The Design of Integrated Learning Model for CLIL-learners

T Baranova¹, A Kobicheva², N Olkhovik³ and E Tokareva⁴, ⁵
1Peter the Great St. Petersburg Polytechnic University; Russia, 195251, St. Petersburg, Polytechnicheskaya, 29, baranova.ta@flspbgpu.ru
2 Peter the Great St. Petersburg Polytechnic University; Russia, 195251, St. Petersburg, Polytechnicheskaya, 29, kobicheva92@gmail.com
3 North-Western State Medical University named after I.I. Mechnikov; Russia, 195067, St. Petersburg, Piskarevskii Av., 47, olkhovik.nataliya@gmail.com
4 Peter the Great St. Petersburg Polytechnic University; Russia, 195251, St. Petersburg, Polytechnicheskaya, 29, tokareva.euy@gmail.com

Abstract. In this paper, we propose a learning model that is comprised of an advanced combination of pedagogic methods and techniques to realize a CLIL methodology at higher education institutions. Introduction of CLIL approach to the delivery of International Business discipline for the four-year students of the 1st cycle resulted in negative outcomes compared to the previous experience of teaching through non-CLIL courses. To reveal the reasons of discipline outcomes decrease we conducted several surveys for the CLIL course students and their course coordinator. Students completed an online test with close and open-ended questions; the course coordinator passed an oral interview. We carried out a quantitative and qualitative analysis of the data obtained and then identified the weaknesses of the CLIL course implementation. To improve the educational process, students’ performance and their learning outcomes, we developed an integrated learning model that is built on a CLIL methodology as a framework and flipped classroom activities, project-based learning as pedagogic tools for creating a blended learning environment. We assume that the use of this model will stimulate students in professional knowledge and skills acquisition and also drive them to continuous education, raise of self-efficacy and motivation.

1. Introduction
At present, modern higher education is undergoing numerous changes related to the adoption of new State Federal Educational Standards (SFES) in Russia, scientific and technical advances, social transformations. The dynamics of modern technical renewal, computerization and expansion of digital communication channels and flows in production resulted in changes in the needs of modern market. Currently, employers are in the search for specialists who are ready to react and adapt to fast shifts in economy, relations, attitudes and professional appeals.

The methodology of modern educational system requires urgent modernization. At the moment, society expects graduates with mature cognitive skills, who are focused on self-development and self-realization, who would be able to operate with the knowledge gained, orient themselves in the global information space, work productively, be sociable, and adequately assess themselves and their abilities.

In a constantly changing world, the educational system should form professional universalism — the ability to adapt to newly emerging spheres and activities [1]. In the modern world, society has already changed its priorities. The notion of an information society appeared which is more interested in its
citizens being able to act independently and actively, make decisions, find uses for their forces in changing living conditions.

Due to the objective need to improve the quality of the educational process, form professional competence of university graduates, increase motivation and cognitive activity of students, we introduced Content Language Integrated Learning (CLIL) into the 4th year bachelors studying on international profile in 2017 [2].

It was an innovative effort to enhance students’ performance and their learning outcomes through integration of CLIL into Business studies at Russian HEIs, since traditionally professional disciplines were delivered in Russian due to the following reasons: (i) insufficient level of English of learning audience; (ii) reluctance of teaching staff to novelties in the academic style and habits; (iii) orientation of Russian HEIs onto the domestic market. Nonetheless, with joining to the Bologna Process in 2003, Russian HEIs gradually refocused the purposes of their educational process to internationalization and integration into global academic community and a new hub of teaching staff was fostered [3].

After implementation of the modernized discipline, we carried out a statistical analysis of three indicators evaluated: use of English, professional knowledge and motivation. According to the obtained results students improved their English, raised motivation in continuous education and self-development. However, we faced a disappointing trend: the professional discipline testing revealed negative results in comparison to previous non-CLIL, traditional teaching practice.

In this connection, the main aim of this paper is to identify the reasons of low professional discipline outcomes and propose a learning model with efficient pedagogic approaches to minimize negative results and improve learning outcomes on the whole.

2. Literature review

Analyzing certain theoretical positions in blended learning, flipped classroom and CLIL methodology, we came up with a proved basis for the design of an innovative model, determination of learning methods, which would drive students to successful studies in Economics and we identified the mechanism for students to encourage their motivation, self-esteem and readiness to life-long learning.

According to Malcevschi, Maestri, Marmiroli [4] blended learning is the combination of multiple approaches to teaching and learning practices. These educational methods may include a good mixture of face-to-face classrooms; self-paced learning and online resources. Boddy et al. [5] define blended learning as a fusion of best online and face-to-face instructions to improve outcomes and increase access to didactic materials in a cost-effective way. The reasonable application of blended learning techniques in good teaching practices was highlighted by Klink [6] with his vision of this method as a “thoughtful integration of classroom face-to-face learning experience with online learning experiences”. Such key attributes in the mentioned above definitions as ‘best’ and ‘thoughtful’ bring us to the necessity to correlate the methods of blended learning in our practices with the abilities of students, extent of their learning skills development and their interest and motivation in the studies.

Köse [7] gave detailed and useful explanations of how Web 2.0 technologies can help develop new complex e-learning opportunities in a blended learning environment. The author described the ways to organize self-directed work and classroom activities in the online environment with the usage of Web 2.0 tools. A successful implementation of blended learning on the WebCT platform was carried out by Perez-Marin et al. in the universities in Spain [8]. This learning model was tested on 237 students in five different courses. The courses outcomes were encouraging, with some variations in the final grades of students, depending on the type of course and the motivation of students to study certain subjects.

Thus, we admit the effectiveness and reasonability of blended learning tools implementation in educational process for economic students at the Russian universities to improve learning outcomes. We also studied the most advanced learning and teaching methods to identify the better ones for our pedagogic experiment: integration of flipped classroom, face-to-face classroom and project-based work into the blended learning environment that will stimulate cognitive capacity and professional skills development.

Abeysekera and Dawson [9] reviewed the literature on flipped classroom approaches and tentatively proposed that flipped approaches might improve student motivation and help manage cognitive load.
The focus of their research was on the following learners’ motivational factors: sense of competence, sense of autonomy, sense of security and relatedness. In their view, students’ cognitive load may be reduced with the use of pre-recorded lectures and instruction designed to the expertise level of students [10]. A feeling of competence, senses of autonomy, security and relatedness are likely to influence student engagement in the flipped learning environment, for example, when students are given the opportunity to apply information gained from the pre-recorded lectures to in-class activities and create new knowledge they feel more motivated and engaged [9].

Thus the idea of experiential learning and ‘construction of knowledge’ has been extended to include: learning through interaction with others, developing the capacity to apply or transfer one’s knowledge and skills to other contexts, and acquiring deepened understandings. Day [11] in an experimental study conducted over two semesters in Boston, USA compared the learning of an experimental group (flipped classroom approach) with that of a control group (traditional lecture), and found that the flipped group performed significantly better in their final grades than the traditional group for both semesters.

Isaiah T. Awidi and Mark Paynter [10] in their pilot study have found positive signs that a flipped classroom approach can enhance the student learning experience and outcomes. Although the initial design of learning activities was time consuming, the flipped approach, once implemented, did reduce the ‘teaching costs’ (in terms of timeline, efforts, etc.) required for traditional lecture presentations. However, the in-class problem solving activities, intended to provide students with a deeper understanding of course content, were not fully appreciated by students.

At the same time, researchers assume, that there is a number of disadvantages in innovative pedagogic methods. Huang and Zhou [12] exemplified that the lack of technical support, bad Internet service were the factors reducing the effectiveness of online learning. Another problem is the need in good writing and typing skills due to the nature of the online medium, which mainly includes text-based communication tools and might be underdeveloped. In addition, students also have problems with time management and self-study. Finally, students may also suffer from stress in an online learning environment [13].

Project-based learning is characterized by numerous advantages in comparison with other learning techniques. The main strength of the method is that students immediately switch into their specialty no matter which year of studies they are in. As the previous studies of project-based learning indicate, students are involved in self-determination and identification of their future prospects [14, 15], that is, self-identification in a future profession and motivation to get additional information in the field of the studied discipline.

Project work not only provides students with specific knowledge but also develops their individual abilities and skills and improves their professional toolbox. This advantage was pointed out in a publication by the English researcher D.L. Fried-Booth [16], who noted that project work allows each student to make a contribution to a shared project, which reflects individual abilities and gifts. As they are all different, students learn to communicate and work together.

Now we can claim that through integration of two efficient learning practices into the educational process – flipped classrooms and project-based learning – we can improve the capacity of blended learning environment. It was proved by several investigations carried out before in the field of students’ performance increase. Chen & Cheng [17], Kuo et al. [18], Tseng et al. [19], Vidal [20] identified positive outcomes of blended learning integration into the professional skills development, meanwhile, Tseng et al. demonstrated good outcomes of combination of such teaching practices as brainstorming, reflecting thinking, and constructing concept maps.

We have to highlight, that the combination of two methods has become a prominent topic among many researchers and has already been proved as an efficient way to enhance the learning environment.

Guzer Bayram and his colleagues said: "Blended learning have been become the center of attention at the beginning of the 2000 as an eclectic approach while scholars are debating on the best environment for students. In blended learning, the main idea is to benefit of both approaches on good sides." [21].
Guzer Bayram and his colleagues claimed: "Blended learning has become the center of attention at the beginning of the 2000 as an eclectic approach while scholars are debating on the best environment for students. In blended learning, the main idea is to benefit of both approaches on good sides". The research of Viet Anh Nguyen has showed positive results of implementing the combination of such methods as: project-based learning and blended learning. The test results showed that this approach was acceptable for students, and they were excited and interested in participating in the courses and this approach also encouraged students to study and learn the course content, as well as obtain skills of teamwork [22]. The data from research [23] showed that students’ performance could be improved by the incorporation of cognitive technologies in project-oriented courses, using a Blended Problem-Based Learning strategy. This strategy is generally applied in project-oriented courses, where students have to not only build but also incorporate new knowledge into real world contexts and therefore familiarize themselves with work conditions. Sarka Hubackova and Ilona Semradova have conducted their own experiment of blended learning that is a combination of contact teaching with a teacher and of a “self-contained preparation using on-line education”. On-line courses as study supplement suit the majority of students. This research may show that students have their better relation to blended learning. In the course of studies they get used to autonomous work, to the course construction and its control. They learn to work better with separate instruments of the on-line course (video, literature, course guidelines, tests, practical tasks and independent work), their orientation in the tasks set is already more advanced [24]. They understand better what is required from them and that is why they find the course more user-friendly.

To sum up, we have not found any research in which combinations of more than 2 learning methods were implemented and the outcomes of such a learning practice were studied. On the purpose of raising the efficiency of the educational process of CLIL students at the Russian universities we intend to integrate into the blended learning environment three methods that would jointly boost the capacity of self-directed study, contact hours and drive students to improvement of their motivation and self-esteem. So the proposed integrated methodology will be based on the creation of blended learning environment for the CLIL students through flipped classroom activities (online self-directed study and face-to-face classroom), project-based classroom with teamwork and online resource.

3. Methods
As it was already mentioned above, the conducted CLIL course negatively affected on students’ professional discipline knowledge. In this case the research questions will be the following:
1. What were the reasons for lower professional discipline testing outcomes in experimental groups?
2. What learning model can solve the detected problems and minimize negative effects of previous course design? How is it possible to introduce such a learning model in the course?

Firstly, we would like to point out that we correlate the lower outcomes of professional discipline testing with existing negative learning/teaching experience and weak points in assumed students’ achievements.

The quantitative and qualitative methods were used in research to answer the first question and fully investigate the learning experience. To obtain the data a comprehensive teacher interview and students’ surveys with close and open-ended questions were conducted. Descriptive statistics and paired-samples t-test were used to analyze the data obtained.

According to the developed syllabus for CLIL-learners the following competencies were supposed to be formed during International Business discipline implementation: communication competency, self-regulation competency, time-management, problem-solving and achievement orientation. To get results on learners’ assumed achievements we conducted an online survey (Figure 1) for all 45 students enrolled in the CLIL course before and after the course. Students were invited by a teaching professor to anonymously respond and were explained that all collected data would be confidential. The survey was based on special statements the goal of which was to evaluate the level of the following competencies: communication competency (S1-S2), self-regulation competency (S3-S4), time-management (S5-S6), problem-solving (S7-S8), and achievement orientation (S9-S10). For each of the statement, the participants marked one of the five Likert scale responses (5=strongly agree,
4=agree, 3=neither agree nor disagree, 2=disagree, 1=strongly disagree). As survey included 2 statements that defined each level of competency, the maximum score in each competency level was 10.

The qualitative data collected in our study comprised the students' responses to the open ended questions in the questionnaire and the course coordinators (CC's) responses in interviews with the researchers. The open ended questions asked students to add comments about their learning experience in the course. Ideas emerging from the responses were then categorized and summarized. All 45 students enrolled in the course were invited by the CC to respond to the online anonymous questionnaire. Their answers were further classified as in-class activities, post-class activities, teamwork (case study), English studies, group discussion and time allocation or overall perception. The CCs views were collated through two face-to-face interviews conducted by the two researchers. Both interviews with the CC were of 45 min duration and followed a semi-structured format. The interviews were recorded, fully transcribed and cleaned to ensure that the transcribed narrative fairly represented the CC's responses during the interview. Based on the research questions, we examined the transcripts, identified key issues and made a summary. After reflecting on the summary and making some minor adjustments, the summary was then provided to the CC to confirm that it accurately reflected what he had intended to convey. If required, further alterations were made to ensure the CC was satisfied with the summary of his views that would be used in the study. Participants of the interview were the course coordinator and research team. Timeline allocated 45 minutes. The following questions were asked:

1. Can you please say your name, role within the university and faculty?
2. What change have you implemented this semester?
3. What motivated you to change?
4. What do you hope to achieve with this change?

Figure 1. Survey on students’ competencies level self-evaluation.
5. How do you expect students to respond to the change?
6. Do you perceive any obstacles or barriers to implementing the change? If so, what are they?
7. Do you plan to continue this course next year?
8. Do you think this experience is positive?
9. Do you have any questions?
10. Is there anything else you wish to add?

4. Results

4.1. Student’s self-evaluation of their learning experience

The response rate for online survey on students’ competencies level evaluation was around 82% (37 students finished the survey). Results of the competencies’ evaluation are presented in the Figure 2.

![Figure 2](image)

**Figure 2.** The students’ perceived competencies level.

Due to collected data of students perceived competencies level the course based on CLIL had a positive outcome, but due to collected data of students perceived competencies level the course based on CLIL had a positive outcome, but not sufficient enough. The difference in the level of problem-solving, time-management, self-regulation and achievement orientation competencies was not significant according to the statistics (Table 1). The only communication competency was evolved significantly. In this case, we have to assume that CLIL course needs improvements.

| Considered competency | Survey | Results (average mean) | SD  | t-value |
|-----------------------|--------|------------------------|-----|---------|
|                       |        | **Problem-solving       |     |         |
|                       |        | competency             |     |         |
|                       |        | Before the course       | 6.07| 0.93    | 3.1   |
|                       |        | After the course        | 6.2 | 0.8     |       |
|                       |        | **Communication         |     |         |
|                       |        | competency              |     |         |
|                       |        | Before the course       | 6.1 | 0.91    | 4.7** |
|                       |        | After the course        | 7.1 | 0.74    |       |
|                       |        | **Time-management        |     |         |
|                       |        | Before the course       | 6.47| 0.88    | 1.8   |
|                       |        | After the course        | 7   | 0.73    |       |

Table 1. Descriptive statistics.
Self-regulation

|                      | Before the course | After the course |
|----------------------|-------------------|-----------------|
|                      | 6.07              | 0.68            |
| Achievement          | 5.3               |
| orientation          |                   |
| Before the course    | 6.4               | 0.95            |
| After the course     | 4.4               |

Note: * p<0.05; ** p<0.01; ***p<0.001

Only 33 (73%) respondents provided comments in the open-response item. The particular aspects of the learning design which respondents singled out to praise in their open-question responses were the in-class activities (including group discussions and team work) and English studies (Table 2). The in-class activities (including group discussions and team work) were considered helpful from a peer learning perspective, and because they were motivational. One student remarked that, “this was the most organized unit I have ever completed. Plus, all the lecturers were enthusiastic about teaching which gave me motivation to learn”. The development of competency in the field of a foreign language in the process of mastering professional discipline was regarded as effective. The positive attitude to English language was mentioned as well. The positive experience of team work was also highlighted as “an important component of every educational process, since it gives you an opportunity to apply the gained knowledge in practice”.

Table 2. Students’ self-evaluation of their learning experience in their open responses – positive experience.

| In-class Activities                                    | Group Discussions & Team work                              | English Studies                                           | Overall Experience                                                                 |
|--------------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------------------------|
| Good way to solidify understanding of concepts          | A good way to interact with other students and train your communication skills | Great way to learn useful vocabulary                      | Unit was a great idea and a good learning experience; nice and fun unit              |
| Great way to learn and understand main notions         | Provided the opportunity to contribute and fully understand in-class discussions | Create positive attitude to English                      | Learnt better about processes and methods of the unit, rather than memorize for a temporary amount of time |
| Provides students the opportunity to fully reflect and understand subject | Lecturers were enthusiastic about teaching which gave students motivation to want to learn | Anxiety relief                                            | Provided course is one of the better methods of teaching and most organized unit    |
| Helps to get opinion of others about the subject       | Develop communicative skills                               |                                                            | They help to learn and understand main notions                                     |
| Gives you an opportunity to apply the gained knowledge in practice | Learn English insensibly                                  |                                                            | Great opportunity to use English in your professional sphere                      |
|                                                        | Use of professionally-oriented language                   |                                                            | Encourages to continue learning English after university                           |

On the other hand, some respondents expressed dissatisfaction with the design of in-class activities and considered that the first few in-class sessions were not effective as students are not used to such a learning method and teaching practice (Table 3). There was also concern about the lack of time to
cover topics. According to some respondents, the discussion groups were not very helpful to their learning, because the groups were too big (i.e. with 20–23 students). One student remarked, “On the lecture only the people sitting at the front of the room get any help”. It was also noted by some respondents that they would prefer more traditional lectures. Several respondents reported that the in-class session notes were too brief or otherwise insufficient. Respondents considered that the pre-class activities (pre-recorded lecture and online quiz) would be effective in preparing them well for in-class sessions, and for understanding the content better. The following student response demonstrates the assumptions given above: “I would like to watch the lecture before the class and it would give me the opportunity to fully understand main topic and participate in discussions.” Finally, several students mentioned lack of their key vocabulary at the start of the course that impedes the understanding of lecturer. Therefore students spent many hours after classes to find necessary information in Russian and learn English vocabulary to prevent subsequent misunderstandings.

Table 3. Students' self-evaluation of their learning experience in their open responses – negative experience.

| In-class Activity | Post-class Activity | English studies | Group Discussion & Team work | Learning Resources and Time allocation | Overall Perception |
|-------------------|---------------------|-----------------|-------------------------------|----------------------------------------|-------------------|
| Felt under prepared to participate in class activities | Lecture notes were too brief or otherwise insufficient | Preferred to learn useful vocabulary before in-class activities | Feeling of frustration in group discussion | Lecture notes brief and insufficient | Really didn't work well. It was difficult to understand the course in English language. |
| English lecture difficult to engage with | Spent many hours to cover topics at home with Russian literature | Difficult to listen lecturer in foreign language | Large group sizes (working with 20–23 people in the class) | Not enough time to learn appropriate vocabulary | Specific needs to have an individual effective learning experience |
| Issues not properly explained. Questions not properly answered | Can’t understand the main points without additional preparation | Insufficient time to cover grammar part | Inadequate/lack of support; attention focused on one side of the class | Insufficient time to go over topic with groups | Professional discipline wasn’t learned as it should be |
| Inadequate explanation to understand calculations and answers | Poor coordination of discussions (not planned) | | | Spent a lot of time at home to cover main topics | Unit was not a good learning experience/Unit was difficult |
| | | | | | Can’t express the idea exactly because of anxiety |

4.2. CC’s survey results

The CC described the in-class sessions, as follows: “My initial interaction with the students, I thought, was positive. It was worthwhile.” The CC mentioned positive points as high presentism in the classroom. Also, the CC highlighted that communication skills and use of English have developed noticeably during this course. On the whole, the CC had a positive view of the provided course.
However, the CC mentioned that there was a lack in enough time to cover all topics of the syllabus. So, students didn’t get all information and didn’t go through all assignments. Lack of in-class time is explained by spending more time than it was planned on explanation of new vocabulary. As the CC shouldn’t use Russian language, it was time-consuming to define all new notions. The CC reflected that he would benefit from implementing the change of this method. It would be better for students to partly prepare before classes to save the in-class time. The CC would devote more in-class time to project activities instead of theoretical issues as project activity involves students in self-determination and identification for their future prospects.

4.3. Integrated learning model
Having revealed the existing weaknesses and problems that students and teachers faced in the learning and teaching process during CLIL course, we decided to elaborate an integrated learning model that could boost the efficiency of educational process and improve the overall results for CLIL students (Figure 3).

The integrated learning model is complex and based on the following methods – CLIL as a framework, flipped classroom (preparation online) as the first stage of educational process, face-to-face learning as the second stage and project-based learning, which is implemented in teamwork as the final stage. All stages are supposed to be repeated during the course creating a cognitively enriched environment for learners and automating their reactions.

Combining different types of learning activities into the blended environment we can achieve better learning outcomes due to the synergy effect and thus minimize failures of the educational process.

The design of such integrated learning model for CLIL students studying International Business is presented on the Figure 4. This pattern could be used as a guideline to implement any professional discipline at all educational cycles.
The first stage of the course is going to be elaborated on the base of Moodle educational platform, the access to preparatory materials is open for students the week before the second stage. All information on the assessment is transmitted to the CCs’ accounts. The second stage is a face-to-face classroom, which is adapted to the students’ knowledge of initial professional discipline and can include, for example, more or fewer discussions if the level of students’ confidence in the material is higher or lower, respectively. The third stage is based on the online international X-culture project for students who study International Business, International Management or International Marketing. This project has already proved its efficiency in different countries (https://x-culture.org/) [25]. Each learning activity at every stage overlaps each disadvantage of previous course revealed during the interview. A combination of these activities is intended to develop the competencies that students found poorly developed before while the whole learning design should play a stimulating role and engage students in continuous educational process.

5. Conclusion
In our study we aimed to reveal the reasons of lower students’ professional discipline attainments and solve the detected problems by developing and implementing a special learning model. The analysis of student’s and CC’s survey results showed a number of risks and failures to be minimize through a transition from a traditional teaching practice to an efficient combination of learning methods that affect simultaneously cognitive functions, professional skills and motivation. Taking into the account those facts we elaborated an integrated learning model that comprises a combination of methods, which could effectively work together generating a synergy effect. The
theoretical work of other scholars in this field has been a useful resource for planning and design, and we expect that our study will provide something of value for future researchers too.

The next year of the International Business discipline delivery we are going to evaluate the overall impact of the developed integrated learning model on students’ hard skills and soft skills to reveal the methodological potential for enhancing the process of professional competence enhancement.

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