http://web.archive.org/web/20210825023139/https://www.topuniversities.com/university-rankings>.
- Xiao, J. F. (2016). Integrated English in China – An effective CLIL model of foreign languages and cultures learning. *International Journal of Innovation and Research in Educational Sciences*, 3(4):234–242. [https://www.ijres.org/administrator/components/com\\_jresearch/files/publications/IJIRES\\_647\\_Final1.pdf](https://www.ijres.org/administrator/components/com_jresearch/files/publications/IJIRES_647_Final1.pdf).