

## **CLIL Principles in Vocational Technical Education**

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### **ABSTRACT**

A dual-focused educational approach assumes closer cooperation between teachers, resulting in cross-curricular link development. Applying the CLIL principles within an experiment, students of the vocational secondary technical school of mechanical engineering were studying the specific-subject content through L2. Higher vocational secondary schools are showing increasing interest in content and language integrated learning (CLIL). Along with the subject-based lexical competence acquisition and the grammar of functional language, CLIL provides effective teaching and learning based on scaffolding. In this paper, some of the results achieved by the experiment are presented. Two groups of students – control and experimental – were compared in the experiment. Specific topics in mechanics had been selected for the CLIL lessons to provide communicative competence acquisition focused on specialist terminology. CLIL balances foreign language skills acquisition and vocational education, thereby significantly supporting motivation and self-confidence in students. Communicative competence acquisition focused on specialist terminology increases graduates' chances in the labour market.

**Keywords:** acquisition; competence; content; language; specific-subject

### **Introduction**

Content and Language Integrated Learning (CLIL) represents an integration concept. It has been regarded as an effective symbiotic fusion of studying particular academic subject matter content through, not in, a foreign language. Didactics of both the foreign language and academic subject matter are integrated within the specific type of education, characterised by the application of various organizational forms and teaching methods including different types of teaching and learning strategies.

In the second part of this paper, insights into historical factors leading to formation of various language teaching methods, with focus on integrating of L2 and academic subject teaching, are provided.

The objective of this paper is to clarify how content and language integrated learning approach differs from L2 teaching in language classes, with no integration into academic subject. In this paper, CLIL principles are described in context of secondary vocational education in mechanical engineering.

### **A short history of language and content integration in education**

During the 1990s, CLIL became one of the most frequently used terms indicating teaching languages in such a way that the focus is not on the form but on the subject matter content. The concept has quite a long history, and over many years specific methodological and organizational approaches have been developed. David Marsh was one of the first promoters of content and language integrated learning, coining the acronym CLIL in his publication *Content and Language Integrated Learning at School in Europe* (1994).

The variety of the approach models is the consequence of cultural, social, political and historical factors typical for a particular region. To a large extent, bilingualism or multilingualism in countries with several official languages in which bilingual education has developed, implementation of learning foreign languages in a real meaningful subject context emerged.

It is worth mentioning that the concept even dates back to history in the work of a significant pedagogue of the Czech origin J. A. Komenský (1592 – 1670). He emphasized the need for effective language education (*Orbis Pictus, Janua Linguarum Reserata*).

Before 1970, programmes focusing on language and content integration emerged as a result of different geographic, demographic, social and economic developments. Mainly in frontier areas, it was essential to enable pupils to study in a bilingual environment to increase their communication skills in everyday situations with other people in the area.

In countries with several official languages, *immersion education* programmes are applied. Canadian Immersion Programmes, focusing on giving instruction in the target language from kindergarten or starting during elementary school (Navés, 2009) prove efficient. The concern about how much content through the students' second language was learnt led to the demand for the immersion programme evaluation by parents, school boards and administrators (Navés, 2009). Immersion education has extended from Canada to the USA and Europe. The term *immersion* became a synonym for bilingual education in the 1970s and 1980s.

European bilingual education was influenced to a large extent by the Canadian immersion education programme. CLIL is considered a bilingual approach. The pupils acquire their language skills simultaneously with the subject matter acquisition and no initial language preparation is required. The use of L1 is allowed too for proper understanding of special subject-based terminology both in L1 and L2.

Language diversity has always been one of the main objectives encouraged by the European Union. In the 1990s, debates on language education in Europe led to investigation and support of innovative methods within the Lingua programme (1990), which declared the importance of supporting innovations in foreign language education. Thus the EU started initiatives in the area of content and language integrated learning (CLIL).

Council Resolution of 31 March 1995, one of the first legislative documents of the Council of the European Union that puts focus on the promotion of linguistic diversity, highlights one of the major issues in education. It aims to make language teaching and learning more effective by introducing a range of innovative methods at schools and universities. In light of the above, the Council emphasizes the need to enhance communication skills with particular attention to methods which develop reading comprehension, writing, listening comprehension and speaking, as well as teaching of classes in a foreign language for disciplines other than languages, providing bilingual teaching. According to the Resolution, promotion of learning of languages in technical and vocational teaching results from a growing number of enterprises that need employees mastering several languages of the Union. The pupils in technical and vocational education must have an opportunity to acquire the language skills necessary to find work and to progress through their career (Council Resolution, 1995). One of the ways to achieve the objectives is to implement language learning methods adapted to technical and vocational teaching.

In the same year, in the White Paper focusing on the teaching and learning towards the learning society, the EU Commission came up with guidelines for action in the fields of education and training. “Training and apprenticeship policies, which are fundamental for improving employment and competitiveness, must be strengthened, especially continuing training” (White Paper. Teaching and Learning. Towards the Learning Society., 1995). Article 127 of the Treaty establishing the European Community stipulates that “the Community shall implement a vocational training policy which shall support and supplement the action of the Member States”. This is the basis upon which the EU Commission stated its objectives in the White Paper that the development of proficiency in three foreign languages is one of the main EU priorities.

Along with this, the Commission stated that “...it could even be argued that secondary school pupils should study certain subjects in the first foreign language learned, as is the case in the European schools” (Eurydice, 2006). The acronym CLIL is used to describe all educational models in which L2 is used to teach certain subjects in the curriculum other than language lessons. The methodological principles in CLIL promote subject-based lexical competence acquisition by exposing learners to situations promoting genuine communication.

### **Status of CLIL provision in Slovakia**

Bilingualism and multilingualism awareness in Slovakia is increasing. Moreover, it is treated as one of the important issues associated with European integration. EU institutions attempt to support programmes seeking and testing innovative methods for learning foreign languages in which L2 is perceived as a tool for communication. Extending the measure of language learning by implementing it into academic subjects other than L2 classes, is seen the best approach to promote language proficiency simultaneously with subject-based lexical competence acquisition. In addition, it favours for cognitive skills development through activity-based learning integrated into academic subject learning. This approach provides a learner-friendly educational environment fostering self-learning in students through Vigotsky’s scaffolding concept, whereby the support that a teacher gives the student is provided in different ways. Controlled practice, working on particular subject matter at an accessible skill level enables the student to learn to master tasks, skills or strategies. They can then move on to mastery of higher level content with more confidence and better understanding [CLIL-Scaffolding, online, 2019]. With such a purpose in mind, language and life-long education in Slovakia have been promoted through EU programmes. The Slovak Ministry of Education confirmed in the previous period participation of the Slovak Republic in the Sokrates II, Leonardo da Vinci II and Youth to promote education and vocational training. It has also offered ERASMUS for student’ and teacher’ mobility support. Nowadays, ERASMUS PLUS includes all the previously existing programmes and covers education, training, youth and sport. It provides an opportunity to propose, train and gain work experience abroad.

The Slovak Academic Association for International Cooperation (SAAIC) – the National Agency of the Erasmus Plus programme for education and vocational training cooperates closely with the Ministry of Education of the Slovak Republic. One of the objectives of the SAAIC is to participate in national and transnational projects, surveys and analyses aimed at improving education in Slovakia.

Accordingly, the association carries out its activities in the Slovak Republic within the EU Commission's initiative, the database of which includes innovative projects in language teaching and learning. The European Language Label is awarded to local, regional, and national projects that have found creative ways to improve the quality of language teaching.

The National Institute for Education in the Slovak Republic provides leadership, design and development of curricula, promotes innovative practices in the educational system and assists in the implementation of innovative approaches including CLIL in the academic subjects. However, mostly primary schools have been enrolled into the accredited programme in Slovakia.

In secondary general and vocational education, growing interest in content and language integrated learning is recorded, though, compared to primary education, not much research has been carried out to provide a complex research results. In the case of secondary vocational education, a few CLIL experiments have been conducted mainly at business academies, engineering and technical schools.

### **CLIL at vocational secondary schools**

Implementation of new innovative methods in foreign language education reflects emphasis on motivation as an important factor for successful language education. Increasing graduates' chances in the labour market represents one of the significant factors of motivation. The ability to combine language and vocational competences is becoming crucial in students of secondary vocational schools in Slovakia. Therefore, the teaching of foreign languages at secondary vocational schools had been gradually adapting to the students' professional orientation. Along with the vocational and language education based on students' professional study area, an appropriate qualification level according to the National Qualifications Framework should be taken into consideration (Lipková, 2018). This must be in compliance with the levels of the European Qualifications Framework for Life-Long Learning and the Common European Framework of Reference for Languages (CEFR): Learning, teaching, assessment as a common basis for the description of objectives, content and methods in second language education.

In Slovakia, CLIL education is carried out at both mainstream grammar schools providing general education and at vocational secondary schools with profession-orientated CLIL classes in the academic subjects.

One of B1 or B2 CEFR common reference levels is chosen by the students of the vocational secondary schools for their final leaving examinations in Slovakia.

Basically, the content and language integrated learning is undertaken in the academic subject classes, thus providing specialist subject-based terminology acquisition so as to facilitate communication on particular professional topics based on their study area. However, the leaving examination outcomes achieved by the students tend to reflect mainly their language competences in general language. As regards assessment of the outcomes achieved in CLIL-type classes, experiments have been carried out applying CLIL principles at the schools willing to allocate more time and support to prepare the CLIL-type integrated curriculum. The approach assumes a closer cooperation between teachers, resulting in cross-curricular link development.

Research in CLIL is carried out in the following areas (Pokrivčáková, 2012):

- language-based CLIL research that concentrates on various ways of co-existence and interaction of the first and target languages in CLIL-type classes,
- content-based CLIL research focusing on the content of the academic subjects, different ways in which the curriculum is coded in a target language in the specific type of bilingual education and how the students' outcomes are influenced by the approach in non-language classes,
- context-based CLIL research studies the influence of various national, cultural and other external factors on the effectiveness of CLIL principles.

### **CLIL research at the Secondary Vocational School in Mechanical Engineering in Bratislava**

The objective of the CLIL research carried out at the Secondary Technical School of Mechanical Engineering in Bratislava (Slovak Republic) was to increase content-based lexical acquisition and motivation in students of the second grade of study at the Technical Lyceum, one of the study branches available at the secondary vocational school. Along with the next two branches of study, Mechatronics and Mechanical engineering, the Technical Lyceum prepares students for successful completion of study at universities of technology or economics. The range of subjects and students' training prepares them for their further profession in fields with a wider scope of knowledge and skills, such as informatics, marketing, etc. The lyceum's study programme provides both general education similar to the secondary grammar schools' study programme and basic vocational education based on studying compulsory subjects complemented by a block of optional subjects. These are incorporated into vocational education in accordance with the demands of particular regions, school conditions and the level of the students' skills. The Technical Lyceum's curriculum aims to foster the increasing number of students from technical vocational schools wishing to study at universities.

The enlargement of general education at secondary vocational schools results from the evaluation of experimentally verified educational and study branches approved by the Ministry of Education in the Slovak Republic in a document of 21 December 2005 under the number CD-2005-24818/41271-2:093. The document helps to realize the objectives of the EU to raise the level of general education at secondary vocational schools.

## **Method**

The effectiveness of the CLIL principles introduced into the academic subject *mechanics: strength and elasticity* was studied by an experiment at the Bratislava Secondary Vocational Technical School of Mechanical Engineering. An increase in technical subject-based lexical acquisition was the main assumption to be proved by the experiment, along with an increase in motivation in students to study professional subject-based L2.

## **Participants**

Two groups of 16 and 17-year-old students were involved in the experiment to compare the outcomes, as well as the attitude towards studying L2 by this approach. English is the L2 target language studied by students in language classes 5 hours weekly.

In both the CLIL and control groups, 32 students (30 male and 2 female students) were required first to write a comprehension test consisting of grammar and reading comprehension parts. The students' outcomes from the both groups displayed various proficiency levels of English language as a target L2.

## **Procedures and analyses**

The main hypothesis at the start of the experiment was that the score in CLIL students would be better than in non-CLIL students in technical subject-based lexical acquisition. English as a target language was integrated directly into the academic technical subject to deliver technical terms in the target language corresponding with the studied content. CLIL classes were carried out in cooperation with the teacher of the respective technical subject. CLIL teaching was preceded by initial selection of the content to be studied with regards to the curriculum and the educational objectives stated by the school management.

## **Selected subject-related topics:**

- Mechanical properties of materials in engineering,
- Shear stress and shear strain,
- Hooke's law in shear,
- Torsion loading of circular and noncircular shafts.

A glossary of technical terms had been worked out before CLIL lesson plans were proposed. The objective was to measure how many technical words delivered in the context the students

can remember and use to describe basic processes being explained in L2 in non-language classes.

Taking into account that no CLIL-type lessons had ever been introduced at the secondary vocational school (except language lessons including ESP combination of various topics with no reference to a particular academic subject), completely new teaching materials were prepared in cooperation with both the L2 and the subject teachers.

The lessons were conducted in the *soft CLIL* way, whereby the teacher concentrates on the use of tools with a focus on linguistic objectives. It is usually planned for a short period, over which the students acquire content knowledge despite the primary focus being on L2 lexical and communication acquisition (Ball et al., 2015).

In light of the above, a lexical approach seems to be a more effective means of understanding grammar structures. So, the lexical meaning with real situations in which particular grammar structures are used should be provided to students in order to form them to understand the grammar of functional language.

CLIL classes were taught by both the L2 and the subject teachers. The structure of the lessons involved academic language input introduced by the L2 teacher through which the content was delivered to students. Then practical tasks based on computing with reference to the studied content, followed under the subject teacher's guidance. Content-based terminology and language structures were practised at the end of the lessons by means of activity-based tasks promoting cooperation of students in pair or group activities in experimental CLIL group students.

### **Content-based academic foreign language**

Academic language incorporates the discipline-specific terminology that allows students to acquire knowledge and academic skills. Competency in academic language often refers to a variety of non-linguistic skills that are integral to language mastery, including (The Glossary of Education Reform, 2013):

- academic skills (organizing, planning, researching),
- cognitive skills (critical thinking, problem solving, interpreting, analysing, memorizing, recalling),
- learning modes (questioning, discussing, observing, theorizing, experimenting),
- work habits (persistence, self-discipline, curiosity, conscientiousness, responsibility),
- other forms of literacy (technological, online, media, multicultural, etc.).

In light of the above, the CLIL approach incorporates a combination of principles to enhance communication competence with the use of technical terminology, in the case of this research, related to the academic subject of mechanics: strength and elasticity.

The incorporation of authentic technical texts adapted for teaching purposes provides good opportunity for understanding the specific meaning of terms within a discourse. Thus, authentic technical texts in a foreign language characterised by high concentration of technical words with their explicit meaning, diagrams, charts etc. represent valuable teaching materials. Working with text may be realized in the form of team-based activities working on a common project that requires looking up and sorting information related to the task. Interpretation and presentation of the students' findings with their attitude to a specific problem develop both critical thinking and motivation in students. They become more enthusiastic about learning academic foreign language by discussing an issue and listening to and attempting to understand utterances of other students.

Different multi-word expressions are the result of a variety of morphemic procedures (derivation, suffixation, prefixation, composition etc.) of word formation (Kucharíková, 1986). Knowing word formation processes and components helps to organize words into categories which helps greatly to build vocabulary and even understand unknown words with ease and expand the learners' productive and receptive vocabularies. Technical expressions are often repeated within a specialized text, which strengthens their importance. Concerning specialized words in mechanical engineering, the occurrence of multi-words is very frequent as a result of the increasing need to express complexity of the reality.

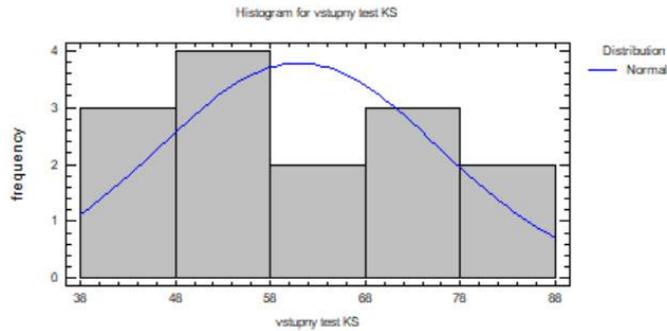
## **Results**

As mentioned above, two groups of the second-grade students studying at the Bratislava Technical Vocational School were compared. In both the groups, *control* and *experimental*, vocabulary and functional language, viewed as the discourse of a subject syllabus, were delivered. In this way target language is more the vehicle of the learning (Ball, 2015). In a *control* group, 'traditional' teacher-centered language education was applied on the language lessons to deliver English in mechanical engineering. In this type of teaching approach, listening is predominant activity, students are passive, in a receptive mode. On the contrary, student-centered teaching methods were applied in an *experimental* CLIL group to make students more interested in language learning. CLIL principles were used in this group with the aim to motivate students through group activities sharing the focus.

Emphasis was put on learning communicative and collaborative skills in the attempt to complete tasks independently. Students interacted with one another in a variety of activities implementing a wide range of strategies.

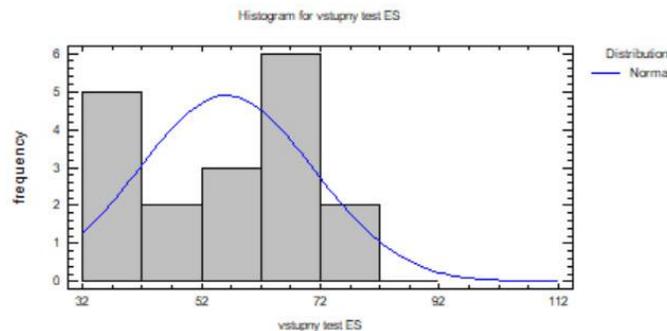
For the language audit reasons, a comprehension pre-test was used in which students demonstrated their target language skills at the beginning of the research. Tests for normality for comprehension pre-test show a normal distribution in both the groups (Figures: 1 and 2).

Figure 1: Test for Normality for comprehension pre-test in the control group



<i>Test</i>	<i>Statistic</i>	<i>P-Value</i>
	<i>c</i>	
Shapiro-Wilk	0,9382	0,38085
W	72	4

Figure 2: Test for Normality for comprehension pre-test in the experimental group



<i>Test</i>	<i>Statistic</i>	<i>P-Value</i>
	<i>c</i>	
Shapiro-Wilk	0,9188	0,125948
W	11	

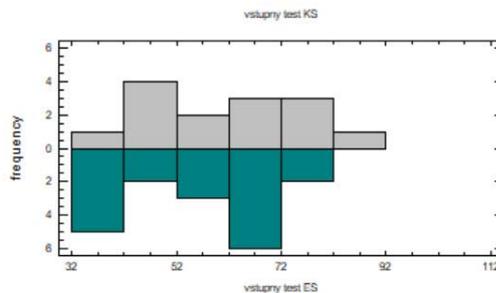
In these results, the null hypothesis states that the data follow a normal distribution. Because the P-value is greater than the significance level of 0.05, the decision is to fail to reject the null hypotheses. We cannot conclude that the data do not follow a normal distribution.

In Figure 3, The StatAdvisor option ran a Kolmogorov-Smirnov test to compare the distributions of the two samples. This test is performed by computing the maximum distance between the cumulative distributions of the two samples. In this case, the maximum distance

is 0.277778, which can be seen visually by selecting Quantile Plot from the list of Graphical Options. Of particular interest is the approximate P-value for the test. Since the P-value is greater than or equal to 0.05, there is not a statistically significant difference between the two distributions at the 95.0% confidence level.

*Figure 3: Kolmogorov-Smirnov Test for comprehension pre-test in control and experimental groups*

Legend:  Control group;  Experimental group



### Kolmogorov-Smirnov Test

Estimated overall statistic DN = 0,277778

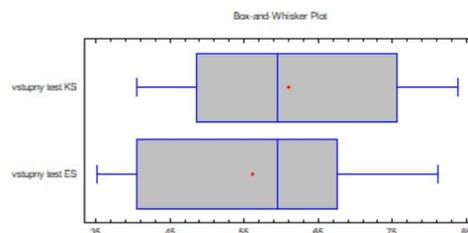
Two-sided large sample K-S statistic = 0,779512

Approximate P value = 0,577807

Box-and-Whisker Plot in Figure 4 points out to L2 comprehension homogeneity of the groups at the start of the experiment.

*Figure 4: Box-and-Whisker Plot for comprehension Pre-test for the control and experimental groups*

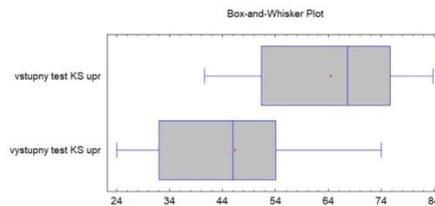
Legend: KS = Control group; ES = Experimental group



To compare the outcomes in students of control and experimental groups achieved at the beginning and the end of the research within each of the groups, pre-test and post-test outcomes were compared (Figures: 5 and 6).

*Figure 5: Box-and-Whisker Plot for the control group*

*Legend: Vstupný test = Pre-test; Výstupný test = Post-test*



**Hypothesis Tests for Pre-test Controlgroup; Post-test Controlgroup**

Sample mean = 18,0098

Sample median = 16,2703

Sample standard deviation = 24,1949

t-test

Null hypothesis: mean = 0,0

Alternative: not equal

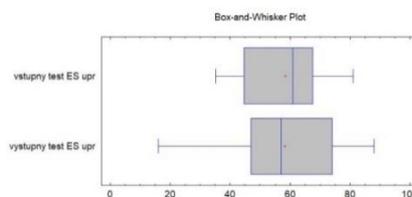
Computed t statistic = 2,46878

P-Value = 0,0331743

Reject the null hypothesis for alpha = 0,05.

*Figure 6: Box-and-Whisker Plot for the experimental group*

*Legend: Vstupný test = Pre-test; Výstupný test = Post-test*



**Hypothesis Tests for Pre-test Experimentalgroup; Post-test Experimentalgroup**

Sample mean = 0,19625

Sample median = -6,62

Sample standard deviation = 14,1889

t-test

Null hypothesis: mean = 0,0

Alternative: not equal

Computed t statistic = 0,055325

P-Value = 0,95661

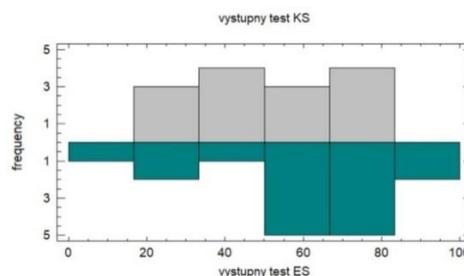
Do not reject the null hypothesis for  $\alpha = 0,05$ .

Statistical results show significant difference in students' performance within each of the groups over the research period. As shown in Figure 5, control students' outcomes did not show increase in subject-based lexical acquisition in language teacher-centered classes. Findings prove low level of enthusiasm for studying L2 in a control group, with reference to an academic technical subject discourse in language classes. In experimental CLIL students, progress in performance had an increasing tendency. Significant progress is seen in experimental students based on findings displayed in Figures 4, 5 and 6. Starting position of both these groups, tested in language proficiency by comprehension pre-test, indicated a homogeneous community with slightly worse results in experimental group at the start of the research. Performance in each of the groups over the research period was compared by evaluating post-test outcomes in both the groups. As seen in Figures 5 and 6, technical subject-based L2 lexical acquisition was improved in experimental students learning L2 by means of CLIL principles.

Figure 7 compares distribution of two samples for the post-test in target technical language acquisition. Compared to Figure 3, number of students in experimental group with poor outcomes in comprehension pre-test decreased in comparison to post-test outcomes. More students demonstrated higher interest in learning L2 integrated into a technical academic subject. Findings in Figure 7 prove higher motivation in more experimental students for learning language, as the distribution of two samples displays.

Figure 3: Kolmogorov-Smirnov Test for post-test in control and experimental groups

Legend:  Control group;  Experimental group



## **Conclusion**

Research carried out at Bratislava Secondary Technical School, providing study programmes in mechanical engineering, reveals the need for seeking methods in language education which result in fostering motivation in students. Consequently, it is important to bear in mind that knowing a purpose of integration of L2 into academic subject increases an interest for studying it in students. Flexibility to adapt to studying in a different language environment; strategies for enhancing the ability to use authentic texts published in a target language along with producing essays by students themselves applying a discipline-based terminology in L2 and activity-based methods for language acquisition, are the benefits that CLIL offers and are essential for further career-building in students.

Requirements for quality education result from the need of companies to employ persons with mastery of communication in several foreign languages. Implementation of the CLIL principles into education proves to be a suitable approach to fostering this tendency.

The research supports the hypothesis that CLIL classes are beneficial for secondary school learners and the data collected from a short questionnaire revealed the motivation and interest in students to incorporate more technical subjects into curriculum implementing CLIL models of education.

## **References**

BALL et al. (2012). Putting CLIL into Practice. Oxford University Press, pp. 21-98. ISBN 978-0-19-442105-8.

Brown, J. D. and Rodgers, T. S. (2007). Doing Second Language Research. Oxford University Press. UK, pp. 79-224.

Burton, N. et al. (2011). Doing Your Education Research Project. SAGE Publications Ltd., pp. 165-229.

Council of the European Union (1995). Council Resolution of 31 March 1995 on improving and diversifying language learning and teaching within the education systems of the European Union. EU Publications.

European Commission (1995). White Paper on Education and Training – TEACHING AND LEARNING – TOWARDS THE LEARNING SOCIETY. Publications Office of the European Union.

EURYDICE (2006). Obsahovo a jazykovo integrované vyučovanie (CLIL) v škole v Európe. Eurydice. Informačná sieť o vzdelávaní v Európe. ISBN 92-79-01915-5.

Kucharíková, A. (1986). Konfrontačná analýza viacslovných termínov v španielskej, anglickej a slovenskej strojárскеj terminológii. Faculty of Philosophy. Comenius University. Bratislava, Slovakia

Lipková, M. (2018). Uplatňovanie princípov CLIL na stredných odborných školách. Proceedings of International Conference. Cudzie jazyky v premenách času IX. University of Economics in Bratislava. Slovakia.

Navés, T. (2009). Effective Content and Language Integrated Learning (CLIL). Content and Language Integrated Learning. Evidence from Research in Europe. Edited by Yolanda Ruiz de Zarobe and Rosa María Jiménez Catalán. Great Britain, pp. 22-25.

POKRIVČÁKOVÁ, S. (2010). Obsahovo integrované učenie sa cudzieho jazyka (CLIL) na 1. stupni ZŠ. In: STRAKOVÁ, Z., CIMERMANOVÁ, I. (eds.). Učiteľ cudzieho jazyka v kontexte primárneho vzdelávania. Prešov : Prešovská univerzita v Prešove, 2010. ISBN 80-555-0232-8. s. 99-121.

CLIL - Scaffolding. [Online]. Available:

[http://ateneu.xtec.cat/wikiform/wikiexport/\\_media/cmd/ile/clpa/modul\\_1/clil-scaffolding\\_pfarre.pdf](http://ateneu.xtec.cat/wikiform/wikiexport/_media/cmd/ile/clpa/modul_1/clil-scaffolding_pfarre.pdf)

Great Schools Partnership (2013). Academic Language. The Glossary of Education Reform. [Online]. Available: <https://www.edglossary.org/academic-language/>

## **Bibliography**

DALTON-PUFFER, C. (2011). Content-and-Language Integrated Learning: From Practice to Principles? Annual review of Applied Linguistics. Cambridge University Press, pp. 182-204.

GONDOVÁ, D. (2012). CLIL očami žiakov. In: KRÁLOVÁ, Z. CLIL – nová výzva. Univerzita Jana Evangelisty Purkyně. Ústí nad Labem. ISBN 978-80-7414-507-0.

KRÁEOVÁ, Z. 2009. Vyučovanie cudzojazyčnej výslovnosti. In: POKRIVČÁKOVÁ, S.: Cudzie jazyky a kultúry v modernej škole. Brno: Masarykova univerzita. ISBN 978-80-210-4974-1.

LOJOVÁ, G. et al. (2011). *Styly a strategie učení ve výuce cizích jazyků*. 1st ed. Praha: Portál. ISBN 978-80-7367-876-0.

MARSH, D. (2002). *CLIL/EMILE –The European Dimension. Actions, trends and foresight potential*. UniCOM, Continuing Education Centre. Jyväskylä, Finland: University of Jyväskylä.

MEHISTO, P. et al. (2008). *M. Uncovering CLIL: Content and Language Integrated Learning in Bilingual and Multilingual Education*. Macmillan ELT. ISBN 978-0230027190.