

Joint Conference: 20th PCSF and 12th CSIS-2020
20th conference Professional Culture of the Specialist of the Future
12th conference Communicative Strategies of Information Society

TRANSFER FROM LEARNING ENGLISH TO TEACHING
ACADEMIC SUBJECTS IN ENGLISH

Galina A. Dubinina (a), Irina K. Stepanyan (b)*
*Corresponding author

(a) Financial University under the Government of the Russian Federation, 49 Leningradsky ave., Moscow 125993,
Russian Federation, GADubinina@fa.ru,

(b) Financial University under the Government of the Russian Federation, 49 Leningradsky ave., Moscow 125993,
Russian Federation, IKStepanyan@fa.ru

Abstract

The study investigates forms of interdisciplinary cooperation in ESP-EMI-CLIL sequence. To identify patterns and trends in the application of CLIL, the research was built on the problem-chronological principle. The study describes a step by step transition from a program partially implemented in English to a program fully implemented in English. The impact of the English Medium Instruction was assessed through the method of generalization. Thus, two directions are integrated in the process of teaching: linguistic and professional. English Medium Instruction (EMI) has changed from being a focused, targetable segment of scholastic activity, a niche, to becoming the mainstream, the dominant trend, of contemporary competitive higher education. Having considered the practice of moving from traditional language training to learning the content of university disciplines through English, the authors single out 3 models of educational activity. The research suggests the possible uses of EMI in new conditions and areas of practice. Authors submit original assignments that they practice in their classrooms to illustrate the phased implementation of EMI technologies. Reflection on multidisciplinary versus interdisciplinary cooperation of instructors is presented through English Medium quazi-professional case-analyses.

2357-1330 © 2020 Published by European Publisher.

Keywords: Content and Language Integrated Learning, English Medium Instruction, multidisciplinary team of instructors.



1. Introduction

The new reality in the academic field is that due to greater internationalisation of higher education and enhanced mobility of both students and academic staff English has become lingua franca, the recognized language of international communication, which has caused the emergence of English Medium Instruction or EMI, - using English as a medium for teaching academic subjects at universities in countries and regions where English is not the national language or in teaching international students at the leading universities worldwide. This technology has been developing since the second half of the 20th century, and today it has changed methodology, techniques and even ways of thinking of the academic actors.

On evidence to date EMI undoubtedly benefits both the students and the University it is applied by. Firstly, students gain access to international educational programmes, secondly, post-graduates obtain an opportunity to do research abroad or in joint cooperation with international scholars, thirdly, and probably most importantly, students become more competitive in the labour market. Universities, in their turn, increase their quotability in world rankings if instruction at some faculties or departments is carried out in English. Furthermore, the fact of English Medium Instruction availability at the University attracts international students, which provides profit from the export of educational services not only to a university, but also nationwide.

English Medium Instruction gives both domestic and international student applicants an opportunity to find the best way to enhance not only their academic skills, but also their English language capability. EMI is the new reality of the global world. Moreover, EMI is also a new parameter of competitiveness, first in the field of education, and later in all areas of the economy. In all probability, EMI should be considered as a problem that requires special treatment.

2. Problem Statement

Today, a number of educational programs at Russian universities are implemented in English. For instance, such options exist at the Financial University under the Government of the Russian Federation, which enrolls international students, a sizable part of whom are English-speaking. Universities arrange for the creation of English-language content of the University, including English-language web resources, printed materials in English, articles for English-language media, portals and other information platforms.

To begin with, many Russian universities are moving to at least partial study of professional undergraduate and graduate courses in English. The reasons for this are evident. No doubt, academic mobility is one of them; among other relevant items the most significant are internationalization of education and the advantage of a wider access to data base.

Programmes for post-graduates taught in English, Master's in particular, require special consideration as post-graduate education is noted for its high degree of professionalization and at this stage EMI is often exercised by a multidisciplinary team of lecturer and instructors.

The focal subject under review in this article is the sequence of educational activities undertaken by such a multidisciplinary team of educators in order to teach students to analyse in English scholastic cases on different professional matters.

The main hypothesis considered in this article is that, when educational analyses of cases on economic, financial or business problems should be undertaken under the supervision of a multidisciplinary team of educators, they should focus on the ways how to turn problems into challenges, and challenges into business opportunities vs sustainable development and efficient entrepreneurship.

3. Research Questions

Thus, the evolution of approaches to the symbiosis of Content and Language Integrated Learning and English Medium Instruction is associated with the current tendency to transfer from learning English as a philological discipline to teaching academic subjects in English as a foreign Language. It's common knowledge that English has become lingua franca in all spheres of communication. Analysis of various aspects of transdisciplinary cooperation and its inextricable connection with content-language integrated learning, assessment of the students' expectations, needs and satisfaction of the results were the object of study of the authors. In this review we intend to focus on the three of the academic disciplines as most illustrative: economics of business, mathematics and English.

3.1. Literature review

Hutmacher (1996), when formulating the idea of a communicative competence for the Council of Europe, defined five sets of key competencies: the mastery of languages and new technologies, listening to and taking into account others' points of view, relating the past to the present and the capacity to face uncertainty and complexity. The Council of Europe attached particular importance, to competencies relating to the mastery of oral and written communication, which are essential for work and social life to the point that those who lack them are henceforward threatened with social exclusion.

Since the beginning of the 21st century there have been wide discussions pertaining to the recent changes in language training. Great contribution to this activity has been made by TESOL - Teaching English to Speakers of Other Languages - an International Association, the largest professional organization for teachers of English as a second or foreign language. It is worth mentioning that the demand for English language learning has never been greater than at the present moment.

Boraie (2013), former TESOL President, states that recently there have occurred some significant changes in teaching English to people whose first language is not English (English as a Foreign Language - EFL) or English as a second language (ESL), or to people whose native language is not English but who live in a society in which English is one of the main languages. Furthermore, English has become a means to learn content such as science and mathematics.

Penny Ur, a renowned EFL expert, author and teacher trainer noted that nowadays the goal is "to produce fully competent English-"knowing bilinguals rather than imitation native speakers.

The significance of English and the way English teachers delimit and design their environment is undeniable and has received wide coverage in the world community.

Nowadays educationalists put much emphasis on the importance of multidisciplinary, interdisciplinary and transdisciplinary (some scholars use the synonymous term crossdisciplinary) approach in teaching. However, a clear distinction should be made between multidisciplinary and transdisciplinarity. The study of Petrie (1992) defines multidisciplinary as "the idea of a number of

disciplines working together on a problem, an educational program, or a research study. The effect is additive rather than integrative”. Choi and Pak (2006) single out the code words for multidisciplinary (1), interdisciplinary (2) and transdisciplinary (3) as additive (1), interactive (2), and holistic (3), respectively. By the word holistic (the parts of something are intimately interconnected and explicable only by reference to the whole) they mean that transdisciplinarity integrates several sciences. Furthermore, they infer that transdisciplinary approach suggests that each of the disciplines involved goes beyond their traditional range.

Educational experience of Stepanyan et al. (2017) shows that the use of a transdisciplinary approach, especially within the framework of content and language integrated learning process, has facilitated solving the problems in analyzing the information by combining the knowledge extracted from various disciplines.

Nowadays pedagogy of education and professional training drifts in the direction of mastering the competencies of bachelors and masters in the analysis of relevant information, the use of appropriate techniques and writing dissertations in the main academic disciplines, which often combine several academic disciplines.

In their research Khalyapina et al. (2017) conclude that the combination of ESP – CLIL – EMI methodologies constitute a model of English language teaching at a modern university, in which the focus of learning a foreign language is gradually shifted from purely linguistic aspects in ESP to tantamount content & language integration in CLIL and further to the dominance of professionally-oriented aspects in EMI.

However, criticism of CLIL has risen recently. Some of the scholars, such as Darn (2006) consider that there is little evidence to show that the comprehension of content is not impeded by lack of language competence. Dallinger et al. (2015) questions the effect of CLIL, “given its null-effect on the content subject and the limited positive outcomes in English”. They think that the alternative to CLIL is the enlarged amount of regular English lessons. The researchers admit the null-effect for subject knowledge but assume that some content subject-related skills might benefit from CLIL. The findings of confirmed previous results of Badertscher and Bieri (2009), Jappinen (2005), Dalton-Puffer and Smit (2013) also showed no differences between CLIL- and non-CLIL-students' achievement.

3.2. Discussion and analysis

In this article, we consider the quasi-professional activity, because this stage makes it possible to combine professional context and EMI as Dubinina and Kondrakhina (2016) imply in their research.

The implementation of the tasks within the framework of the given activity should be and in practice is facilitated by the interdisciplinary collaboration: the selection of thematic materials for teaching English in cooperation with teachers of specialized disciplines and in parallel with the study of English-language materials on the basic disciplines at English language workshops.

As rule, a cross-disciplinary educational activity combined with EMI is a transnational educational process and takes place in a multilingual environment. Students study their speciality in a language immersion setting, usually in English and the language of the host country. Professional orientation and digitalization of learning complement this list with the language of a particular academic discipline. For

instance, at the Financial University under the Government of the Russian Federation the language of mathematics and information technology is lingua franca for most of the academic subjects. English is used as the language of international communication, and Russian as the language of the host country, which in this case is necessary for those students who do not speak English. The most frequent ratio of these languages at the initial stage is 50/50.

The problems that arise when teaching foreign students have always been in the focus of instructors' attention. In Russia, strengthening of the state policy on training international students at Russian educational institutions has intensified research in this area. Many universities have established special preparatory departments or faculties, and teachers working with such students reflect on their experience, develop new approaches and methodologies.

Difficulties in teaching foreign students are mostly due to the heterogeneous level of students' background knowledge. Russian language proficiency is essential for all the students. If they lack it, the way out of this predicament can be the use of English, since a number of students speak English much better than Russian. Bilingual education can improve the efficiency of foreign students' learning of special subjects, mathematical cycle disciplines in particular. Moreover, there is a whole layer of English-language terminology, both in the field of mathematics and in the field of information technology, the latter is important in the light of expanding digitalization.

No doubt, interdisciplinary education as a rule exists in a multi - ethnic environment that is typical for teaching international students. It may be concluded that the most effective way to improve the quality of education and, in general, to study undergraduates at a University on a par with students from the host country, is multilingual education. The coexistence of students with different native languages (L 1) and working foreign languages (L 2) within the framework of the general educational process is a serious challenge that requires interdisciplinary interaction between the teachers of special disciplines and foreign language teachers. Most often, Russian higher education institutions provide training in Russian and English. However, the composition of international students has changed recently, and more and more often there is a need to use other partner languages.

For example, in Portugal, where international students can access undergraduate studies and integrated Master's studies through a special access and can apply if they have a diploma that allows access to higher education in the country where it was obtained, or if they have completed Portuguese upper-secondary education or an equivalent study cycle, Portuguese as well as English can be used as lingua franca. African Portuguese-speaking countries constitute a sizable number of international students.

The TIE-CLIL project (translanguage in Europe, funded through Socrates - Lingua Action A) promotes plurilingualism through the introduction of Content and Language Integrated Learning in five different EU languages (English, French, German, Italian, Spanish).

The transition from traditional English language learning to teaching academic subjects in English can be successfully accomplished through content and language integrated learning (CLIL), the essence of which lies in understanding that while learners are studying certain subjects they are also mastering a foreign language (Khalyapina, 2017).

CLIL is closely connected with EMI (English Medium Instruction). As English is a recognized lingua franca, the language of international communication, EMI has a number of benefits both for students and for the University it applies. Firstly, students gain access to international educational programs. Secondly, post-graduates obtain an opportunity to do research abroad or in joint cooperation with international scholars. Thirdly, and probably most importantly, students become more competitive in the labor market (Almazova et al., 2018).

Today, a number of educational programs in Russian universities are implemented in English. Such options exist at the Financial University under the Government of the Russian Federation, which enrolls international students, a sizable part of whom are English-speaking. The Financial University works hard to strengthen its international reputation in contacts with international educational institutions and organizations, as well as in the media and on the Internet. Part of these efforts envisage the creation of English-language content of the University, including English-language web resources, printed materials in English, articles for English-language media, portals and other information platforms.

4. Purpose of the Study

The purpose of the research is to consider the evolution of the methodological approach aimed at helping students and educators to adapt to studying academic disciplines through the medium of the English language. This tendency, formerly a limited segment of scholastic activity, now is the mainstream in transnational education. The research studies how Content and Language Integrated Learning (CLIL), where the English teacher uses cross-disciplinary content and thus the students learn both the content and English, fosters a teacher's linguistic, teaching, and intercultural competence that is of major importance rather than their being a native speaker of English.

The authors deduce that case-analyses is one of the most efficient technologies in the educational process under discussion, provided cases are presented in a logical sequence (depending on the stage of training), they should gradually get bigger, from mono-cases (for one discipline) for undergraduates at the initial stage of teaching to complex interdisciplinary cases for postgraduates, which accumulate knowledge gained in several major disciplines and require a substantially wider horizon of professional competence.

The main hypothesis considered in this article is that, when educational analyses of cases on economic, financial or business problems is undertaken under the supervision of a multidisciplinary team of educators, they should focus on the ways how to turn problems into challenges, and challenges into business opportunities vs sustainable development and efficient entrepreneurship.

5. Research Methods

As the focus of the given research rests on the system of methods aimed at the integration of a foreign language with professional information through Content and Language Integrated Learning, it first and foremost aims to develop interactive teaching approach. The research was built on the problem-chronological principle because it describes a step-by-step transition from a program partially implemented in English to a program fully implemented in English.

In the given research the authors concentrated on the educational contents analysis: language propaedeutics; choice of the words, phrases and sentences; building the thematic base. The impact of the English Medium Instruction was assessed through the method of generalization.

In order to assess the appropriateness of the chosen context, themes and patterns, thematic analysis was applied. In selecting the relevant thematic context it was very important to ensure an efficient interdisciplinary cooperation. Furthermore, the correlation between the chosen context and the applied methods of communication was analysed from the standpoint of discourse. On the basis of the above research techniques, products and procedures were developed.

On the verge of the 2020-es society is committed to creating a sustainable world in all its spheres. Sustainable academic development covers education, research and entrepreneurship. It's well known that while education focuses on knowledge dissemination; research concentrates on knowledge creation and technology development; entrepreneurship aims at knowledge exploitation and wealth creating, including investing in business and solutions to societal and market needs. Hence information is one of the most powerful instruments of education, especially in the educational sphere, exchange of knowledge via cyberspace is able to simplify the dissemination of knowledge, exchange of scientific findings and generation of new ideas.

Modern educational technologies are admittedly efficient in creating an educational environment that ensures the effective interaction of all participants in the educational process and fostering foreign-language communicative proficiency.

The priority project "Export of education", aimed at improving the competitiveness of Russian education in the international market of educational services and thus increasing non-resource exports of Russia, is the reason why the leading Russian universities switch from studying English as a foreign language to learning professional disciplines of bachelor's and master's programs in English as a foreign language. In their analysis of these processes the authors apply the method of consistent detailing, presented below.

6. Findings

Having considered the practice of moving from traditional language training to learning the content of university disciplines the authors single out 3 models of educational activity:

- Model 1. Teaching junior students English on the basis of professionally oriented materials and quasi-professional activities, development of oral and written language skills in the educational sphere of communication;
- Model 2. Training junior undergraduate students for specialized disciplines with part of the content presented in English;
- Model 3. Teaching specialized disciplines and elective subjects fully in English at senior undergraduate Bachelor courses, Master's and postgraduate courses.

Let's consider what the contents of each of the models can be and the techniques can be applied.

6.1. Model 1

In their first year junior students study in the wide context of their future profession and get a general idea of the subject, concepts and terms within the range of their specialty. English is taught with the inclusion of a number of philological aspects, especially, essential Grammar structures.

Below are the examples of the EMI interactive task offered to the students of Economics and Finance at the initial stage.

Illustration 1

A student gets acquainted with a family from a foreign country and compares their personal budget (Table 1) with that of his family. The student is to apply mathematical tools to analyze the comparison.

Table 01. Personal Expense

Item	Percentage of Total Expenses
Entertainment	35
Food	29
Clothing	11
College supplies	10
Savings	5
Personal care	4
Transportation	3
Other	3

Illustration 2

A student has to complete the chart (Table 2). The task is to compute the ratio between income and expenses, to calculate the share of each type of expenses and to suggest ways of correcting the budget.

Table 02. Your Monthly Budget

	Monthly sources of income		Monthly fixed expenses		Monthly flexible expenses		Monthly optional expenses	
	Type	Amount	Type	Amount	Type	Amount	Type	Amount
1.								
2.								
...								
Total:								

Illustration 3

Students analyze opportunity costs of economic decisions in order to explain that choices involve tradeoffs. One of the situations is below.

A worker is currently earning €400 for a 40 hour week. The management offer a 12% wage increase or a basic wage of €410 and a reduction in the working week to 38 hours. What is the opportunity cost if the worker chooses a 38 hour week?

- (A) 2 hours;
- (B) 38 hours;
- (C) €38;
- (D) €48.

The following mathematical tools are applied: addition, multiplication and division operations, calculating ratio.

From the point of view of the language propaedeutics, the following communicative skills are worked out while solving the given economic problems through EMI:

- building discourse with elements of reasoning, evaluation, criticism;
- recognition and logical linking of main and secondary information;
- arranging a keyword or idea into a piece of discourse;
- creation of a factual chain.

Grammar practice involves working out the use of conditional sentences, numerals, fractions and percentage points.

6.2. Model 2

In order to ensure close interaction and appropriate interpenetration of the academic disciplines, it is necessary to find points of intersection between them. This stage of educational process is characterized by a deeper immersion into the context of the specialty. This is quasi-professional activity where interdisciplinary interaction requires the use of the educational technologies capable of activating the professional activities through EMI. Such activity is best implemented by case study and a role-play or a business game to follow.

Below is the example of the case-study considering a debatable economic situation in English (Konnova et al., 2015). Students are offered an economic problem without specifying which mathematical tools should be used, but with a high degree of certainty. The latter is rarely present in cases, so the proposed problems were called case problems. The case task contains three options for investing the capital of young entrepreneurs for a period of 4 years: (a) a small business for the production and sale of a certain product, (b) a portfolio of securities (investment portfolio) and (c) Bank deposits:

1. Small business

Being students, young people had a business idea, for which they prepared a business plan: to open a pizzeria and offer pizza "Margarita" in it.

All expenses are divided into several groups:

Fixed (paid once): equipment, kitchen supplies, etc.

Total: XXX XXX RUB.

Annual: rent (paid at the end of the year), electricity, water, tax.

Total: YYY YYY RUB.

Costs per unit of production: dough, tomatoes, cheese, tax.

Total: ZZ RUB for a pizza.

Salaries:

A pizza-maker receives SS rubles for 100 pizzas and his/her performance is PPPP pizzas per year (depending on demand, an entrepreneur can add more pizza-makers).

Other employees - with a salary of SSSS rubles per year. The equipment can be sold and the business can be closed at the end of each year. Every year it is depreciated by $r^0\%$.

According to estimates, the demand for products will be as follows:

1st year: $Q_D = \alpha_1 - \beta_1 p$, 2nd year: $Q_D = \alpha_2 - \beta_2 p$,

3rd year: $Q_D = \alpha_3 - \beta_3 p$, 4th year: $Q_D = \alpha_4 - \beta_4 p$, $\alpha_i, \beta_i \in R, i = 1, 2, 3, 4$.

Instruction. Create a profit function for each year and study it to the maximum to calculate the optimal cost per unit of product.

Thus: Small business requires investment of all funds at once without any remaining balance!

2. Investment portfolio

Young people can invest their money in securities. After making complex calculations, they compiled a table of returns for securities portfolios A, B, and C depending on the economic situation in the Russian Federation (the situation changes every year). Forecast for the next four years:

- the first year is a Bad one (securities are devalued by $x\%$).
- the second year is a Bad one (securities are devalued by $x\%$);
- the third year is very Successful (securities are becoming more expensive by $y\%$).
- the fourth year is a Successful one (securities are becoming more expensive by $z\%$).

Papers in portfolios A, B, and C cost the same: U rubles each (Table 3).

Table 03. Securities Yield

Portfolio	Yield per year per share (RUB)		
	A bad year	A good year	A very good year
A	a	b	c
B	d	e	f
C	g	h	k

Shares are purchased for a minimum of two years, since if they are sold after a year, the Bank retains $R\%$ of the original amount invested.

Thus: If you choose to invest in securities, then invest all the funds without a balance!

3. Bank deposits

Young people are also considering the option of investing in a Bank (banks) on real terms (research independently).

Thus: If you choose the option of Bank deposits, then invest all funds without a balance!

Main task:

Develop an optimal investment plan for each year (out of four) of the above options.

What is the maximum profit for young entrepreneurs if they choose the best way to allocate their capital every year (out of four)?

To solve the case, students are recommended to determine the nature of the knowledge needed to solve the problem, make the necessary calculations for each investment option, summarize the results and prepare a justification for the decision. As we can see, this task requires a complex application of

economic knowledge, the use of some mathematical apparatus and taking into account interdisciplinary connections.

It is obvious that by solving this case, students master the basic concepts, methods of calculations and research methods of higher mathematics, necessary for the successful solution of mathematical, financial and economic problems, and learn to create mathematical models.

6.3. Model 3

In his works on contextual learning, Verbitskiy (2017) analyzes the transformation of the basic forms of students' activity: from academic activities (an example of which is a lecture, and during which information is transmitted and assimilated) to quasi-professional activities (didactic role-plays, business games, etc.) and, further, to educational and professional activities (research, practice, internships). The contents of the instruction at this stage is governed by the curriculum of a particular discipline and should be the matter of a special investigation. However, it is evident that language skills at the advanced stages, those of quasi-professional or even professional activities, should imply:

- highlighting the key idea, main and secondary information;
- building narratives with elements of reasoning, criticism, evaluation, opinion, argument in oral and written form based on associative thinking;
- recognition and logical linking of main and secondary information;
- deployment a keyword or idea into narration using graphs and diagrams;
- creation of a factual chain with the subsequent monologue or dialogue on this basis.

7. Conclusion

Thus, the evolution of approaches to the symbiosis of Content and Language Integrated Learning and English Medium Instruction is associated with the current tendency to transfer from learning English as a philological discipline to teaching academic subjects in English as a foreign Language.

Being taught by multidisciplinary teams of instructors via EMI-CLIL training, students accumulate knowledge gained in several major disciplines and acquire a substantially wider horizon of professional competence. This research has shown that CLIL promotes cognitive or thinking skills such as reasoning, abstract thinking, hypothesising, creative thinking synthesis, evaluating and so on. CLIL also promotes a deeper level of assimilation – as students are repeatedly exposed to similar language and language functions and they need to produce and recall information in their first language.

The focal subject under review is the sequence of educational activities undertaken by a multidisciplinary team of educators in order to teach international students different disciplines. The main hypothesis considered in this research is that when educational activity is undertaken under the supervision of a multidisciplinary team of educators they should focus on the analyses of the ways how to combine the efforts of all the educational actors.

Admittedly, English Medium Instruction has changed from being a focused, targetable segment of scholastic activity, a niche, to becoming the mainstream, the dominant trend, of contemporary competitive higher education. The presented research highlights 3 models of educational activity through the medium of English: at the initial level junior students learn English on the basis of professionally

oriented materials and engage in quasi-professional activities. Then at the later stage students are trained for specialized disciplines with part of their content presented in English. And to crown it all, specialized disciplines and elective courses are delivered fully in English. The third model is exercised predominantly at senior undergraduate Bachelor courses, Master's and postgraduate courses.

On evidence to date, many Russian universities are moving to at least partial study of professional undergraduate and graduate courses in English.

In the course of teaching foreign languages, the integration of a foreign language with professional information is carried out, which affects the ways of learning it, and requires interactive teaching methods. Thus, two directions are integrated in the process of teaching IA: linguistic and professional.

Teaching methods should also be evaluated so that they suit the required target learners as well as the particular contexts.

This research revealed that active methods of teaching shade the role of the teacher in a special light. First and foremost there is a tendency nowadays to shift from a teacher-centered model to a learner-centered approach to learning and teaching. Another trend is to transfer from a product-driven educational process to a process-driven one. This is where the transition from learning a foreign language to learning academic subjects in a foreign language (English mostly) is topical.

This tendency is especially vivid in the export and import of education where a special role belongs to the English language. English as a foreign language has a special status. English is the language of international communication, and information is exchanged in this language. Both professional and scientific interaction today involves exchanging messages, conducting discussions on the Internet, including working in English-speaking online communities.

As to the context, the background, environment or framework of events or occurrences form a setting of any event, idea or statement. Context is part and parcel of any educational process be it providing information, presenting new concepts, or developing thoughts.

The findings pertaining to this research infer that not only do contexts matter, but so do language teaching methodologies. Modern educational technologies focus on creating a scholastic environment that ensures the effective interaction of all participants in the educational process and, with the modern trend to teaching academic disciplines in English, fostering English-language communicative proficiency.

Teaching the content of curricular subjects through the medium of a non-native language introduces students to the content of various disciplines and thus teaches them to apply their knowledge of a foreign language in various interdisciplinary contexts. Through CLIL approach learners gain knowledge and understanding of an academic subject or other matters while simultaneously learning and using the target foreign language. Thus, the main method of training in CLIL is language immersion in the practice-oriented environment.

The central remit in implementing EMI-CLIL approach is to challenge dominant stereotypes and commonly held perceptions of traditional application of a foreign language study and to adhere to its use in interdisciplinary educational collaboration. Interdisciplinary links based on foreign language learning are actually the reason why it has acquired the status of a meta-subject discipline. Interdisciplinary approach focuses on interrelated and coordinated formation of communicative (linguistic) and professional competences.

Thus, if the primary purpose is to teach subject-specific content of the target discipline (law, economics, finance, banking, etc.), using English as a medium of equipping students with the knowledge of subject matter disciplines is the sphere of responsibility of both the teachers of specialized subjects and the teachers of English as a foreign language.

The use of a multidisciplinary approach, especially within the framework of content and language integrated learning process, dramatically changes the educational process and contributes to solving the problems, analyzing the information and combining the data mined from various disciplines.

English Medium Instruction gives both domestic and international student applicants an opportunity to find the best way to enhance not only their academic skills, but also their English language capability. EMI is the new reality of the global world. EMI is a new parameter of competitiveness, first in the field of education, and later in all areas of the economy. In all probability, EMI should be considered as a problem that requires special treatment. English Medium quazi-professional case-analyses suggest a number of options for implementation, diversification and assessment which require further consideration.

Acknowledgments

The authors would like to thank:

- Nadezhda I. Almazova, Doctor of Education, Professor, Institute of Humanities Director, Peter the Great St. Petersburg Polytechnic University, for providing an encouraging opportunity to share opinions and to keep abreast of current thinking and developments in the field of professional didactics.
- Ludmila P. Khalyapina, Doctor of Education, Professor, Institute of Humanities Deputy Director, Peter the Great St. Petersburg Polytechnic University, for inspiring this research and contributing to the application of CLIL and EMI technologies at non-linguistic universities.
- Elaine M. Caruana, M.A. in English Language Teaching, (M.A. ELT), Director of Studies, Berlitz Language School, Malta, whose teaching context has provided useful encouragement and guidance.

References

- Almazova, N. I., Rubtsova, A. V., & Eremin, Yu. V. (2018). Innovative productive method of teaching foreign languages to international students. 18th PCSF 2018 Professional Culture of the Specialist of the Future. *The European Proceedings of Social & Behavioural Sciences*, *LI*, 1-12. <https://doi.org/10.15405/epsbs.2018.12.02.1>
- Badertscher, H., & Bieri, T. (2009). *Wissenserwerb im Content and Language Integrated Learning [Acquisition of knowledge in CLIL]*. Haupt.
- Boraie, D. (2013). 8 Current Trends in Teaching and Learning EFC/ESL. <http://blog.tesol.org/8-current-trends-in-teaching-and-learning-eflesl/>
- Choi, B. C., & Pak, A. W. (2006). Multidisciplinarity, interdisciplinarity and transdisciplinarity in health research, services, education and policy. *Clinical and investigative medicine. Medecine clinique et experimentale*, *29*(6), 351-64. <https://www.ncbi.nlm.nih.gov/pubmed/17330451>

- Dallinger, S., Jonkmann, K., Hollm, J., & Fiege, Ch. (2015). The effect of content and language integrated learning on students' English and history competences - Killing two birds with one stone? *Learning and Instruction*, 41, 23-31. <https://doi.org/10.1016/j.learninstruc.2015.09.003>
- Dalton-Puffer, Ch., & Smit, U. (2013). Content and Language Integrated Learning: A research agenda. *Language Teaching*, 46(04), 545-559. <https://doi.org/10.1017/S0261444813000256>
- Darn, S. (2006). *Content and Language Integrated Learning (CLIL)/ A European Overview*. <https://eric.ed.gov/?q=Darn%2c+Steve&id=ED490775>
- Dubinina, G. A., & Kondrakhina, N. G. (2016). Implementation sequence of professionally oriented foreign language training in a non-linguistic university. *Vestnik of Moscow State Linguistic University. Pedagogical Studies. Theory and practice of foreign language teaching in the system of vocational training*, 14(753), 81-90. http://libranet.linguanet.ru/prk/Vest/14_753.pdf [in Rus.]
- Hutmacher, W. (1996). Key competencies for Europe. *Report of the Symposium. A Secondary Education for Europe Project*. Council for Cultural Cooperation.
- Jappinen, A. -K. (2005). Thinking and content learning of mathematics and science as cognitional development in CLIL. Teaching through a foreign language in Finland. *Language and Education*, 19, 148–169. <https://dx.doi.org/10.1080/9500780508668672>
- Khalyapina, L. P. (2017). Current trends in teaching foreign languages on the basis of CLIL. *Teaching Methodology in Higher Education*, 6(20), 56–52. <https://doi.org/10.18720/HUM/ISSN2227-8591.20.5>
- Khalyapina, L. P., Popova, N. V., & Kogan, M. S. (2017). Professionally-oriented content and language integrated learning (CLIL) course in higher education perspective. In L. Gómez Chova, A. López Martínez & I. Candel Torres (Eds.), *Proceedings of the 10th International Conference of Education, Research and Innovation (ICERI)* (pp. 1103-1112). IATED. <https://doi.org/10.21125/iceri.2017.0370>
- Konnova, L. P., Rylov, A. A., & Stepanyan, I. K. (2015). On Implementing the Competence-Based Approach When Teaching Mathematics Through Case-Method at the Economics University. *Standarty i monitoring v obrazovanii [Standards and Monitoring in Education]*, 3(6), 28-31. <https://doi.org/10.12737/17278>
- Petrie, H. G. (1992). Interdisciplinary Education: Are We Faced with Insurmountable Opportunities? *Review of Research in Education*, 18, 299–333. <https://www.jstor.org/stable/1167302>
- Stepanyan, I. K., Dubinina, G. A., Nikolaev, D. A., Kapranova, L. D., & Pashtova, L. G. (2017). Cross-Disciplinary case-analyses of investment optimization in a foreign language applying dynamic programming. *Espacios*, 38(62), 19. <http://www.revistaespacios.com/a17v38n62/a17v38n62p19.pdf>
- Verbitskiy, A. A. (2017). *Teoriya i tekhnologii kontekstnogo obrazovaniya [Theory and technologies of context education]*. MPGU Publ. [in Rus.]