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STUDENTS' PERCEPTIONS OF CONTENT AND LANGUAGE INTEGRATED LEARNING AT SELECTED TECHNICAL UNIVERSITIES IN POLAND

Students' perceptions of Content and Language Integrated Learning at selected technical universities in Poland

The present article is an attempt to present the situation in the area of Content and Language Integrated Learning at some technical universities in Poland. It starts with a brief outline of CLIL methodology as well as its status in the context of Polish tertiary education, and then moves on to a discussion of the results of the study conducted among Polish and international students attending English-medium courses in their specialist areas, such as, for instance, engineering. The courses involve learning of new, difficult concepts as well as specialized vocabulary. The study took place in three universities which have been offering content instruction in English for a number of years. Its aim was to investigate problems and difficulties that students come across during the course of their studies in a foreign language, as well as their expectations concerning such a mode of education.

Key words: basic skills, students' needs, content-based instruction, specialist knowledge, CLIL (Content and Language Integrated Learning), communicative teaching, language immersion, professional competence

Słowa kluczowe: podstawowe umiejętności, potrzeby studentów, nauczanie przedmiotowe (poprzez treści), wiedza specjalistyczna, CLIL (zintegrowane nauczanie językowo-przedmiotowe), nauczanie komunikacyjne, „zanurzenie” w języku, kompetencja zawodowa

1. Introduction

The 21st century has brought about significant changes in many areas of life, uncovering at the same time the weaknesses and inadequacies of traditionally conceived education. It has been realized that living and functioning in the highly competitive contemporary global market requires different types of knowledge and skills, and thus, if we want to take full advantage of participating in different areas of life, the goals of education need to be reformulated. The key concept of the new, emerging model of education are the so-called “basic skills”, one of which, alongside information technology, is English.

As it is, in many instances, English is no longer “a foreign language” but rather has acquired the status of a *lingua franca*, becoming an important means of communication within many countries in Europe and internationally. With education in Europe becoming globalised as a result of the Bologna Process, whose goal was to standardize higher education through a variety of international exchange programmes for students and teachers, more and more people have the opportunity to take advantage of studying and/or working abroad. Hence, many universities and other institutions of higher education in non-English speaking countries, taking into consideration the needs of international students, offer courses delivered in English, as teaching vernacular languages to those students would be time consuming, costly, and definitely less effective, especially in the case of such difficult languages as, for instance, Polish, Czech, or Turkish. Besides, in today’s world, if an institution of higher education wants to be recognized internationally and attract students and teaching staff/researchers from other countries, offering instruction in English, the modern *lingua franca*, seems to be the most reasonable solution. As Graddol explains, it is in such a context that, over the years, English has become a common working language, a means of instruction in numerous English-medium programmes in most European countries: “As English becomes a basic skill, so success in other areas of the curriculum becomes dependent on success in English. In effect, failure to master English as a basic skill means failure in other disciplines” (2006: 120).

In recent years, the ELT profession has witnessed a significant change in the needs of students which have shifted from General English to more specific subject areas related to the course of their studies. Accordingly, numerous higher education institutions across Europe, in addition to regular language courses, have started developing content-based instruction in the context of which a foreign language and content are learned simultaneously. In other words, an additional language, other than the native language of the students, is used to acquire specialist knowledge. Such a solution was a welcome oppor-

tunity for local students, who could take advantage of context based instruction and develop a better command of a language in relation to their future job requirements. It is in this context that *Content and Language Integrated Learning (CLIL)* has emerged as a significant trend in European education.

The present article is an attempt to present the situation in the area of *Content and Language Integrated Learning* at some technical universities in Poland. It starts with a brief outline of CLIL methodology as well as its status in the context of Polish tertiary education, and then moves on to a discussion of the results of the study conducted among Polish students attending English-medium courses in their specialist areas, such as, for instance, engineering. The courses involve the learning of new, difficult concepts as well as specialized vocabulary. The study took place in three universities which have been offering content instruction in English for a number of years. Its aim was to investigate problems and difficulties that students come across during the course of their studies in a foreign language, as well as their expectations concerning such a mode of education.

It has to be explained at this point that the study this article reports on is *only* a part of a larger European research project conducted in Germany (Leibnitz University Hannover), the Netherlands (Erasmus University Rotterdam) and Poland in 2011-2012. Its preliminary results (the data concerning CLIL at universities in Hannover and Rotterdam) were presented at a conference on *Integrating Content and Language on Higher Education* in Maastricht, April 2013.

2. Content and Language Integrated Learning (CLIL) – Some theoretical considerations

Content and Language Integrated Instruction is a pedagogical proposal that has become very popular in recent years. As Coyle, Hood and Marsh (2010: 3) write, the term CLIL “was adopted in 1994 (...) within the European context to describe and further design good practice as achieved in different types of school environment where teaching and learning take place in an additional language”. They define it as “a dual-focused educational approach in which an additional language is used for the learning of both content *and* language” (ibid.: 1); the two are interwoven, but neither is emphasized over the other. Obviously, Coyle, Hood and Marsh do not perceive CLIL as a new form of language education, or a new form of subject teaching. They refer to it as “an innovative fusion of both”, “a content-driven approach to teaching in which the non-language subject is taught *with* and *through* a foreign lan-

guage” (ibid.). They also point out that CLIL is closely related to other existing content-centered educational proposals such as, for instance, Bilingual Education, Sheltered Content Instruction, Language across the Curriculum, Immersion Education, and Language for Specific Purposes (cf. also Larsen-Freeman, 2000: 137-142; Richards and Rodgers, 2001: 205).

The very idea of education in a language that is not the learner’s native language has a very long tradition, going back to ancient times. In ancient Rome, for instance, educating children in another language (Greek) was considered as a means of providing them with access to social and professional opportunities in their future lives. In more recent times, French immersion programmes in Canada have generated a lot of interest among second language acquisition researchers and language teachers alike. It has to be stressed, however, that learning content in an additional language has never been available to such a broad range of learners as nowadays (cf. Coyle, Hood and Marsh, 2010).

In Europe, the idea of providing instruction in schools through the medium of more than one language has been popular from the very beginning of the European Union. To give just a few examples, in 1976 the European Council “listed language-learning objectives and argued for the promotion of language teaching outside the traditional school system”; in 1984 the European institutions recognized a need “to give greater impetus to the teaching of foreign languages”, which eventually led to the development of CLIL as “a major educational initiative”, and finally resulted in the 2005 European Council recommendation “that CLIL should be adopted through entire Europe” (Coyle, Hood and Marsh, 2010: 8).

CLIL is a proposal rooted in communicative methodology; more specifically, it is one of the manifestations of content based instruction (CBI) whose basic principles can be summarized as follows:

1. “People learn a second language more successfully when they use the language as a means of acquiring information, rather than an end in itself”.
2. “Content-Based instruction better reflects learners’ needs for learning a second language” (Richards and Rodgers, 2001: 207).

Thus, it can be assumed that, on the one hand, CBI, and hence CLIL, leads to more effective learning, and, on the other, content-based programmes better prepare language students for academic studies, and as such they should become a central priority in higher education.

Savignon (2004, in Coyle, Hood and Marsh, 2010: 32-33) highlights yet another set of principles deriving from communicative methodology which, in her opinion, are relevant to CLIL, since “language learning is conceptualized within authentic contexts for use”:

- “Language is a tool for communication.
- Diversity is recognized and accepted as a part of language development.
- Learner competence is relative in terms of genre, style and correctness.
- Multiple varieties of language are recognized.
- Culture is instrumental.
- There is no single methodology for language learning and teaching, or a set of prescribed techniques.
- The goal is language using as well as language learning”.

Savignon's views are shared by Mehisto, Marsh and Frigols (2012: 29), who single out such features of CLIL as *multiple focus, safe and enriching learning environment, authenticity, active learning, scaffolding, and cooperation*.

Researchers emphasize the following benefits of instruction focusing on content in comparison with more traditional language instruction:

- thematically organized materials, typical of content-based classrooms, are easier to remember and learn;
- the presentation of coherent and meaningful information, characteristic of well-organized content-based curricula, leads to deeper processing and better learning;
- there is a relationship between student motivation and student interest – common outcomes of content-based classes – and a student's ability to process challenging materials, recall information, and elaborate (after Stoller, 1997:3);
- in content-based language teaching, the claim in a sense is that students get “two for one” – both content knowledge and increased language proficiency (after Larsen-Freeman, 2000: 142).

In this context it seems relevant to note that, as Larsen-Freeman (2000: 140-142) reminds us, language instruction involving both specific content and related language skills can be considered a form of language immersion, since it creates opportunities for language learning through problem solving, cooperative learning, collaboration, and negotiation of meaning, i.e. processes central to second language acquisition. Furthermore, when language becomes the medium for conveying informational content of interest and relevance to the learner, it takes on its appropriate role as a vehicle for accomplishing a set of content goals.

Although, as has been pointed out, there is no single methodology for teaching and learning as far as CLIL is concerned, it is usually the 4Cs Framework that is advocated at the tertiary (higher education) level. The framework is believed to integrate “four contextualized building blocks” such as:

- Content (subject matter);

- Communication (language learning and using),
- Cognition (learning and thinking processes), and
- Culture (developing intercultural understanding and global citizenship) (Coyle, Hood and Marsh, 2010: 41).

The four components, however, need to be carefully balanced, as otherwise problems may appear. One of such major problems with CLIL, especially in technical universities which require complex specialist knowledge, is bridging the gap between the learners' poor linguistic knowledge in the foreign language and the much higher demands of the subject (cf. Gierlinger, 2012: 13). This primarily concerns low-level learners, but the problems with content and cognition appear at other levels as well. Therefore, in CLIL programmes, just as in any other programmes, the learners need to be taught how to become:

- “efficient readers;
- efficient dictionary users (real and web-based);
- efficient notetakers;
- efficient communicators (with interaction and negotiation skills);
- efficient researchers and data gatherers;
- efficient presenters in the target language” (ibid.).

It goes without saying that the effectiveness of learning will obviously depend on the teaching staff – their professional competence in the area of the subject matter being taught as well as their teaching skills, not to mention their knowledge of the vehicular (target) language. Because of their specific subject objectives, content courses are often taught by subject specialists and it is a well-known fact that in some countries, higher education teaching staff members do not have sufficient training in educational methodologies. In such cases higher education is perceived in a rather traditional way, and teachers/lecturers focus largely on “imparting information” to students (a transmission mode) rather than using an interactional mode. At the same time, however, the teaching staff may feel uncomfortable or even embarrassed delivering a lecture in a language that is not their native language. Crandall comments: “It is not surprising, that both language and content area teachers may be frightened at the prospect of integrating language and content instruction, since there is limited attention to language needs in the preparation of content teaching, and limited attention to either the specific discourse of academic disciplines or to the practical concerns of needs analysis, text adaptation, curriculum development, or collaborative teaching in most language teacher education programmes” (1998: 2).

There is yet another relevant aspect concerning subject specialists which they often seem to be unaware of: in order to make the content com-

prehensible to students, teachers need to introduce some kinds of adjustments and simplifications similar to those that native speakers make in communicating with non-native speakers. In the field of second language acquisition, the discourse that results from such modifications is referred to as "foreigner talk". Richards and Rodgers suggest that teachers and lecturers operating within the framework of content focused instruction "consciously and unconsciously make such "foreigner talk" modifications in the language they use in teaching, in order to make the content they are focusing on more comprehensible to their students" (Richards and Rodgers, 2001: 209).

Just for the reasons mentioned above, not to mention a number of others, CLIL as a teaching proposal may be difficult to implement unless the subject teachers have a good command of the vehicular/target language. It is emphasized that in order to be effective, CLIL requires close cooperation between subject specialists and language specialists, of a kind which is often institutionally difficult to achieve, usually because of the unwillingness of the former to acknowledge language specialists' knowledge of the subject and other skills. As Graddol asserts, "Above all, it requires patience and the time to allow teachers to gain experience and bring about the necessary cultural change within institutions" (2006: 120).

As far as students are concerned, in many countries they are expected to participate in English-medium classrooms for at least some of their academic or professional careers. For instance, they may enroll on courses or entire academic programmes which are taught through English. In such a case, they are expected to function in a vehicular language, and, what is more, assessment of their English/language proficiency is made partly through subject assessment. Furthermore, the activities of the class/lecture are specific to the subject matter being taught, and are planned in such a way so as to stimulate students to think and learn through the use of the target language. Such an approach lends itself quite naturally to the integrated teaching of the four traditional language skills.

Summing up, a CLIL approach offers unquestionable advantages which include:

- enabling learners to access subject-specific vehicular language terminology;
- preparing them for future studies and/or working life;
- advancing learners' cognitive development (ability to think in different languages can have a positive effect on content learning).

Hence, CLIL not only promotes the development of global language competence, but also serves to stimulate cognitive flexibility as it exerts an impact on the process of conceptualization (i.e. the way we think) enriching the understanding of concepts, enabling better association of concepts, helping

the learner advance towards a more sophisticated level of learning in general (cf. Coyle, Hood and Marsh, 2010: 9-13).

3. Content and Language Integrated Instruction in Poland

With Poland joining the European Union, new objectives for language teaching and learning had to be formulated, taking into consideration the process of internationalization of education on the one hand, and a shift in the students' needs on the other.

As far as the process of internationalization of higher education in Poland is concerned, it is primarily noticeable in the increasing number of schools offering English language instruction and instruction through the medium of English (CLIL). This is connected with the fact that, nowadays, Polish citizens, students and university graduates, as well as teaching staff, are faced with new opportunities; they can participate in numerous international exchange programmes and work in different European countries. Moreover, because of the process of economic globalization, foreign language skills (i.e. "basic skills") have become indispensable within the country, for instance to be able to work effectively in inter-/ multinational enterprises. There is yet another aspect of internationalization, namely international students and scholars coming to Polish higher education institutions as a result of the Bologna Process.

It seems, however, that a lot of opportunities are missed due to such factors as language problems, as students, less often the teaching staff, do not feel confident enough to study or/and work in a foreign language. Likewise, foreign students are discouraged from coming to Poland because of the limited number of study courses provided in foreign languages, especially English, as well as language difficulties (cf. Łuczak, 2011).

It is often emphasized that Polish students enrolling at institutions of higher education "are not only unaware of their language needs, but very often do not have a vision of what they would like to do in their future jobs, where they see themselves in 5 or 10 years' time and what opportunities studying at a university in the European member state opens for them". Thus, there seems to be a need "to arouse in students the interest in learning foreign languages, to make them aware of the opportunities for developing language skills at and outside school, for mobility and career planning" (Łuczak, 2011: 63).

Most higher education institutions nowadays offer ESP courses, claiming to take into consideration the students' needs from the very beginning. Such courses usually involve not only language, but also content related to

the students' area of study, which is vital from the point of view of the students' future employment. It is not uncommon to find higher education institutions where the students can enroll on courses or entire academic programmes taught in English.

Offering English-medium instruction (CLIL) already has some tradition in Poland; such programmes have been offered at the Łódź Technical University as well as the Medical University in Poznań, and more and more institutions of higher education are following in their footsteps, introducing classes and lectures in English. Content-focused instruction in an additional language, usually English, can take different forms at different levels of higher education. It is crucial, however, that a vehicular language is used as a means of instruction for all students, Polish and international, and that students and their teachers use English on an everyday basis both at school and during workshops and conferences. Obviously, such a situation creates various problems for Polish and international students alike, which is unavoidable, as English is their additional language. In the words of Graddol: "the learner is not necessarily expected to have the English proficiency required to cope with the subject before beginning study. Hence, it is a means of teaching curriculum subjects through the medium of a language still being learned, providing the necessary language support along the subject specialism" (2006: 86).

In the following part of the article the results of the study focusing on the students' problems and expectations with reference to their English-medium studies is presented.

4. The study

As it was explained earlier, the study described in this section is a part of a larger project investigating CLIL; it was conducted in Poland, among Polish and international students attending English-medium courses in their specialist areas. Its aim was to investigate problems and difficulties that students come across during the course of their studies in a foreign language, as well as their expectations concerning such a mode of education. In particular, the aim was to provide answers to the following questions:

- 1) What language problems do students who study in a foreign language have?
- 2) Which skills prove to be most problematic in the process of studying in a foreign language?
- 3) Which skills do they find most useful and important during their studies?

4.1. Subjects and instruments of data collection

The subjects of the study were students from three technical universities in Poland, namely Łódź, Poznań and Wrocław; it involved 112 students from Łódź, 161 students from Poznań and 48 students from Wrocław, altogether 321 subjects. Out of this number, 171 students were enrolled on B.Sc. courses (Łódź – 100, Poznań – 49, and Wrocław – 22) while the remaining 135 attended M.Sc. courses (Łódź – 12, Poznań – 97 and Wrocław – 26). The vast majority of the students (80%) were of Polish nationality. The data concerning age, education, gender and nationality are presented in the table below.

GENDER	Number	Percent
Male	154	49%
Female	163	51%
TOTAL	317*	100%
AGE	Number	Percent
18-22	127	40%
23-26	183	58%
27-30	7	2%
TOTAL	317*	100%
EDUCATION	Number	Percent
BA	171	56%
MA	135	44%
PhD	0	0%
TOTAL	306*	100%
NATIONALITY	Number	Percent
Polish	256	80%
Other nationality	65	20%
TOTAL	321	100%

Table 1: Subjects of the study (own source)

* the differences in the TOTAL given result from the fact that the respondents failed to provide information about their gender, age and education.

The data, obtained by means of a questionnaire, were collected during the academic year 2011/12 in three technical universities where courses were delivered in English. The questionnaire was administered to the students during their classes to ensure that all the copies were returned promptly. There was also a possibility to fill in the questionnaire on-line for a limited time using a password created for the students. Both the instructions and the survey items were in English. Unfortunately, it turned out that the

number of the respondents from Łódź, Poznań and Wrocław was uneven due to the following circumstances:

- a) not all the respondents returned questionnaire forms filled in during their classes;
- b) there was a rather low response rate when it comes to the on-line questionnaires.

The first part of the questionnaire consisted of 12 statements and questions which referred to different aspects of the language skills involved as well as problems experienced by the students during the course of their studies. The second part of the survey aimed at obtaining background information about the participants of the study, their nationality, gender and types of studies (cf. Table 1 above).

4.2. Findings of the study and interpretation of the results

When it comes to item No. 1, addressing problems with speaking in English during classes, more than half of the respondents admitted to having such problems (74 strongly agreed and 85 agreed with the statement), whereas 115 disagreed or disagreed strongly (83 and 32 respectively). The results are illustrated in Figure 1.

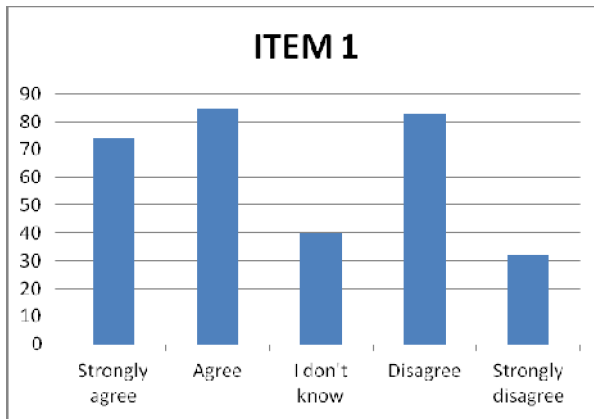


Fig. 1: Problems with speaking in English during classes.

Such a result is understandable when we take into account the recruiting procedures – usually the students are expected to take a language exam (written or oral) at a given university. It is not uncommon, however, that a recognized certificate is enough to become a student in English-medium courses. For Bachelor studies (cycle I), the required level of language proficiency is B2 (CEFR), whereas for M.Sc. (cycle II) it is B2 or C1. It sometimes

happens, however, that the students represent lower levels of English language proficiency, especially when it comes to writing skills. Thus, it is quite probable that these students provided the “agree” answers.

More or less similar results were obtained for statement 2 (problems with understanding academic teachers), where the “agree” and “strongly agree” options were marked by 149 respondents (84 and 65 respectively) and “disagree/strongly disagree” by 118 (82 and 36 respectively, cf. Figure 2). The former responses, acknowledging problems with listening comprehension, could come from students with very limited experience in listening to academic teachers speaking different varieties of English (Polish academic teachers, visiting professors from abroad and native speakers). Another problem to be considered could be the level of proficiency in English represented by Polish academic teachers with respect to pronunciation, grammatical accuracy, range of vocabulary, etc.

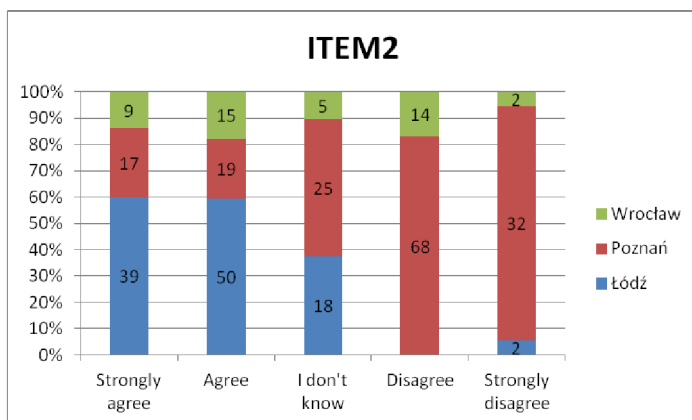


Fig. 2: Problems with understanding academic teachers.

As far as the students’ ability to give oral presentations is concerned, 103 respondents agreed that they could deliver such presentations without any problems (22 “strongly agree” and 81 answered “agree”), whereas 104 were of the opposite opinion (36 “disagree” and 68 “strongly disagree” options). It is interesting, however, that 107 respondents provided an “I don’t know” answer, which obviously requires further investigation.

Item No. 5 inquired about the differences between the ways of delivering oral presentations in the students’ home country and at universities in other countries they were familiar with. 76 students stated that such differences exist (27 strongly agreed and 49 agreed); they listed the following (the answers are presented in the original form):

- *Better preparation, better content and wider knowledge,*
- *Form of presentation*
- *In France the presentation techniques are unknown. The scientific knowledge is believed to be the only element required,*
- *In native language it is easier to say the same sentence better without thinking about it,*
- *Less stress,*
- *Language (easier in native language),*
- *In other universities you may be more confronted with native speakers, who makes you feel not good enough to present something in English. At home university you may know: the others are not better and understand with my accent.*

As can be seen from the above, some answers are ambiguous and difficult to understand, as the students are not very specific in their explanations.

When it comes to item No. 7, concerning students' problems with following lectures in English, 108 respondents provided an "I do not know" answer, whereas 102 students claimed not to have any problems (73 agreed and 29 strongly agreed). At the same time 113 respondents (68 strongly disagreed and 35 disagreed) admitted to having such problems which certainly is a cause for concern. Such responses show that learning new subject matter/content can be difficult for students, especially if the language of instruction is English. Specialized vocabulary, new terminology as well as new modes of instruction (students did not have lectures and/or laboratory classes in their secondary schools) could be the reasons for the appearance of the problems identified by the respondents.

The next item (No. 8) was connected with cultural differences concerning the non-verbal behaviour of academic teachers as well as different teaching styles and their interpretation by the students. Altogether 138 respondents acknowledged having problems with interpreting their teachers' behaviour (51 strongly agreed and 87 agreed). An answer to the problem revealed by the students' responses could be courses on interpersonal and intercultural communication during which students are familiarized with similarities and differences among various nationalities and their cultures. Such courses could aid students in understanding cultural differences and, as a result, contribute to diminishing barriers in communication among students and academic teachers coming from different cultural backgrounds.

In the following item (No. 9), the respondents were asked to tick the most difficult aspects of their studies. A vast majority of the students picked "expressing one's opinions in public" (97 responses), then "participation in

discussions” (81 responses) and, finally, “understanding course requirements” (60). “Understanding lectures” was ticked by 53 students, and “understanding academics’ English” – by 57 of them. Only 34 respondents selected team projects, and 6 marked “other” options (see Fig. 4). The first two options selected by the respondents point to the necessity of introducing some changes as far as the classroom procedures are concerned. More oral tasks should probably be introduced, including discussions held during classes. Appropriate training, involving examples of both specialized and academic language (ESP and EAP), would contribute to the improvement of the respondents’ speaking skills. It comes as a surprise that 60 respondents claimed to have problems with understanding course requirements. On the one hand, such a response indicates that academic teachers do not provide the students with clear information about their requirements, prerequisites and assessment forms as far as their courses are concerned. On the other hand, however, it may suggest a lack of communication between the two parties as well as the fact that some students may be afraid of asking their academic teachers about the courses and final evaluation form i.e. projects, reports, summaries, etc.

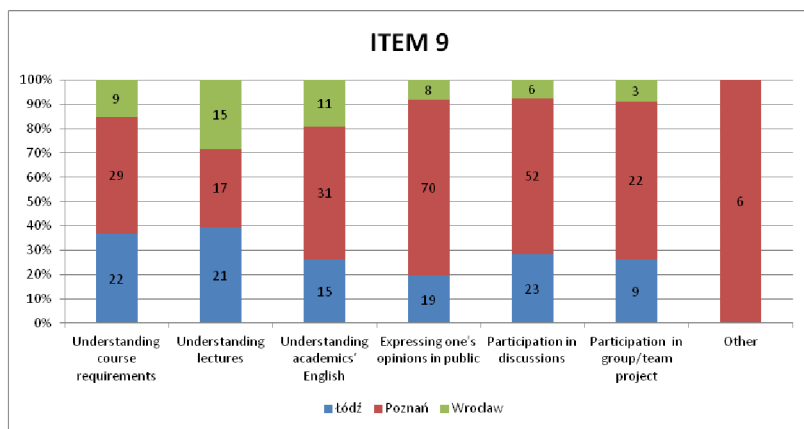


Fig. 4: The most difficult elements of the studies according to the respondents.

As far as problems with written assignments are concerned (item No. 10), the students most frequently pointed to such forms of writing as reports (41), conference papers (40) and theses (35). Interestingly, almost the same amount of students indicated paragraph (25) and summary writing (24; see Figure 5). Such responses definitely point to the necessity of introducing new courses, for instance “Written English”, better addressing the students’ needs and expectations. Taking into account secondary school requirements and curricula, it can be seen that students’ ability to write in English is rather

limited, to say the least. Hence, in order to help students overcome their problems with writing in English, supplementary written English courses should be offered, parallel to students' regular courses.

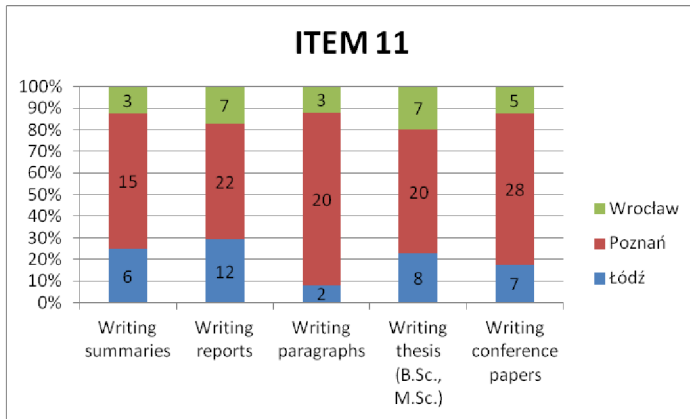


Fig. 5: Problems with written assignments.

The last item (No. 12) in the survey was concerned with the students' views on the most important aspects of positive academic communication. Students could choose from six options, assigning values from 1 (the most important element) to 6 (the least important). The results show that the students attached the biggest importance to understandable instructions delivered by academic teachers (100 respondents marked it as 1), the academics' good command of English (58 respondents valued it as 2), and the students' speaking skills (for 61 respondents it was number 1). Surprisingly, the respondents did not assign much importance to students' knowledge of the "academic culture" (only 18 respondents assigned 1 to it). The lack of concern for this aspect of studies on the part of the students can be explained, firstly, by knowing/being informed about this culture (I know, i.e., I understand, thus I do not make mistakes), and secondly, attending introductory/orientation classes for international students during which various aspects of studying in Poland are handled. Additionally, events such as "Polish week" are organized by the three universities. Some of the responses are shown in Figures 6 and 7.

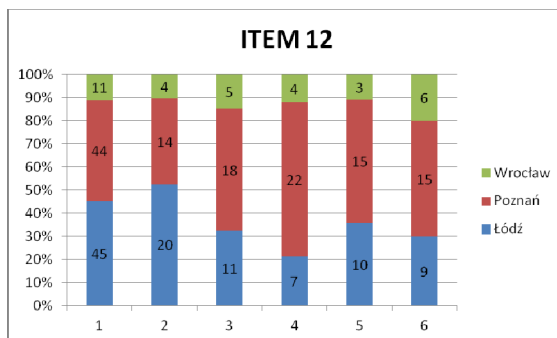


Fig. 6: The importance of clear instructions delivered by the academics.

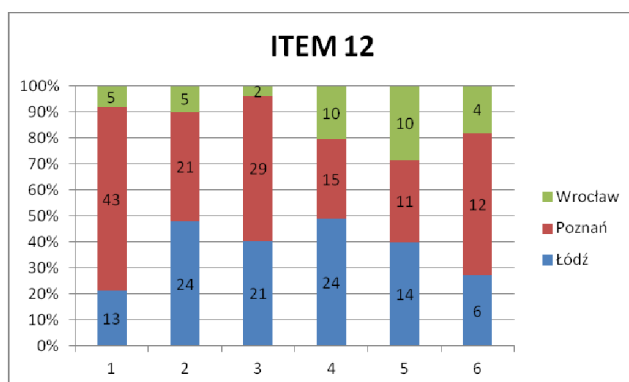


Fig. 7: The importance of students' speaking skills.

Careful analysis of the data provided by the questionnaire described in the present article allows for the formulation of some provisional conclusions concerning CLIL and/or content-based instruction at technical universities in Poland. First of all, it is possible to draw a provisional profile of a technical university student, following an English-medium course of studies. Obviously, coming up with a complete and accurate profile would require more similar data, and thus further studies, including more situational ones. Secondly, this study, as well as some follow up studies, will make it possible to design and introduce new courses, as well as modify the existing ones in order to make them more relevant to the students' needs and expectations. As it is, it seems that special attention should be paid to written English which should significantly contribute to the quality of the students' written assignments, and, in particular, to the quality of their final "product" – a Bachelor's or Master's thesis.

5. Conclusions, implications and directions for future research

It would be premature to draw any general conclusions concerning CLIL in the context of Polish tertiary education on the basis of the present study. However, the picture that emerges from the analysis of the responses of students from three Polish technical universities is quite clear, even with the rather limited data provided. As it appears, there is quite a large group of students who do not have problems with speaking and/or understanding academic teachers, and thus following their course of studies. But the fact that there is a group of students who need some help and training in the development of their speaking skills is a matter of concern. The same can be said about the students' ability to prepare and give oral presentations as well as their ability to understand lectures delivered in English.

The majority of the respondents seem to have problems with completing written assignments in English, especially when it comes to writing their theses (B.Sc., M.Sc.), reports and summaries. Students claim that the three important elements of "positive academic communication" are clear instructions from the academics, the teachers' good command of English, students' speaking and writing skills.

As for future research, it should be pointed out that although the present study has provided some valuable insights into CLIL as implemented at the universities in question, its main aim has been to contribute to a better understanding of the students' needs and expectations. Thus, the study is limited in its scope and should be followed by more similar studies. Besides, the data gathered by means of student questionnaires are also limited, as they present only one side of the picture. Thus, the next step should be a collection of data concerning the teaching staff, for instance by employing interviews with academic teachers and/or observations of the teaching process. Such data, as already suggested, could serve as a basis for introducing changes in English-medium programmes at technical universities.

A more general conclusion can be drawn that it is necessary to provide a wider offer of lectures/courses in foreign languages. Such courses would not only attract international students to study in Poland, but also could give Polish students extra opportunities for exposure to foreign languages at the academic level, preparing them for the challenges of the European markets.

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Appendix

The questionnaire form presented below focuses on problems and difficulties that students come across during the course of their studies in a foreign language. The research has been based on information acquired from Polish students and international students who study at technical universities in Łódź, Poznań and Wrocław.

STUDENT QUESTIONNAIRE

Please tick the following items which will form a basis for my survey. The questionnaire is anonymous and the results will be published in conference journals.

Students' perceptions of Content and Language Integrated Learning at selected...

	<i>Strongly agree</i>	<i>Agree</i>	<i>I do not know</i>	<i>Disagree</i>	<i>Strongly disagree</i>
1. You have problems with speaking in English during classes.					
2. You have problems with understanding the academic teacher.					
3. If yes: 3a. It is because of your problems with English.					
3b. It is because of the poor content knowledge of a given course.					
4. You can give an oral presentation in English without any difficulty.					
5. There are some differences between oral presentations given in your native country and at other universities.					
6. If yes - please state the difference					
7. You can follow the lectures delivered in English without any problems.					
8. You have problems with understanding the academic's cultural behavior.					
9. What are the most difficult aspects of your studies? (tick as many you wish)	<input type="checkbox"/> Understanding course requirements <input type="checkbox"/> Understanding lectures <input type="checkbox"/> Understanding academics' English <input type="checkbox"/> Expressing one's opinions in public <input type="checkbox"/> Participation in discussions <input type="checkbox"/> Participation in group/ team projects <input type="checkbox"/> Others.....				
10. Do you have problems with written assignments?	<input type="checkbox"/> Yes <input type="checkbox"/> No				
11. If yes , please tick the problematic forms/types of writing:	<input type="checkbox"/> Writing summaries <input type="checkbox"/> Writing reports <input type="checkbox"/> Writing paragraphs <input type="checkbox"/> Writing thesis (B.Sc., M.Sc.) <input type="checkbox"/> Writing conference papers				
12. What are the most important aspects of positive academic communication from the students' point of view? (scale 1-6, 1 – the most important one)	<input type="checkbox"/> Clear instructions from the academics <input type="checkbox"/> Academics' good command of English <input type="checkbox"/> Students' writing skills <input type="checkbox"/> Students' speaking skills <input type="checkbox"/> Students' knowledge of the "academic culture" <input type="checkbox"/> Team work				
Personal Information	1. Student's nationality				
2. University in: <input type="checkbox"/> Łódź <input type="checkbox"/> Poznań <input type="checkbox"/> Wrocław	3. Gender: <input type="checkbox"/> Male <input type="checkbox"/> Female				
4. Age: <input type="checkbox"/> 18-22 <input type="checkbox"/> 23-26 <input type="checkbox"/> 27-30	5. Education <input type="checkbox"/> B. A. <input type="checkbox"/> M. A. <input type="checkbox"/> Ph. D.				