

In Search of the Elusive ESP Methodology



PROCEEDINGS

International Conference

Languages for Specific Purposes: Opportunities and Challenges
of Teaching and Research

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Editorial

Welcome to the special issue of Inter Alia 2018 comprising five peer reviewed contributions from the first international conference of the Slovene Association of LSP Teachers organized in Rimske Toplice, Slovenia, from 18 to 20 May 2017. The conference »*Languages for Specific Purposes: Opportunities and Challenges of Teaching and Research*« was held to mark the 20th anniversary of the existence of the Slovene Association of LSP Teachers that has been playing an instrumental role in the development of LSP teaching and research in Slovenia.

In this special issue of Inter Alia 3 we are happy to publish five papers from the conference that cover a range of research topics contributed by authors from Croatia, Serbia and Macedonia. Despite popular claims by Hutchinson and Waters (1987) that there is no specific methodology for ESP, all five papers in this issue of Inter Alia 3 display that for decades ESP teachers have used various methodologies in the attempt to find the best ones to satisfy the specific foreign language learning needs of their ESP students.

With a view to finding the elusive ESP methodology, the authors of the action research overview titled *CLIL in Secondary Vocational Schools Seen Through Students' Perspectives* from the Aviation Academy in Belgrade and the Faculty of Philology, University of Belgrade have turned to content and language integrated learning - CLIL. The authors, Danijela Manić and Julijana Vučo, believe that CLIL could be the most appropriate methodology for learning ESP since it urges ESP students to learn English unconsciously while learning content as well as developing cognitive and communication skills.

Our next paper from the contributors Marija Stanković from Singidunum University Belgrade, Centre Niš, Serbia, and Nikola Tatar from the Faculty of Philosophy also in Niš, focus on the prime function of assessment, that is the feedback to students about their progress. This intersection between learning and assessment is explored by the authors of *E-Testing Versus Paper Testing in EFL in Higher Education: A Comparative Analysis of Student Performance with Reference to Anticipated Stress Level* by investigating the reliability and validity of e-assessment in EAP instruction.

Rethinking the Roles of the LSP Practitioner with Regard to Internationalization of Higher Education explores the possibility that the best ESP methodology could arise from addressing the challenges ESP teachers and students encounter in their own settings, more precisely at the Faculty of Humanities and Social Sciences and the Faculty of Mining, Geology and Petroleum Engineering, University of Zagreb, Croatia. Since the internationalization of high education in Croatia is a challenging process, the authors Tina Miholjančan, Dubravka Pleše and Azra Plićanić Mesić conclude that ESP teachers in Croatia need more guidance, information and professional development – if they are to enable their ESP students' participation in various academic and intercultural contexts demanded by the current process of globalization.

In our next contribution *The Use of Language Learning Strategies by Maths and Computer Science Students* the author Ljiljana Knežević from the Faculty of Sciences, University of Novi Sad, addresses the question of the interdisciplinary use of language learning strategies in Serbian EAP context. In search



of the most efficient ESP methodology, Knežević looks at the prospect that language learning strategy identification and factors contributing to their use could be some of the essential constituents of the »specific« ESP methodology.

Finally, the authors Jana Kegalj from the Faculty of Maritime Studies in Rijeka and Anita Jokić-Kuduz from the First Croatian High School of Rijeka explore stimulating and enhancing ESP students' interest in learning ESP - the indispensable pre-requisites to the evasive ESP methodology. Their paper *How to Make Teaching Maritime English (More) Interesting?* aims to establish, raise and evaluate the levels of ESP students' motivation.

In conclusion, I would like to take this opportunity to express my gratitude to the professional contribution of our reviewers whose quality work has made the current issue of *Inter Alia 3* possible.

I hope you find reading the contributions in the special issue of *Inter Alia 2018* exciting, enjoyable and informative.

Slavica Čepon
The Editor

CLIL in Secondary Vocational School Seen Through Students' Perspectives—Action Research Overview

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Abstract

Communicative competences may be fostered by increasing students' motivation to learn foreign languages. This can be accomplished by applying new approaches, instruments and tools to modern foreign language teaching and learning procedures. This action research, used as a tool for reflection on teaching practices, looked into the possibility that CLIL approach could be one of such new approaches. The purpose of this study was to determine the students' challenges, attitudes and motivation for CLIL lessons, the best methodology and the most important/best acquired language skills in order to improve or adjust the CLIL approach to satisfy ESP students' needs and make ESP lessons more effective. This paper presents the results of action research conducted in two secondary vocational schools in different educational systems, aiming to determine and compare the students' attitudes towards the ESP environment, the challenges students face, and appropriate CLIL methodology.

Key words: CLIL, action research, ESP.



1 Introduction

CLIL (Content and Language Integrated Learning) is an increasingly popular method of delivering foreign language training through recognized school subjects, using established syllabi within a school's curriculum. The CLIL approach is focused both on foreign language acquisition and content acquisition of non-linguistic subjects, whereby it is necessary to integrate simultaneously language and content learning.

For the purposes of this research, we should distinguish between “hard” and “soft” CLIL approaches (Ball, 2009; Bentley, 2010). CLIL modules through which certain non-linguistic subjects are taught in a foreign language over an appropriate number of hours constitute the hard version of CLIL. On contrary, a soft CLIL approach refers to certain subjects and content taught in foreign language classes, such as ESP.

It is believed that the greatest benefit of the CLIL educational system is that it provides a stimulus to students learning a non-linguistic subject in a foreign language. Consequently, it is thought that the CLIL approach activates Krashen's theory (1981) on the adoption of L2, i.e. students learn more easily when they forget they are using a foreign language and use it spontaneously (Krashen & Terrell, 1983; Vučo, 2006).

This paper presents action research as a part of the ECML project conducted by teachers working in the CLIL environment. The study explored ESP teaching practices in CLIL classrooms to check if the methodology, activities and vocabulary exercises were appropriate and satisfactory as well as if the ESP students enjoyed learning CLIL and recognized the importance of language skills corresponding to the scope of their future work. The purpose of this study was to determine the students' challenges, attitudes and motivation for CLIL lessons, the most effective methodology and the most important/best acquired language skills in order to improve or adjust the CLIL approach to satisfy the students' needs and make lessons more effective.

The paper gives a short theoretical framework of CLIL in vocational schools, followed by a preview of ECML project and the results of the action research conducted in two vocational schools, both applying CLIL methodology.

2 The CLIL approach and its characteristics

An increasing number of educational and school institutions apply CLIL teaching, which suggests the CLIL method must have positive aspects. The reasons for its application in teaching are reflected in the following statements (Çekrezi, 2011): “CLIL teaching strengthens self-esteem and motivation among students; learning foreign languages is the basis of each curriculum; CLIL students are more exposed to the foreign language than students in traditional classrooms and teaching methods are diverse, since each subject uses didactic tools specific to the content that is being taught, along with language activities and methods common to teaching foreign languages.” (pp. 3822–3823).

According to Coyle, Hood & Marsh (2010), CLIL is “a dual-focused educational approach in which an additional language is used for the learning and teaching of both content and language” (p.1). The vehicular language is mainly a foreign language, but it can be another language, a form of inherited language or the language of a community (Coyle et.al., 2010). CLIL aims to create an improvement in both the foreign language and the non-language area competence. Teachers involved in CLIL classrooms may be subject or language teachers, however language teachers need to learn more about the content and subject teachers need to work on the language needed for their subjects. In some

classrooms, cooperation between subject and language teachers is possible. CLIL classes need a great range of activities, and the materials that will be used in class have to be well prepared.

Lesca (2012, as cited in Manic, 2017) points out the advantages of CLIL classes, which are reflected in the methods and techniques used: multi-focus (the integration of content in the context of linguistic and non-linguistic objects through authentic teaching materials), active learning (where the student has a central role), and an authentic environment and cooperation between teachers in lesson planning.

2.1 The CLIL methodology

CLIL teachers constantly look for the most effective teaching methodology between that of the foreign language lesson and that of specific subjects. In CLIL lessons more attention is paid to language than it is when the subject is taught in the mother tongue. The CLIL approach fosters students' self-confidence and motivation, thinking skills and social and national values (Bentley, 2010). Regarding language, content-obligatory language is typical for CLIL lessons, and it comprises the vocabulary, grammatical structures and functional language for specific subjects (Bentley, 2010). Obligatory language should be presented through visual organizers in the early stages. Language is used to learn as well as to communicate. The most evident benefit of CLIL for learners is the improvement it brings about in communication and language skills. Suggested activities for developing communicative competence are brainstorming, open questions, peer discussions, role plays and debates. Before performing these activities, it is important to assign clear roles, timing and purposes. The language focus in a lesson does not incorporate structural grading; it is functional and dictated by the context of the subject. CLIL teachers should highlight vocabulary, allow learners to be more relaxed when using the target language and correct mistakes by recasting language immediately after they make mistakes. Teaching practices need to involve the learner in research and independent study and, in class, encourage interaction among peers. When students work in groups, they exchange information, deal with questions and have discussions among themselves. They describe, explain, evaluate, argue, and draw conclusions, which they then communicate through written or oral reports (Wolff and Quartapelle, 2011, in Quartapelle & Schameitat, 2012).

Texts used in CLIL lessons should be followed by illustrations to help learners visualize what they are reading. Microsoft PowerPoint presentations are very helpful for this purpose. Highlighting useful language in the text may help students to reproduce the core of the text in their own words. A variety of tasks should be provided according to different learning styles, preferences and purpose.

3 The ECML project

The ECML (European Centre for Modern Languages) is an institution which encourages excellence and innovation in language teaching. The ECML's strategic objectives focus on best practices of the learning and teaching of languages, on training multipliers and on support to research projects. "In order to implement its strategic objectives, the ECML organises a programme of international projects on language education" (n.p.).

The ECML project Action Research Communities for Language Teachers promotes techniques for action research and establishes a community of practice which brings together newly qualified and experienced teachers with teacher educators and university researchers. The project strengthens professional language teaching networks by forging links between academic expertise on action research and good practice in language classrooms. Language teachers are involved in action researches and



are offered a diverse range of perspectives on teaching methodologies. In addition, this project provides opportunities for language teachers to reflect on practice and to propose and test innovations while working collaboratively within a community of practice. A workshop (as a part of this project) for teachers and teacher trainers/educators from across Europe was held in Graz in November 2016. Throughout the project, participants shared examples from their own teaching, and reflected on action research approaches in different European contexts. The participants then identified their own action research interests, formed collaborative groups and defined a set of pilot classroom projects. One of the collaborations was made between Serbian and Macedonian teachers, both working in secondary vocational schools and applying the CLIL approach in their teaching practices.

The action research rationale relies on the model of the dynamic CLIL teacher (described in the European Framework for CLIL teacher education) who follows a personal path of enquiry, reflection and evaluation. One of the main powerful tools for empowering teaching and learning is the ability to conduct action research in collaboration with colleagues and other stakeholders, including students.

4 The study design

The action research, obligatory for Serbian and Macedonian participants of the workshop in Graz, was conducted by the teachers involved in the above mentioned ECML project. It was carried out in two secondary vocational schools: the Aviation Academy (Belgrade, Serbia) and the Secondary Vocational School for Economy and Law “Vasil Antevski - Dren” (Skopje, Macedonia). The collaboration between these two teachers was made due to the similarities in teaching methodology used in their ESP foreign language classrooms. Namely, the mutual methodology used to teach vocational English was based on the CLIL approach. The Aviation Academy is a secondary vocational school within the system of the Ministry of Education, Science and Technological Development, and it is the only school of this kind in Serbia and the whole region. The curriculum of the school involves both general English (GE) and Aviation English (ESP). The main difference between these two subjects can be seen in different methodology and activities used in the classroom. CLIL methodology is the core of ESP at the Aviation Academy.

For the purpose of the research, a questionnaire and an interview were used (a sample questionnaire may be found in the appendix). The teachers decided to conduct the research among their own students. It was not important to choose the students of the same age and level of English, because the methodology was the matter under examination. Despite this, it was still expected that the discrepancy in GE knowledge may yield different results, both in Serbian and Macedonian groups.

The overall number of students involved in the research was 50. The first-grade class at the Aviation Academy in Serbia comprised 25 students at A2/B2 level of GE who were learning vocational subjects both in English and in their mother tongue for the first year. Most of the students were not familiar with Aviation English (terminology and aviation operational procedures), therefore they sometimes had problems in acquiring knowledge even in their mother tongue. The group named 1-5 comprised 11 students and the group 1-7 consisted of 14 students. The students from the former group were better in terms of English knowledge (B1/B2 level) than the group 1-7 who were mostly at A1-A2 levels, although the CEFR standard in the first year of secondary vocational school in Serbia is A2 level.

In Macedonia, the final year students were involved in this project. The Macedonian students formed two groups (the group IV-1 with 11 students and the group IV-2 with 14). Business English for the students of economics is the optional subject in their third and fourth years of secondary vocational education. The B2 students were in the second year of studying vocational subjects in English and

in the fourth year of studying vocational subjects in their mother tongue. Most of the students were already familiar with the terminology of business English. The two Macedonian groups involved in this action research were also at the higher and lower levels of English knowledge.

At the Aviation Academy in Serbia, teaching is based mainly on the textbook followed by PowerPoint presentation. The textbook is made up of adapted authentic materials with follow-up language and content exercises. The authors of the textbook are English teachers who have been working at the Aviation Academy for more than ten years. Authentic materials used in classrooms are adapted to the level of students' previous language knowledge. Language and content are integrated, with the focus on meaning, and language skills are combined. Language is functional and dictated by the content of the subject, approached lexically rather than grammatically. Lessons are student-centered, activities are performed mostly in pairs or groups. Visualization and PowerPoint presentations facilitate students' acquisition of the foreign language.

In Macedonia, at the Secondary Vocational School for Economy and Law, the textbooks followed by PowerPoint presentations, online materials and You Tube are mainly used in lessons. The textbook is made up of adapted authentic materials with follow-up language and content exercises. The authors of both textbooks, the Serbian and the Macedonian, are ESP teachers who had adapted the authentic materials to meet the special needs of their ESP students.

In terms of methodology, similar activities and tasks are used in both schools, aiming to develop the communication and language competencies needed for their scope of work. The communicative approach is largely utilized, therefore language is approached lexically rather than grammatically. During CLIL lessons, students acquire vocabulary and grammar, but the focus of a CLIL is on understanding the subject content, not on grammatical structures (Bentley, 2010). Lessons are often based on reading or listening texts, in pairs or groups. Many CLIL activities are similar to those in ELT textbooks, such as cloze tests, gap fill, matching, multiple choice, true/false, ordering words, text completion, etc. It seems that from a language point of view CLIL approach contains nothing new to an English teacher as the methodology is similar to the one used in ESP lessons by ESP practitioners for years.

5 The results of the survey

After the analysis of the first question in the questionnaire, we may conclude that 47 out of 50 students like learning ESP. In Macedonia, 65% of the students find CLIL more interesting than GE lessons, and 79% of Serbian students think the same. 96% of the Macedonian students and 88% of the Serbian students find CLIL lessons more difficult in terms of the content and language than GE lessons. Despite this, after being interviewed, the students from Serbia stated that they enjoyed ESP lessons with the CLIL approach more than GE lessons, although ESP was a totally new challenge for both ESP students and teachers. One of the possible explanations for this may lie in the attention that ESP teachers pay to their lessons and methodology. Namely, it appears that when ESP teachers are aware that they are teaching a 'new' language for the first time, they may approach ESP more exhaustively. On the contrary, in secondary vocational school, GE lessons aim only at the improvement of language skills at the appropriate level, building on the competence previously acquired in elementary school.

A large majority of Macedonian students like working in groups (77%), while Serbian students prefer pair work (46% of students like pair work, and 29% of students like group work). It is interesting that some students at the Aviation Academy prefer to work alone. This was typical for the students in the group I-7 who are at a very low level of English competence. In the interview, they explained that they



felt more confident when working alone and at home, preparing carefully for every lesson, since they lacked the skills in GE and were aware of the necessity to do a lot of work on their own time. When they were asked to work in pairs or groups, they felt a little inhibited and uncomfortable due to their perceived lack of foreign language competence. The Macedonian teacher stated that the activities in CLIL lessons at the beginning (when the students were in the first year) were usually performed in pairs. No explanation was offered as to why they should switch from pair work to group work.

Among the many activities used in CLIL classrooms that are similar in Serbian and Macedonian schools, the students chose the ones they preferred. The questionnaire offers four different methodologies: working from a text book, PowerPoint presentation, watching video clips, and listening activities. The Serbian students (75%) like PowerPoint presentations most, 50% of students prefer watching video clips, 33% enjoy using text books (texts followed by language exercises), and only 13% chose listening activities. In the interview, the Serbian students said watching video clips was very difficult because of the need to understand spoken English, since it is the first year of ESP learning. They think that the most attention should be paid to vocabulary, definitions and the content through texts for beginners. Most of the students are new to listening activities, therefore this will require more practice in the higher grade classes. Listening skills are of great importance in aviation. Among the Macedonian students video clips were the most popular (73%) and none of them liked the text book (0%). The texts used in these books should be reviewed for relevance and authenticity, since it is highly recommended that authentic texts be used in CLIL, even if some adaptation to the students' level is required. Of the Macedonian students, 38% like the PowerPoint presentations used in class, but only 23% of students find the listening activities appropriate.

Among the many activities suggested in the survey, Macedonian students chose speaking exercises, such as debates, summarizing and commenting. Most of the Serbian students wanted exercises based on reading (read and choose, read and complete, read and correct). None of the Serbian students liked debates due, apparently, to the lack of content knowledge. They commented that it would be very easy if they had the textbook in front of them during the task. Since it is their first year of studies, they are not familiar with the subject content neither in English nor in their mother tongue.

The vocabulary exercises (see the appendix, question no.7) used in both schools were similar and all aimed to help the students acquire the terminology needed for their respective career paths. Most of the Macedonian students enjoyed exercises such as odd word out, matching the words with their explanation, filling in the missing word, putting words in the right order, while Serbian students enjoyed matching the words with their explanation, filling in the missing word, finding synonyms, choosing the correct answer and odd word out activities. Such exercises are typical in language classes, whereas the emphasis in our CLIL lessons shifted inevitably to content knowledge with language acquisition in context.

All students recognized the importance of language skills for their future professional careers, however speaking was seen as the most important skill for the general improvement in understanding and for bettering communication competence.

In terms of skills acquisition our students believe speaking and vocabulary to be their strongest suits, with the exception of the group I-7 with the modest English language competence who think that reading and vocabulary are the skills that they need to improve. However, if we compare the grades in ESP and GE, we can conclude that the students show greater success in ESP, which proves the benefits of CLIL lessons in terms of improving language skills. These students feel more confident when they attend CLIL lessons, and the results are obvious, not only in their grades but also in their increasingly active participation in every CLIL lesson. Grammar was not seen as a high priority in any of the groups participating in the research.

6 Conclusion

The action research conducted as part of the ECML project in two different secondary vocational schools showed results in support of the CLIL learning and teaching approach. CLIL is not easy to apply and it requires effort to be put into practice. Despite the difficulties and many challenges that CLIL brings, students in both schools find ESP more interesting to learn than GE. One of the reasons for that, according to the students, is the fact that English is the language of Aviation, therefore being fluent in English is the utmost competence for them. The students are aware of job-market demands in terms of foreign language skills, thus the language students learn in CLIL classrooms appears to them more pragmatic and vocationally-oriented than GE. The students state they enjoy CLIL methodology since it facilitates their learning, especially when acquiring the unknown content and language. Furthermore, the teachers appear to be more aware that ESP terminology and language are introduced to students for the first time, therefore they pay greater attention to didactic strategies. Contrary to that, GE instruction was focused on revising the material and improving their foreign language ability in terms of language skills. Additionally, the students prefer CLIL classes because of a wide range of activities, well-prepared materials and the variety of exercises and tasks that meet their language learning needs. Finally, the students emphasize the fact that the teachers in CLIL classes seem to feel the need to be more reflective in order to better understand and improve their teaching practices as well as develop strategies geared towards their professional development.

After much reflection on CLIL examples from teachers' own practice we can conclude that CLIL is definitely one of the most useful methodologies for learning ESP. In both schools most CLIL activities have proven to be appropriate (pair work, group work, text book, PowerPoint presentations, video clips, listening activities) as well as the exercises with focus on language (odd word out activities, matching the words with their explanations, filling in the missing words or putting them in the right order). CLIL learners appear to be motivated since they feel autonomous in learning a new language. Learning seems meaningful to them and topics they learn boost their interest and motivation. Since CLIL supports teaching grammar in context, students are not focused on form, but on meaning. The CLIL approach makes students learn language unconsciously while learning content as well as develop cognitive and communication skills. The Action Research at the Aviation Academy led us to improve both student learning and teacher effectiveness, showing that more video clips should be trialed in Aviation English. At the same time, the emphasis should be put on oral activities, even though the students did not identify such activities as essential.

Since GE is the language ESP students were learning for more than four years, they were expected to have acquired some language competences to be able to follow ESP lessons at the same pace. However, this was not in fact the case, therefore one of the conclusions of the study was that no matter how difficult the subject/language being taught, it is of key importance that the level of students' knowledge in any group is comparable.

In terms of the limitations of the study, it would be advisable to conduct additional research in the same school among the students of the different foreign language teachers to check if there are any differences in CLIL methodology among different teachers teaching Aviation English with the same content and the same language, but using different activities. Moreover, it could be equally interesting to include the students of different ages and levels of English in the same school or to involve the students of other colleges. Since CLIL class management appeared more difficult when activities were performed in groups of four than in pairs, this could be additionally researched in terms of age, cognitive complexity, subject understanding, language level and students' self-esteem.



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- d) choose the correct answer
- e) put in the right order
- f) odd word out
- g) other: _____

8. What foreign language skills are the most important to you in your CLIL lessons? (1=the most important;4=the least important)

| SKILLS | 1 | 2 | 3 | 4 |
|-----------|---|---|---|---|
| Reading | | | | |
| Speaking | | | | |
| Listening | | | | |
| Writing | | | | |

9. What skills are best acquired in your CLIL lessons? (circle as many answers as you like):

- a) reading
- b) speaking
- c) writing
- d) listening
- e) vocabulary
- f) grammar

Thank you for your time and cooperation.

E-Testing Versus Paper Testing in EFL in Higher Education: A Comparative Analysis of Student Performance with Reference to Anticipated Stress Level

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Abstract

E-assessment turns out to be extremely important for the improvement of student learning experience, especially in higher education: an increasing number of universities opt for e-tests instead of paper-and-pencil tests. Therefore, the aim of this study is to investigate the validity of e-testing by comparing the scores of a computer-administered test to the scores of a paper-and-pencil test. Besides student performance, the research also surveys students' personal opinions and measures stress level before and after the tests. It includes a sample of 60 students from Singidunum University and the Faculty of Philosophy in Niš, whose knowledge of English ranges from A1 to B2. The overall results indicate that the aspects of validity, practicality and seeing each student as a separate individual have to be taken into consideration with these two types of testing.

Key words: foreign language assessment, e-assessment, paper-and-pencil test, stress level.



1 Introduction

Rapid technological advancement and a growing amount of knowledge have paved the way for information and communication technology (ICT) in classroom, as the only appropriate way to respond to the increasing demands on knowledge acquisition and knowledge assessment. Therefore, ICT has begun to permeate education, which is no longer restricted to schools. New technologies, which have become central to people's reading, writing, calculating and thinking, create learning opportunities that challenge traditional concepts of education, schools and universities, enabling people of all ages to engage in the process of learning whenever and wherever they want (Collins & Halverson, 2009).

In order to respond to students' curiosity and the variety of their learning needs, which nowadays go beyond simple knowledge discovery, a modern classroom must be equipped with computers. In the entire process of learning, e-assessment turns out to have an extremely important role in the improvement of student learning experience, especially in higher education, which is confirmed by the increasing number of universities that opt for e-tests instead of paper-and-pencil tests (Hillier & Fluck, 2013). It is widely acknowledged that examinations serve multiple purposes: they determine not only the extent of students' knowledge, but also the extent to which educational objectives have been achieved (Shah, 2002); eventually they reveal what goes on in the classroom, scrutinizing the very process of teachers' teaching and students' learning (Rehmani, 2003). Thus, the ultimate goal of the examination process is not only to grade students, but to point to possible omissions, identify the weak links and in that way enable the improvement of the teaching process (Ketabi & Ketabi, 2014). Learning styles of new generations of students have dramatically changed and, more importantly, their working environment will be recognisably different. Teachers can no longer teach the way they have been teaching for years because they will not gain students' attention, whose habits and learning styles depend on fast search and instant feedback (Kovacs, 2015). If teachers want to be successful, they need to get students prepared for the working environment that awaits them, the one not much different from their everyday living environment (Hillier & Fluck, 2013): the grand empire of ICT in which the imperative is not only to know, but to know fast.

Whereas the introduction of e-tests went smoothly with the majority of subjects, the same cannot be said for languages. In Spain, for instance, foreign language teachers were firmly opposed to e-testing. Most of those teachers reacted positively to a series of trainings organised afterwards, but were not ready to implement them on their own (Laborda & Royo, 2009). Therefore, the aim of this paper is to investigate the validity of e-testing by comparing the scores of a computer-administered test to the scores of a paper-and-pencil test. Besides student performance, the research also surveys students' personal opinions and measures stress level before and after the tests. The entire procedure consists of two parts: doing the paper test and the e-test, and filling in the single direct-method questionnaire, which, in this case, represents the research tool used for data collection. As far as our quantitative data analysis is concerned, frequency distribution was used.

1.1 Starting assumptions

Assessment has become extremely important for the improvement of student learning experience. It provides a measure of student performance necessary for effective decision making in educational system (Dietel, Herman & Knuth, 1991). It is an important factor that reflects and affects the quality of learning and education (Tomljanovic & Polic, 2015). Teachers have been assigned a new role: to create a supportive environment for a pedagogical approach known as assessment *for* learning, in which students are supposed to be actively involved in the assessment process, the elicitation of constructive feedback and the development of self-assessment skills (Maele, Baten, Beaven, & Rajagopal, 2013),

thus taking control of their own learning (Whitelock, 2009). Therefore, today's generations, which use powerful tools to support learning and solve problems in class, should not be denied access to these tools when their knowledge is assessed (Ridgway, McCusker & Pead, 2004). One of the broadest definitions of e-assessment is the use of computers for any assessment of student activities (Tomljanovic & Polic, 2015). As research has confirmed, the advantages of e-assessment over paper-assessment are abundant: it is faster both to complete and to grade, with no difference in scores (Bodman & Robinson, 2004; Koppel & Hollister, 2003) or with a positive impact on the scores (Clariana & Wallace, 2002); it is cost-effective (Ridgway, McCusker & Pead, 2004); it is a valid, practical, reliable and secure alternative to a paper-and-pencil test (Tomljanovic & Polic, 2015); students have positive attitude towards e-assessment due to the ease of use, friendly interface and feeling of control, as well as instant feedback (Karadeniz, 2009; Ridgway, McCusker & Pead, 2004).

It is not strange that students have welcomed ICT at schools: it perfectly suits their learning styles and living habits. However, the same cannot be said for their teachers, at least some of them and, especially, those who teach languages (Kovacs, 2015). Even if they agreed that the introduction of ICT could really improve the learning process, and thus the teaching process itself, and eventually accepted to enrich their classes, they have not yet come to terms with using ICT in the process of assessment. Some of the reasons usually listed for this reluctance are: languages are not like other subjects (Lo Bianco & Aliani, 2013), not all four skills could possibly be tested via e-tests (Laborda & Royo, 2009), e-tests could never be as valid and reliable as paper-and-pencil tests, and, therefore, the results obtained would not show the real state of affairs when it comes to students' knowledge or point out their weaknesses and strengths.

The questions which inspired this paper are:

- Is e-assessment as valid and reliable as traditional paper-based assessment?
- Do students feel (more) comfortable doing assessments on computers?
- Are there any practical reasons why traditional assessment should give way to e-assessment?

So, the three factors the authors were interested in were:

- reliability – should the marks obtained through e-testing be considered as valid as the ones obtained through paper-testing?
- affectiveness – how do students feel during e-assessment and paper-and-pencil assessment?
- practicality – in what sense are e-tests better than paper-and-pencil tests?

In order to investigate the validity of e-testing, it was necessary to compare the scores of a computer-administered test to the scores of a paper-and-pencil test; then, for the effectiveness, it is students' personal opinions and stress level before and after the tests that count; finally, the practicality factor was determined by an informal talk to teachers, on the one hand and, consulting the existing literature, on the other hand.

The starting assumptions were: if new generations are brought up on technology which, as their natural environment, becomes central to their learning, and if they expect to get an instant feedback, then e-testing should prove valid and less stressful.

2 Method

This part of the paper focuses on the participants and the procedure. The whole procedure can be divided into two parts. The first part, or the experiment, included doing the paper test and the e-test, while the second part included completing the single direct-method questionnaire, which was our



research instrument used for data collection. The questionnaire was distributed by the examiner once the examinees have finished the tests. Our quantitative data analysis included frequency distribution, which is, in this case, represented as the percentage of agreement with the given statement.

2.1 Participants

The research included a sample of 60 students from Singidunum University, Centre Niš, and the Faculty of Philosophy in Niš with the following characteristics: the students were all about 19 years old, their knowledge of English ranged from A1 to B2, they attended the same English language course with the same grammar and vocabulary units, and they took the same tests for the research. To mention the differences, the students study at two different universities (private and state, respectively) and at two different faculties, and the tests were done at different stages of the course (one mid-term and the other at the end of the semester).

2.2 Procedure

In order to answer the first two questions ‘*Is e-assessment as valid and reliable as traditional paper-based assessment?*’ and ‘*Do students feel (more) comfortable doing assessments on computers?*’ the research needed to be conducted. In the first part of the research, the students were asked to complete an e-test and afterwards a paper-and-pencil test. After that, they had to complete a questionnaire related to their stress level before, during and after the tests (Deramo, 2009).

The e-test was performed via M-Tutor application, created for the needs of Singidunum University, where at least one part of almost all exams is done on the computer via this application. Teachers and professors create different areas within their subject (English teachers, for instance, vocabulary, phrasal verbs, comparison of adjectives, present tenses, past tenses, etc.) and enter the questions and answers that may appear in the tests. They mark one or more answers as correct. In that way, the teachers create online databases of questions. Before the mid-term or final exam, a teacher creates a test which may include one or more areas, by determining the number of questions from each area, the numerical value of each correct answer and the time students have to complete the test. The order of questions is random, as well as the order of answers within the same questions. Students have an access to M-Tutor application only at university. The students enter their student identity number to log in to their accounts and access the test. There is no possibility of going back to change the questions. At the end of the test, the students immediately see the results, whereas the teacher has a real-time insight into each student’s performance, with a possibility of reviewing each question within each test individually for each student. The possibility of cheating by logging in by someone other’s name is excluded by having the photo of the student corresponding to their identity number on the screen all time during the exam.

The e-test done in this research comprised 30 multiple choice questions, which appeared randomly on the screen one by one, each with four options, only one of them being correct. The questions tested the vocabulary and grammar areas previously covered in lectures. There was no going back once the question was answered (the *next* button appeared as soon as one of the options was checked). The overall time for answering the questions was 15 minutes. Upon answering the last question, or when the time ran out, the results were shown immediately on the screen, so that each student could see their score.

The paper-and-pencil test was also composed of 30 questions, some of which were fill-in-the-gaps questions and others complete-the-sentence questions. The students had to finish the test in 45 minutes, although most of them completed the answers ahead of time. It was possible to go back, think again and correct previous answers, however, there were no immediate results.

The questionnaire concerning the students' feelings before, during and after the tests was in Serbian and was comprised of six statements, each offering the same two options: e-test or paper-and-pencil test. The students had to circle the option they found more appropriate (Table 1).

Regarding the interviews with ten professors from one state faculty and one private faculty, they were invited to think whether they had used e-assessment in their teaching practice, their opinion about them, and whether they would exchange the standard pen and paper tests for e-tests.

3 Results

After the 60 students handed in the paper-and-pencil tests, the scores on the tests were compared to each student's score on e-test done via M-Tutor application in order to determine the validity of e-tests. The comparison showed the following results:

Out of 60 students, 16 did not pass the e-test and 22 failed the paper-and-pencil test. The average number of points scored on the e-test is 19.3, and on the paper test 18.4. Most of the scores on the e-test and paper test are quite similar with ± 2 points, i.e. correct answers, equally in favour of one or the other form of the test. However, there are some examples of a greater discrepancy in the results, where the difference in the correct answers equals or exceeds 5, in favour of either one or the other form of the test: there are 7 students who scored at least 5 points more on the paper test, and 8 students who scored at least 5 points more on the e-test. These results show that, the possibility of not passing an e-test is equal to the possibility of failing the paper test; in other words, having the answers offered on the screen, from which the correct one should be chosen, instead of thinking of and writing the correct answer as in a paper test, does not make the test easier and does not ensure not failing the test. Also, one quite usual assumption that some students may simply have luck when clicking on the correct answer without really knowing what the correct answer is could easily be counter-argued by the examples of the students who do not have so much luck or by those who are knowledgeable, but choose an incorrect answer by mistake.

As far as the stress level is concerned and the question how the students felt before, during and after the tests, that is whether they anticipated and expected to do better on the e-test or paper test, the results of the questionnaire are given in the table 1, in the number of students and the percentage:

Table 1: *The questionnaire results*

| Statement | <i>the e-test</i> | <i>the paper-test</i> |
|---|-------------------|-----------------------|
| 1. <i>Before taking the test, I thought that I would do better...</i> | 50 (83.33%) | 10 (16.67%) |
| 2. <i>Now, I think that I have done better...</i> | 27 (45%) | 33 (55%) |
| 3. <i>The level of stress was higher before...</i> | 45 (75%) | 15 (25%) |
| 4. <i>A greater amount of concentration was necessary for...</i> | 19 (31.67%) | 41 (68.33%) |
| 5. <i>I find that ... is less valid.</i> | 29 (48.33%) | 31 (51.67%) |
| 6. <i>In the future, I would prefer to sit the English exam as...</i> | 32 (53.33%) | 28 (46.67%) |

Here, it could be noticed that the students had similar prejudice as some teachers: 83.33% of them thought that the e-test would be easier and they would do better on it. However, their opinion changed after they handed in the paper test: there was a slight advantage in favour of the paper test, i.e. 55% of the students said that they had thought they had done this form better. There was a great level of stress present during the e-test (75%), which, as the students explained, originated from having much less time (15 minutes in comparison with 45 for the paper test) and not being able to go back and forth



over the questions. We have also found some contradictory claims, namely more students concluded that a greater amount of concentration was needed for the paper test (68.33%). Regarding the validity of tests, the difference in opinion is not so prominent: 51.67% of the students consider the paper test more valid. Yet, 53.33% of the students would like to do e-tests in the future.

Finally, practicality as the factor which is often considered when deciding on the changes in every educational system. The information was gathered by talking to teachers and professors, and also from the sources (Sindre & Vegendla, 2015; Tomljanovic & Polic, 2015; Dermo, 2013; Hiller & Fluck, 2013; Ridgway, McCusker & Plead, 2004). Most of the teachers and professors were satisfied with the possibilities that e-assessment provides, but they were not willing yet to start using e-tests because, according to them, some students tend to do worse on computer-based tests. They claimed the main reason had more to do with the students' familiarity with technology than with their academic knowledge and skills. One of the professors believed the students would need a lot of time to adjust to computer-based testing, so some of the students with excellent foreign language knowledge might not do as well in e-tests.

The following can be deduced:

- no paper is needed for online assessments, therefore there are reduced costs to parents and schools;
- online exams are more accessible than paper-based exams, providing that higher education institutions are equipped with a sufficient number of computers, so that students divided into groups can take turns in accessing online tests;
- online assessments are less time-consuming;
- online assessments reduce grading time;
- since there is no human error, grading is more accurate with online assessments;
- online assessments offer a simple method of grade record keeping system.

4 Discussion

Successful assessment, whose ultimate goal is not merely to grade students, is a complex and ongoing cycle. It includes the collecting and analysing of data, discussion, the identification of outcomes, suggesting improvements, introducing changes, and reflection (Buzzetto-More & Alade, 2007). Student outcomes should be improved by using the obtained assessment data (Martell & Calderon, 2005).

The inspiration for the research was the fact that even though there are teachers who are greatly opposed to the idea of introducing ICT in both teaching and assessment processes, some universities are still gradually, but surely introducing ICT (Laurie, Bridglall & Arseneault, 2015). However, there are still some traditional universities which are not willing to implement, or even take into consideration any changes, even though their teaching staff approves of it enthusiastically. The opinions on this matter are quite divergent, and it seems that there has been a disregard for what students think and appreciate, based on the amount of research conducted (Dermo, 2009).

Sources most often point out the fact that we spend most of our time online whether in the workplace or at home (Hillier & Fluck, 2013; Collin & Halverson, 2009; Laurie, Bridglall & Arseneault, 2015), which means that we are always surrounded by modern technologies. This is one of the reasons for introducing e-assessment. In addition, if we are to get used to ICT in the teaching and learning processes, the introduction of e-assessments is expected to complete the whole process. Computer-based testing (CBT) will likely become the main method for administering tests in the future (Ghaderi, Mogholi & Soori, 2014).

The second most commonly cited reason in favour of ICT is related to practicality. In the 21st century, technology is central to learning in school and outside school, so there is no reason why it should not prove central to the assessment process, especially because it may facilitate testing and support authentic assessment (Bennett, 2002). ICT tools may reduce the burden on teachers while testing a range of skills, knowledge and understanding (Jamil, Tariq & Shami, 2012). E-tests are effective in terms of cost and time: they reduce the cost of test administration and distribution, reduce testing time and grading time, there is also a greater level of accuracy in grading, and it is simple to keep records of grades. Additionally, online testing is nowadays using 3D engineering models, audio and video items, industrial tools and machines, and even interaction (Sindre & Vege-ndla, 2015). Finally, one more fact in favour of this claim which at the same time relates to the first one: the century we live in has witnessed the success of online universities and virtual schools in the United States (Bennett, 2002).

The third significant factor puts students in focus. Namely, more recently, there have appeared surveys which focus on students and their experience. There is no doubt that especially summative assessment can be stressful for students. Unlike formative assessment (*aka* informal assessment), summative assessment produces a great amount of stress and makes students feel anxious (Ketabi & Ketabi, 2014). Furthermore, while waiting for the results, students drift apart from this stressful circumstance and may forget what problems or question ambiguities they had encountered, so, when they finally get the scores, these are most often without any further or only with a vague feedback. In other words, the connection between assessment and learning becomes difficult to see. The students lack the information about their weak points, which is crucial for their future performance and thus the prime function of assessment – the improvement of teaching and learning process – is lost (Kopp, 2015).

Given the lack of research on this topic from the perspective of student perception of e-assessment, a piece of research was carried out at the University of Bradford in order to make some conclusions on this matter (Dermo, 2009). The focal point of the research were practicality, reliability, validity, security, affective factors as well as learning and teaching dimensions. It was found that as much as it is important for teachers to consider e-tests valid, it is also significant that students have confidence in a test because it will certainly affect their motivation, engagement and cooperation (Domino & Domino, 2006). This research confirmed the previously mentioned notions and some new ones. Firstly, it proved validity and practicality and, secondly, security and reliability; thirdly, it pointed out the benefits for teaching and learning processes. Finally, the focus, which was of equal importance, was on the so-called affective factors. They refer to the emotions such as concentration, comfort, stress, student expectations and preferences, which students experience during e-assessments, and even though there were some anecdotal answers, the results of the survey indicate a normal range of attitudes, with slightly positive feelings towards e-assessment. Therefore, the minority of students who have opposite views should not be ignored, but, nevertheless, foreign language teachers should not be afraid to use e-assessment (Dermo, 2009).

In a way, this paper confirms almost all of the factors considered above. Despite the modest sample of students, the research confirmed that e-assessment is as valid as paper-and-pencil assessment: the students pass and fail both forms of assessment. A slightly higher number of correct answers on the e-test can be accounted for by the possibility of guessing the answer, but also by the fact of feeling more comfortable doing the test in the familiar environment. There will always be students who prefer one form over the other form of the test. If foreign language teachers are to respond to their students' needs, maybe the option of allowing students to choose which form of test they prefer should be considered.

When asked how they felt before, during and after the tests, the students gave a variety of answers. The common thread is the realisation that, in contrast to their expectations, the e-test was not at all



easier than the paper-and-pencil test. Contrary to the authors' expectations, the stress level was much higher on the e-test. Namely, the authors assumed that the students would be more comfortable and stress free in their everyday environment, i.e. doing the e-test. It turned out that the time limit of 15 minutes was the cause of stress: if the students had been given more time (and the possibility of going over the same questions again), they would not have been under such pressure. However, the time limit did not make them concentrate, it only rushed them into clicking the answers. That is why they felt more concentrated when doing the paper test. The final point of interest in this research was practicality, which was unambiguously confirmed in all aspects: cost-effectiveness, time-effectiveness, accessibility, accuracy, and storage.

5 Conclusion

As it has already been mentioned, the main aim of this paper was to investigate the validity of e-testing in foreign languages by comparing the scores of a computer-administered test to the scores of a paper-and-pencil test on a sample of 60 students, attending two different universities. Besides student performance, the research also gained insight into students' personal feelings and opinions and measured stress level before and after the tests.

Based on the results of this small-scale survey, the following can be concluded:

- validity of e-assessments should not be a stumbling block: e-assessments are as valid as traditional assessments;
- students as individuals are different: some feel comfortable and perform better on e-tests, others when doing paper-and-pencil tests;
- practicality is recognized by everyone: universities, teachers and students.

The limitations of our study are a small sample of participants and the fact that the sample was taken only from two universities. Further research should be of a larger scale, both in terms of the number of participants and the number of universities included.

On the whole, if language teachers still harbour doubts about e-assessments, maybe we should start with formative online assessment and gradually move towards summative e-assessment, remaining aware that every approach has its advantage and limitations. Of course, in order to introduce e-assessment, teachers must work in classrooms equipped with computers, where, prior to the assessment, e-learning should be encouraged. Furthermore, it will probably take some time before students themselves get used to e-tests. Until then, it would be desirable that they should be given the option to choose the form of the test they prefer. After all, we are all interested in guiding and encouraging foreign language students in order to increase their autonomy and take responsibility for their learning, which will, undoubtedly, continue even after we give them final grades.

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Rethinking the Roles of the LSP Practitioner with Regard to Internationalization of Higher Education

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Abstract

The objective of courses for languages for specific purposes (LSP) within the higher education curriculum is to help students develop a new type of “literacy” in languages for specific purposes, which will enable their participation in various academic and (inter)cultural contexts. Due to a steady growth in students’ international educational experiences, LSP practitioners need to consider these new trends in tertiary education when designing LSP courses. Thus, the course syllabus and the resources used in the courses should ease the adjustment process of students in international educational settings. This report focuses on the contribution of LSP practitioners to their students’ academic achievement in the international arena by assuming various roles in the teaching and learning process, i.e. the role of a teacher, course designer and materials provider, collaborator, researcher, and evaluator. It highlights necessary changes LSP practitioners need to undergo in performing these roles in order to integrate the international and intercultural dimension into the course.

Key words: LSP practitioners, roles, internationalization of higher education, student mobility.



1 Introduction

The process of globalization has made an impact on every aspect of society, including the sector of higher education. It has resulted in the internationalization of universities, i.e. collaboration among universities on a regional, international and intercontinental level. This report discusses how the process of internationalization affects the teaching of LSP courses, in particular the effect it has on performing various roles LSP practitioners assume in the teaching process. It briefly outlines the classification of these roles and defines the term internationalization. The main focus of the report is on the positive aspects of this process, as well as the challenges to which LSP practitioners need to respond in order to adapt the roles they perform to the new teaching context. Finally, in this report we address some of the challenges we encounter in our own teaching settings, i.e. the Faculty of Humanities and Social Sciences and the Faculty of Mining, Geology and Petroleum Engineering, University of Zagreb.

2 The roles of the LSP practitioner

In today's world, a person teaching any language can no longer be called a teacher. The more appropriate term in LSP today is practitioner. Although we are still teachers, we are also expected to be many other things at the same time: course designers, material providers, collaborators, researchers and evaluators. The classification is taken from English for specific purposes (ESP) (Dudley-Evans & St John, 1998), since the majority of available literature stems from that field, but it can be applied generally, to any language acquisition process.

The primary and most traditional role of any language teacher is to teach students a foreign language. The role of an LSP practitioner is not very different from the role of a general English teacher. However, teaching LSP demands the ability to blend language teaching skills and knowledge with subject knowledge, which is not the case in general English teaching. Although we strive to teach our students the material, sometimes the roles become reversed and students themselves become the source of information regarding their field of study. In a manner of speaking, they may become our teachers while we turn into their students. Generally speaking, a student-teacher relationship is basically a partnership where a practitioner is expected to remain interested in the subject content, curious and open to the influx of new ideas and subject-specific knowledge (Bojović, 2006). It is generally believed that we do not have to be experts in the field (Cheng, 2015), although other views are present (Anthony, 2011).

LSP instruction represents a specific type of language instruction, namely the one focused on very specific vocabulary, therefore the materials also have to be specifically designed. In order for us to be able to cater to the needs of our students better, the needs analysis (what are the particulars that must be learned) has to be performed as the first thing in course design. The LSP practitioner must also take into account what teachers of professional subjects need the students to know and be able to express in a foreign language. As LSP practitioners, we must also be aware of the time that can be dedicated to the learning of a professional foreign language as well as the material means that can be used for that purpose. Only when all of this and many other factors are taken into account the course material creation can begin.

Designing teaching materials is a long and arduous process, which requires the LSP practitioner to delve into research and select the materials which seem to best fit the needs of our students. Although an LSP practitioner should be well aware of the students' needs, abilities, he/she is still usually not completely competent in the subject content. This is where the role of the collaborator comes into

play. As a course- and teaching materials' designer, an LSP practitioner must collaborate with people proficient in the specific field, and ask their advice and guidance in the creation of course books and other materials. This type of collaboration refers to discussions and advice-giving as it is not expected that any of the experts will participate in the teaching process itself.

Another role of an LSP practitioner is that of a researcher. Each LSP practitioner should mainly be focused on keeping up with the latest scientific work connected to both our field of study and the field of study we teach. We are also expected to do our own research in our classrooms, which should enable us to improve our materials and teaching methods as well as keep up with new discoveries and trends. This has traditionally been done by reading books and journals specific for the field. However, today there are a number of specialist blogs and numerous Internet-based resources that can be used freely. Also, forums created by and visited by ESP practitioners represent a useful resource that can help resolve issues, offer guidance, exchange information and provide advice.

The role of an LSP practitioner as the evaluator of our students' knowledge and proficiency is especially demanding. Evaluation in itself is a complicated and long-lasting process which begins even before the start of the course by the evaluation of students' needs. It spans for the duration of the course itself, via the monitoring of class advancement, depending on different methods of teaching and, in the end, by the evaluation of achievements of our students, the effort and work they invested and their performance through different kinds of written and oral examinations. There are numerous types of evaluations, ranging from student testing, course evaluation and self-evaluation, student polls (which are conducted at the University of Zagreb every semester and allow students to evaluate the work of their teachers), all the way up to different kinds of standardized tests, such as IELTS or TOEFL.

3 Internationalization of higher education and the roles of the LSP practitioner

3.1 Defining the term internationalization of higher education

The term internationalization has been part of the political and economic context through centuries, but as far as the education sector is concerned, it came into use in the early 1980s. The preferred term before that period was international education, a term which is still used nowadays, together with many other related terms regarding the context of the internationalization of education that appeared over the last three decades, e.g. cross-border higher education, international studies, multicultural education, global education, intercultural education, studying abroad, academic mobility, etc. Some of the terms that marked the beginning of the 21st century are transnational education, borderless education and cross-border education. Knight (2003, p. 2) discusses the aforementioned terms, and contrasts the terms borderless and cross-border education by making an interesting observation that they both reflect the context of education that we can experience today. On the one hand, there is a tendency to cross borders and connect, but on the other hand, the borders do exist, and many processes in terms of "regulatory responsibility, especially related to quality assurance, funding, and accreditation" take place within one country's border.

One of the first definitions of internationalization that can be found in relevant literature was given by Knight (1994, p. 7) who first defined internationalization as "the process of integrating an international and intercultural dimension into the teaching, research and service functions of the institution". How the process has evolved can be seen in the new, updated definition Knight proposed almost a decade later (2003, p. 2), according to which "internationalization at the national, sector, and institutional levels is defined as the process of integrating an international, intercultural, or global dimension into the purpose, functions or delivery of postsecondary education". This updated definition includes the term "global", which highlights the more extensive sphere in which the process takes place. It



also stresses the importance of the collaboration between the government, the education sector and higher education institutions (HEIs) when it comes to supporting and enhancing the process of internationalization.

De Wit (2002, pp. 83–102) lists four rationales for internationalization: political, economic, social and cultural, and academic. These rationales usually vary by country and region, and their importance and dominance may change over time. Currently, the more dominant rationales are probably the economic rationales. Furthermore, Knight (2008, p. 25) discusses some rationales that have emerged at the national level (e.g., human resource development, strategic alliances, income generation/commercial trade, nation building, social/cultural development and mutual understanding) and at the institutional level (e.g., international branding and profile, quality enhancement/international standards, income generation, student and staff development, strategic alliances and knowledge production).

According to literature (e.g. Khorsandi, 2014), internationalization encompasses the following six components: “a) international students’ recruitment; b) student and scholar mobility; c) research and knowledge exchange and technical assistance; d) marketing and expansion of university campuses and branches abroad; e) internationalization of campus curricula; and f) virtual transnational internationalization (like MOOCs)” (pp. 24–25). This list of components suggests that the process of internationalization is not only about scholar and student mobility, and cross-border collaboration, but also about developing programs, policies and strategies that will help the HEIs carry out the process. Internationalization takes two directions—external and internal. External internationalization refers to internationalization abroad, i.e. cross-border education, and internal to internationalization at home. The internationalization abroad includes the collaboration between universities, international projects, and recruitment of international students and academic staff. Knight (2004) states that the terms cross-border education and internationalization are very often used interchangeably when we refer to external internationalization, but warns that they should not be used as synonyms, since the term cross-border does not include the at-home aspect of internationalization. Internal internationalization, on the other hand, aims at creating a framework within which an institution’s structural, cultural and curricular changes would take place. These changes should enable the implementation of intercultural and international programs and courses.

3.2 Internationalization and the roles of the LSP practitioner

In the first part of the paper, we discussed the five roles that the LSP practitioner assumes when teaching LSP courses.. In this part of the report, we will look at the same five roles from the perspective of internationalization of higher education (HE), and explore the benefits and challenges that this process brings with regard to the above listed roles.

As regards the role of the teacher that LSP practitioner performs, the process of internationalization of HE, especially international cooperation and mobility, have enabled LSP practitioners to experience teaching LSP courses abroad as guest lecturers or job shadowing through short-term and long-term programs, mostly funded by the Erasmus Program. Furthermore, through similar programs practitioners can undergo teacher training which aims at their professional development with a special focus on intercultural learning and the use of new teaching tools in the classroom. LSP practitioners need to teach their students how to cope with their studies at home, but also prepare them for the international arena, e.g. when they participate in exchange programs and spend a semester or longer abroad. This means that, besides the language and study skills, the LSP courses also include the aspect of cultural orientation which can help students adapt to university life abroad. They can acquire intercultural competence which will ease the adjustment process and help them better understand the cultural shifts they have to make in a new environment. Thus, LSP

practitioners need to adjust to these circumstances and make necessary changes in their practice in order to satisfy the needs of their students.

Regarding the role of a course designer and materials provider, we can notice certain changes in the course syllabus and the students' needs. Since students nowadays participate in various international academic contexts, the needs analysis we usually carry out at the beginning and the end of the academic year produces different results. The new context requires from the students to acquire a new literacy in LSP, i.e. skills like intercultural competence, group work skills or presentation skills. Thus LSP practitioners need to adjust the materials to the students' needs and take them into account when planning the course and designing the course syllabus. For example, students increasingly participate in international conferences and need to know how to write a speaker proposal or an abstract, as well as learn how to deliver the talk at the conference, therefore materials that enhance the development of such writing and presentation skills should be included in the course. Another change that can be noticed is in the motivation of students. As the content of the LSP course is now more tangible than before, LSP students can actually apply the skills and competencies they develop in the course in real life for the purposes of their studies at home and abroad. LSP practitioners can see a substantial increase in students' motivation to gain knowledge that could help them be successful academically in various intercultural contexts. This shows how important it is for LSP practitioners to know and/or learn what their students need to be successful academically in international contexts, and to create such materials, which will help in achieving the outcomes of the course.

The third role that the LSP practitioner assumes is the role of a collaborator. The process of internationalization has brought this role to another level. Before, the collaboration was rather local and/or within the institution, but today, due to advancements in technology, it is possible to collaborate with LSP practitioners and subject specialists from abroad not only in person, but also through new media and social networks. It is possible to have a subject specialist, who is a native speaker of the language that we teach, deliver a talk over Skype, which allows students to experience a lecture they would normally attend in a foreign country, and even participate in a discussion. Furthermore, LSP practitioners could achieve collaborations through online projects. The advantage of online projects is the ability to participate from the comfort of your own home or office. It should be highlighted that such collaborations also contribute to intercultural learning, since they include national and/or cultural specific elements in terms of approach and method.

With regard to the next role of a researcher, LSP practitioners can become familiar with new findings of the research in their own profession through various types of mobility, e.g. job shadowing, participating in international conferences, attending seminars, etc. In case of a lack of funding, there are also numerous webinars which are organized by various associations that may also provide an insight into the new findings in LSP. By connecting with foreign practitioners through international projects and building an international network, LSP practitioners are also in the position to be involved in the research and make their own research results public.

Finally, regarding the role of an evaluator, LSP practitioners often have to evaluate their students' proficiency in a foreign language by administering various tests or helping them prepare to take international exams in order to help their students participate in the international arena and embark on their studies abroad (e.g. IELTS or TOEFL for the English language; the Goethe-Institute examinations, i.e. the German test for academic entrance exams recognized by many German institutions). The proficiency in a foreign language is needed so that students can satisfy the foreign language entry requirement set by a university in order to be successful in their future academic studies.

So far, we have only addressed the positive aspects of internationalization in terms of the five roles, e.g. improving the quality of teaching, learning and research, the commercial advantage, achieving



academic excellence, enhancing the curriculum with international content, strengthened research, international awareness, partnerships and collaboration, knowledge and language acquisition, and many others. However, there are also risks associated with internationalization of HE. According to Knight (2007, p. 8) the most serious risks are “commercialization and commodification of education programs, the increase in the number of foreign ‘degree mills’ and low-quality providers, and brain drain”, whereas the risks that are no longer considered so important are “the loss of cultural or national identity, jeopardy of the quality of higher education, and the homogenization of curriculum”.

When it comes to negative aspects of the internationalization of HE and how the process affects teaching LSP courses, we would like to draw attention to the following issues which can usually be noticed on national level: quality insurance of LSP courses, lack of materials for international contexts, lack of opportunities for LSP practitioners to develop professionally, lack of guidance in terms of dealing with the process of internationalization and its implementation in the curriculum. Since internationalization of HEIs in non-English countries entails English-medium instruction (EMI), i.e. academic subjects taught in English, we need to address the role of ESP, and thus the role ESP practitioners can assume in EMI programs at universities. However, it is first necessary to address the difference between EMI and ESP in terms of learning outcomes, as well as explain why Content and Language Integrated Learning (CLIL), i.e. an approach usually associated with secondary education, should be mentioned in this context. While ESP has only language learning outcomes, EMI focuses on content learning outcomes. On the other hand, CLIL is a combination of these two approaches since it encompasses both language and content learning outcomes, i.e. something the EMI context lacks (Kırkgöz & Dikilitaş, 2018). This is why ESP courses could, in the future, play a more important role in the internationalization of HE, because they can complement EMI programs which often present challenges to both the content teachers and students taking the course. They would provide students with language skills which they will need in order to succeed both academically and, later, professionally in the international arena, and thus enable a more successful implementation of EMI in HE.

3.3 Internationalization of higher education in Croatia

In Croatia, the process of internationalization of HE has also evolved, therefore every higher education institution (HEI) needs to cope with all of the challenges this process presents. Various institutions are involved in building a strategic framework which would enhance the internationalization of HEIs. Some of the major contributors to internationalizing HE in Croatia are:

- a) *The Agency for Mobility and EU programs (AMPEU)*. It was established in 2007. Its scope of activities includes education, youth and science, and its purpose is to help improve the education system by internationalization through international system and cooperation. In 2011, Croatia gained full participation in the programs, and in 2014, the National Agency started implementing the program Erasmus +.
- b) *Agency for Science and Higher Education*. Part of the (re)accreditation process of every HEI in Croatia is to meet certain standards that concern internal quality assurance, study programs, students, research, and resources. Internationalization and mobility are also among the standards HEIs need to meet, and this is why they need to have procedures, rules as well as resources to support international activities.
- c) *Sector for Quality of Higher Education, International Cooperation and European Affairs from the Croatian Ministry of Science and Education*. This sector also has the objective of internationalizing HE and currently works on the implementation of the Action Plan for Internationalization of Education for the period 2018–2020. This Action Plan aims to enhance institutional capacities of HEIs for internationalization, increase the number of foreign language courses,

encourage participation of vulnerable groups in mobility schemes, increase the availability of information on studying in Croatia, etc.

- d) *Institute for the Development of Education*. On the website of the Institute we can find the mission statement of the Institute: “The Institute for the Development of Education contributes to the development of higher education policy, provides expert support to institutions, connects domestic and international experts and enables individuals in Croatia and the region to achieve their educational goals.” It supports projects related to internationalization, participates in Annual Scholarships and Higher Education Fair in Zagreb, Rijeka and Zadar, and has been an Education USA Advising Center for Croatia since 2000.

Despite all the work that the above listed contributors undertake with regard to the internationalization of HE in Croatia, and the effort that HEIs put into their international activities, we can notice in our own contexts, i.e. at the Faculty of Humanities and Social Sciences and the Faculty of Mining, Geology and Petroleum Engineering, University of Zagreb, that this process raises issues and represents a challenge in terms of the adjustment of both academic staff and students to the new circumstances. It seems that most of the activities related to internationalization at our institutions refer to outward mobility and collaboration with foreign universities in terms of conducting research in tandem. We still have to put more effort into encouraging inward mobility and internationalizing the curriculum to attract foreign students to study at our institutions. Finally, it is necessary to point out that our institutions mainly receive funding through the Erasmus Program, and that we lack our own financial resources to help internationalize our programs and our institutions in general.

4 Conclusion

The internationalization of HE in general is a demanding and challenging process, let alone in countries like Croatia, where it has only recently become a central issue for HEIs. This means that we still have a lot of work to do before it evolves in the way it has in the countries with the leading education systems. LSP practitioners have, because of the nature of their job, and being language teachers, always been part of the international arena and aware of the importance of the intercultural dimension in the teaching process. However, this does not mean that LSP practitioners are knowledgeable enough about internationalization, that they have enough international knowledge and experience, and that they don't need further development. On the contrary, we also struggle with issues like limited international skills, resistance to change, uneasiness with new routines, fear of unfamiliarity and otherness. It is because of these issues that we argue that LSP practitioners need guidance in this process of internationalization, more information and professional development, so that they can eventually become even more important contributors to the process of internationalization.

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The Use of Language Learning Strategies by Mathematics and Computer Science Students

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Abstract

The research into language learning strategies has mainly focused on strategy identification and factors contributing to their use, such as L2 proficiency, gender and age. One of the under-researched factors are the academic fields of learners and their effect on the strategy use. The present paper addresses the question of the interdisciplinary use of language learning strategies in the context of English for Academic Purposes. Applying Oxford's (1990) Strategy Inventory for Language Learning, the paper reports on the use of strategies by mathematics and computer science students at the University of Novi Sad, Serbia. The study reveals that both groups of students are medium strategy users and that compensatory strategies are the most preferred strategies among the participants. The results also show that computer science students are weaker strategy users than their mathematics peers. The findings offer pedagogical implications to teachers of languages for academic and specific purposes, material developers and syllabus designers.

Key words: Language learning strategies, academic field, Strategy Inventory for Language Learning, English for academic purposes.



1 Introduction

Language learning strategies (LLS) and researchers such as Rubin (1975) and Stern (1975) have played an important role in foreign language pedagogy since the 1970s. Focusing on the activities that successful language learners employ during the process of second and foreign language learning, language learning strategies are defined as “specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations” (Oxford, 1990, p. 8). Relying on a more recent definition, language learning strategies are “activities consciously chosen by learners for the purpose of regulating their own language learning” (Griffiths, 2013, p. 36). The original idea was to identify and enlist these actions and activities in order to teach less successful learners how to apply them. With this aim in mind, numerous researchers have focused on identification and classification of language learning strategies (Cohen et al., 2003; O’Malley & Chamot, 1990; Oxford, 1990; Purpura, 1999) offering a number of more or less similar categorizations. One of the most detailed and widely accepted classification systems has been provided by Oxford (1990) who classifies strategies into two broad categories – direct and indirect, based on the criterion whether strategies directly involve the target language or not. Within this system the author identifies six major groups of language learning strategies: memory strategies (those that help learners store and retrieve L2 content), cognitive strategies (help learners manipulate language material), compensatory strategies (help learners use L2 in spite of the knowledge gaps), metacognitive strategies (help learners manage the learning process), affective strategies (help learners regulate their emotional state) and social strategies (help learners work with others while learning). The strategy identification procedures have mostly relied on questionnaires or self-report and qualitative research methods, such as interviews or written diaries. The literature review suggests that the greatest number of studies have applied a questionnaire developed by Oxford (1990), the so-called Strategy Inventory for Language Learning (SILL) (Nyikos & Oxford, 1993; Green & Oxford, 1995; Wharton, 2000; Bruen, 2001). The instrument aims at assessing the frequency of use of particular types of strategies and represents a standardized measure that can be applied with learners of a variety of languages. In spite of the advantages that this instrument offers, it does not provide any space for learners’ creative responses (Oxford, 1993), which is often seen as one of the major shortcomings of the tool. Applying different strategy categorization, Cohen, Oxford and Chi (2003) subsequently developed the Language Strategy Use Inventory according to skills. However, the analysis of the literature sources suggests that the SILL has preserved the dominant role among researchers. A possible reason for this may lie in the fact that the choice of strategy identification instrument is closely related to the issue of strategy classification, and as Griffiths and Oxford (2014) state, in spite of numerous attempts to provide adequate categorization, no consensus has been reached among researchers, leaving thus the Oxford (1990) system of classification superior.

Apart from the research into identification and classification of strategies, there have been numerous studies focusing on factors contributing to L2 learners’ use of strategies, such as the level of L2 proficiency, age, gender, learning style etc. (Green & Oxford, 1995; Wharton, 2000; Carson & Longhini, 2002; Oxford, 2003; Anderson, 2005). One of the factors that have been under-researched is the academic field of L2 learners, and its effect on the strategy use. The present paper addresses the question of interdisciplinary use of language learning strategies in English for academic purposes (EAP) context.

2 Academic field and language learning strategy use

As Meshkat and Khanjani (2014) notice, the literature is scanty regarding the influence of academic fields on students’ use of language learning strategies. Examining variables affecting the choice of language learning strategies by university students, Oxford and Nyikos (1989) pointed to the differences

in strategy use related to the students' majors. University major made a highly significant difference in this respect, as humanities, social science and education students used strategies significantly more often than technical science students. Peacock (2001) investigated the use of language learning strategies by science, mathematics and engineering students in a Hong Kong university and concluded that cognitive and compensatory strategies were the most preferred strategies among the students. He also reported on some discipline differences as physics students used significantly fewer cognitive and mathematics students significantly fewer metacognitive strategies in comparison with other students participating in the study. Investigating further the same issue on a larger number of students across eight academic disciplines, Peacock and Ho (2003) came to the conclusion that humanities students were more efficient strategy users than their science and engineering peers. The study revealed that the greatest number of strategies were employed by the students majoring in English, this particularly referring to cognitive, metacognitive and social strategies, while computing students proved to be the weakest strategy users (this especially referring to the use of metacognitive strategies). The overall results showed that compensatory strategies appeared as the most favoured and affective as the least favoured strategies among the participants. Finally, applying a qualitative research method for investigating the effect of academic majors on the strategy use, Rao and Liu (2011) concluded that the students of different disciplines showed more similarities than differences regarding the strategy use. Nevertheless, the humanities students participating in this study showed to be more active strategy users than the science students.

To summarize, although scanty, the research into the effect of academic discipline on language learning strategies has pointed to some consistent differences in strategy use and strategic preferences of students of various academic subjects, suggesting thus that academic major appears as a variable affecting students' choice of strategies. According to Peacock and Ho (2003), further research in this area is highly needed considering the fact that there is a very large number of EAP students in universities around the world. As all of the studies described above were conducted in American or Asian educational context, there seems to be a lack of data referring to other social, geographical and educational contexts. Bearing this in mind, the present paper addresses the question of interdisciplinary use of language learning strategies in Serbian EAP context. More precisely, the study is concerned with the use of language learning strategies by mathematics and computer science students, the frequency of strategy use, the students' preferred types of strategies, as well as possible differences between the two groups of students.

3 Research design

The study was conducted with 59 undergraduates of the University of Novi Sad (N=59), 30 of them studying mathematics and 29 computer science. Initially, there were 67 participants as this was the final number of the undergraduates, but eight of them provided incomplete answers and were excluded from the data analysis. As shown in Table 1, the participants were first- and second-year students, and their age spanned from 19 to 21 years. Regarding their English language proficiency, all of the students were tested prior to taking their EAP course at university (Quick Placement Test, OUP, 2001) and proved to be B1-B2 level English language users. Their educational background was similar as they all completed their secondary education in Serbia.

Table 1: *Distribution of participants (N=59) in relation to the year of study*

| Participants | Mathematics students | Computer Science students |
|--------------|----------------------|---------------------------|
| First-year | 12 | 14 |
| Second-year | 18 | 15 |
| Total | 30 | 29 |



As stated above, the aim of the research was to examine the interdisciplinary use of language learning strategies in Serbian EAP context. Regarding this aim, the following research questions were set:

1. Are mathematics and computer science undergraduates high, medium or low strategy users?
2. What types of strategies do these students use?
3. Does the students' strategy use differ by discipline?

Relying on Oxford's taxonomy of language learning strategies (Oxford, 1990) as a most comprehensive system of strategies proposed so far, the instrument chosen for this study was Oxford's SILL Version 7.0 for non-English speakers, as it follows the given categorization. The choice of the instrument was also supported by the fact that its reliability and validity have been proven in numerous studies conducted in various contexts (Nyikos & Oxford, 1993; Green & Oxford, 1995; Bruen, 2001; Wharton, 2000; Hong-Nam & Leavell, 2006). The SILL has consistently scored above .90 using Cronbach alpha (Peacock & Ho, 2003, p. 184), which points to the high level of internal reliability. This self-report questionnaire is comprised of 50 items, each item representing a language learning strategy. The items are grouped into six categories according to the six strategy types: memory strategies (items 1-9), cognitive strategies (items 10-23), compensatory strategies (items 24-29), metacognitive strategies (items 30-38), affective strategies (items 39-44) and social strategies (items 45-50). The respondents indicate how often they employ each of the strategies by selecting one response on the five-point Likert scale, with value 1 denoting "Never or almost never true of me" and 5 implying "Always or almost always true of me". According to the scale ranges set by Oxford (1990), small total score values (1.0-2.4) indicate low level strategy use, values 2.5 to 3.4 medium strategy use and values 3.5 to 5.00 high level strategy use.

The SILL was administered to the students at the beginning of the EAP course, more precisely, in the second week of the course. Considering that the participants' level of English was assessed as B1-B2, the survey items were all in English. However, the purpose of the survey and detailed instructions regarding the administration procedure were provided and discussed in students' L1. The participants anonymously filled in the questionnaire and the data analysis included descriptive statistics and student's t-test for comparing the means and establishing possible statistical differences between them.

4 Results

The results of the study are presented in the following order: the overall results of the students' strategy use, the results referring to the use of particular types of strategies, and finally, the results indicating the preferred individual strategies.

The analysis of the overall results suggests that all participants in the study fall within the category of medium strategy users, as the mean values representing the frequency of their strategy use range between 2.74 and 3.06. The means also indicate that mathematics students use language learning strategies more often than their computer science peers, but the difference between the two results has not proved statistically significant ($p > 0.05$), as it can be seen in the following table:

Table 2: *The overall use of strategies by mathematics and computer science students*

| | Mathematics students | Computer Science students |
|--------------|----------------------|---------------------------|
| M | 3.06 | 2.74 |
| SD | 1.27 | 1.34 |
| Min-Max | 2.4-3.74 | 2.12-3.44 |
| P | 0.5272 | |
| Strategy Use | Medium | Medium |

The results on the use of particular strategy types are given in Table 3 for mathematics students and Table 4 for computer science students. The given results are presented in descending order, with most frequently used strategies given at the top and least frequent strategies at the bottom of the table:

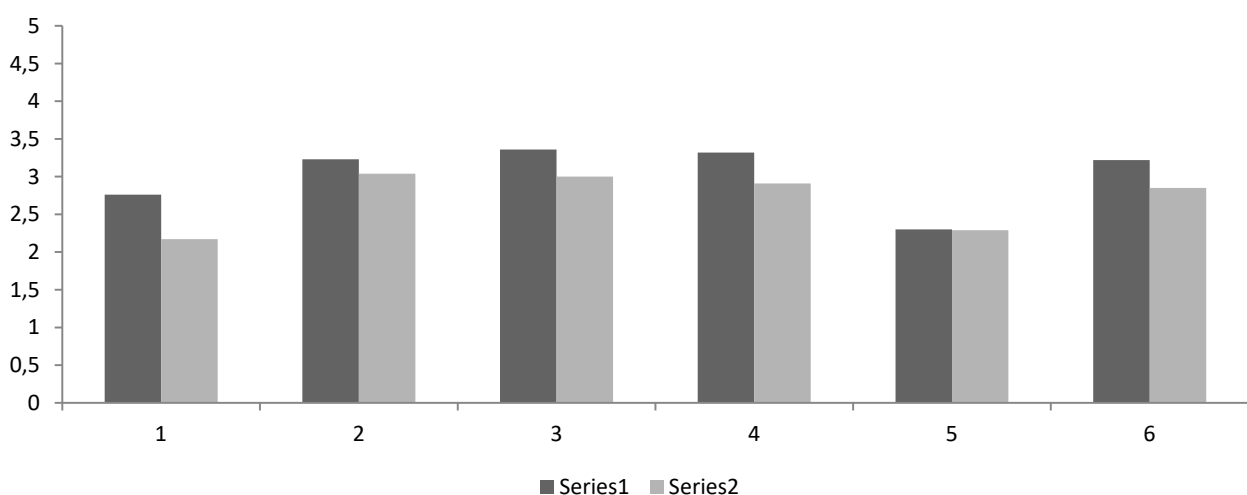
Table 3: *The use of particular strategy types by mathematics students*

| Strategy type | M | SD | Strategy Use |
|------------------|------|------|--------------|
| 1. Compensatory | 3.36 | 1.13 | Medium |
| 2. Metacognitive | 3.32 | 1.20 | Medium |
| 3. Cognitive | 3.23 | 1.24 | Medium |
| 4. Social | 3.22 | 1.30 | Medium |
| 5. Memory | 2.76 | 1.26 | Medium |
| 6. Affective | 2.30 | 1.23 | Low |

Table 4: *The use of particular strategy types by computer science students*

| Strategy type | M | SD | Strategy Use |
|------------------|------|------|--------------|
| 1. Cognitive | 3.04 | 1.25 | Medium |
| 2. Compensatory | 3.00 | 1.41 | Medium |
| 3. Metacognitive | 2.91 | 1.30 | Medium |
| 4. Social | 2.85 | 1.43 | Medium |
| 5. Affective | 2.29 | 1.36 | Low |
| 6. Memory | 2.17 | 1.18 | Low |

According to the above results, it appears that the participants mostly apply compensatory, cognitive and metacognitive strategies, while the least frequently used strategies are affective and, in case of computer science students, memory strategies. The highest recorded value refers to compensatory strategy use by mathematics students (3.36) while the lowest value describes the use of memory strategies by computer science students. Mathematics students tend to use all of the strategy types, except for affective strategies, more frequently than their computer science peers, as it is clearly observed in the graph below.



Graph 1: *The use of particular strategy types: mathematics and computer science students compared*

Finally, referring to the use of individual strategies, the survey shows that the most popular strategies among the students are the following two compensatory strategies: *If I can't think of an English word, I use a word or phrase that means the same thing* and *To understand unfamiliar English words, I make guesses*.



As for metacognitive strategies, the two most preferred strategies among the participants are: *I pay attention when someone is speaking English* and *I notice my English mistakes and use that information to help me do better*, while the most preferred cognitive strategy is *I watch English language TV shows or go to movies spoken in English*. On the other hand, the least used strategies among the students are the affective strategies *I write down my feelings in a language learning diary* and *I talk to someone else about how I feel when I am learning English* as well as the memory strategy *I physically act out new English words*.

5 Discussion

As it has already been stated in the previous section, the students majoring in mathematics and computer science at the University of Novi Sad all show to be medium strategy users regarding their English language learning and usage. Considering their level of proficiency, which ranges from B1 to B2, and taking into account the fact that strategy use generally improves learners' language competencies, somewhat higher strategy use could have been expected by the participants. The findings corroborate previously recorded results in other higher educational and cultural contexts such as India (Meshkat & Khanjani, 2014) and China (Peacock & Ho, 2003) where it was also found that all non-humanities students fall within the category of medium strategy users. Similarities are also observed when it comes to specific types of strategies, as compensatory strategies, followed by cognitive and metacognitive ones, proved to be the most favoured strategies by the participants in Peacock and Ho's study (2003). It appears that the general context of higher education initiates and supports the use of operations and techniques useful for overcoming a lack of specific information, mental manipulation and tackling various data as well as managing the learning process. The above authors also reported that computing students used the fewest language learning strategies when compared with their peers majoring in other seven disciplines. The present results, although based on the comparison between the students of two academic disciplines, also suggest that computer science students are not so fond of using strategies. This particularly seems to be the case with their use of memory strategies, as this was the lowest result recorded in the study. Apart from memory strategies, the findings of this study also point to extremely low use of affective strategies among all participants. Although they are adults and therefore supposedly mature in every segment of their life, it appears that the participants generally pay less attention to the affective dimension of their foreign language learning. A possible explanation may be found in general educational context in Serbia which still relies on traditional approaches and values, focusing mostly on learners' achievement and the assessment of gained knowledge, thus marginalizing the affective and social aspects of learning. It can therefore be concluded that since the beginning of their general education the participants have rarely been guided how to regulate their emotional state while learning, and what benefits this can bring in terms of learning efficiency. These results do not refer only to Serbian undergraduates as similar findings have been reported by Wharton (2000) who also found that affective strategies were the least favoured type of language learning strategies among undergraduates of a Singapore university. Finally, considering the students' most preferred strategies, the two compensatory strategies, it can be assumed that the choice of these strategies is related to the main principles of dealing with mathematical problems, i.e. applying various individual solutions and approaches in solving a single problem. The most favoured cognitive strategy, on the other hand, is directly related to the global dominance of English in mass media.

6 Conclusion

The interpretation of the study results offers certain pedagogical implications to EAP/ESP teachers, material developers and syllabus designers. As the results of this and previously conducted studies

show (Oxford & Nyikos, 1989; Peacock & Ho, 2003), students of non-humanities orientation do not tend to use strategies often. Therefore, in the process of syllabus design and material development for these groups of students EAP/ESP teachers and practitioners should pay particular attention to creating activities that stimulate the use of language learning strategies. In their classes, teachers themselves should try to make these students maximally aware of the importance and benefits of strategy use in language learning. This particularly needs to be the case with the courses for computing students, as they show the weakest performance regarding the strategy use. Collaborative tasks and activities should also be given more space in EAP/ESP syllabi and classroom activities as they are crucial for developing students' social strategies.

Last but not least, EAP/ESP teachers and practitioners should pay more attention to the affective domain of language teaching by creating a pleasant atmosphere in which students would not feel stressed when expected to communicate in a foreign language and where they would learn how to relax and make their language learning not only more successful, but also less stressful and more enjoyable. In addition, EAP/ESP teachers and instructors should be aware that students' language learning also reflects specific characteristics of their academic field. In case of mathematics and computing students that would mean accuracy, attention to detail, and preference for individual work in problem solving. Teachers and instructors, therefore, should be aware of these differences and show high flexibility in selecting and applying an approach and activities that would stimulate students to accept different approaches to learning the foreign language content.

This report presents preliminary results that stress the need for conducting a larger-scale study on the use of language learning strategies among LSP students of various professional orientations. The study reported in this paper has a certain number of limitations. In the first place, it represents a small-scale research with only two groups of students of a relatively small size. Additional limitation lies in the fact that the research results rely only on the quantitative data. Qualitative research design would certainly offer a better insight into students' choice of strategies and reasons for using them. A larger sample that would include students of various academic subjects would also contribute to better explanation of the influence of academic field on students' strategy use in the context of LAP/LSP teaching and learning. For the time being, the value of this report is in its pedagogical implications as it stresses the need for analyzing students' learning habits and characteristics of the field of study prior to the beginning of the course with a view to enlarging the scope of students' strategies and ensuring better learning outcomes.

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How to Make Teaching Maritime English (More) Interesting?

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Abstract

It is widely acknowledged that student interest and motivation for learning have a considerable influence on second language acquisition (e.g. Baker, 2006; Dörnyei & Ushioda, 2011). This paper focuses on methods of stimulating and enhancing students' interest in learning maritime English, as one of the factors of success in second language development. The students of Nautical Studies and Marine Engineering at the Faculty of Maritime Studies in Rijeka were selected as the target group. The data were collected through survey in the form of a questionnaire. The aim of the research was to identify the elements from teaching general English that affect the level of student interest in learning English for specific purposes, as well as to make suggestions to improve levels of interest in the classroom. The authors found that using role-plays based on authentic situations, digital media and integrated tasks both raise and sustain interest in students during lessons.

Keywords: Maritime English, motivation, second language teaching, learning material.



1 Introduction

English for specific purposes (ESP) focuses on teaching a specific functional variety of a natural language to students who are trained to join a community of people that share a specialized knowledge. ESP is characterized by unambiguous terminology, specific rhetorical elements and structures, complex syntax and lexical density. It serves a specific purpose and involves a particular way of communication, whether written or oral. Maritime English is a particular variety of ESP used by seafarers both at sea and in port and by individuals working in the shipping and shipbuilding industry. It is an umbrella term encompassing five different subvarieties according to the specific purpose they serve within the maritime context: English for navigation and maritime communications, English for maritime commerce, English for maritime law, English for marine engineering, and English for shipbuilding (Bocanegra-Valle, 2013).

Teaching maritime English presents quite a challenge for any teacher. As Dudley-Evans and St. John (1998) emphasized, the role of the teacher changes when compared to English for general purposes (EGP), as the teacher needs to have specific knowledge of the subject besides having knowledge of the language. The teachers of maritime English are not mere teachers of terminology, hence the Maritime English course they conduct should involve all the complexities of the variety of English they teach. However, during class, the level of student motivation and interest inevitably drops, so the teacher has to draw upon certain strategies in order to maintain interest, which in turn should enhance learning.

This paper aims not only to establish the type of motivation present in students learning a specific variety of English, maritime English, but also to suggest and evaluate some ways of raising the level of motivation and interest in students, especially during class when their concentration and motivation begins to wane.

2 Theoretical background

The issue of motivation in second language acquisition has been widely acknowledged by many authors and methodologists. Since Gardner (1985), the theory of motivation has developed considerably, identifying various types and degrees of motivation in learning. It has also been observed that motivation differs in students learning EGP and ESP (Guerid, 2015; Johns & Dudley-Evans, 1991). A study conducted by Madrid (2002) about how powerful 18 motivational classroom strategies were, identified the strongest motivational strategies, among which the use of audio-visual resources was dominant, followed by new technologies and group work. Bernaus, Wilson, and Gardner (2009) conducted a study which showed that teacher motivation influences the use of strategies in class and can influence the students' attitudes towards learning, but they also emphasized that the role of the teacher in the process of language learning is much more complex. Teacher motivation is related to the use of motivational strategies – the more motivated the teacher is, the more varied strategies he or she will use.

3 Methodology

To specify the parameters of this course of study, the authors performed a set of procedures, i.e. a qualitative needs analysis (Nunan, 2001) as the first step in the research at the beginning of the academic year 2016/2017. The authors performed a qualitative needs analysis at the courses we were currently teaching to determine the activities and materials we will use. The courses involved were English for marine engineering and English for navigation and maritime communications.

Based on our experience and reference literature, in case the motivation drops in class, the students need interactive activities where they can actively use the language, a variety of materials which would stimulate all their senses and simulations of real-life situations. Xiao Yishan (2008) conducted a needs analysis for the teaching of English for navigation and maritime communications and he emphasized that any course should be based on an analysis of learner needs. However, the author focused on the target needs analysis, according to Hutchinson and Waters' framework (1989), while in this particular situation, the focus was not so much on "what learners need to know", as this was already prescribed by the course content and structure, but more on the "how they will learn it" and "what they expect from the course" in order to see how learning may be optimized. The authors focused on a qualitative analysis, where the emphasis was more on the process of learning and the learners themselves. Although the needs analysis does not yield absolute results, it may provide some guidelines and focus the course on learning. Another important implication was suggested by Tominac (2008) who conducted a study of TOMEC test (Test of Maritime English Competence) and concluded that the students of Marine Engineering were much better in tasks which involved visual forms, such as drawings, diagrams and pictures, whereas students of Nautical Studies were better in listening comprehension tasks, which reflects the areas in which the students feel comfortable.

The second stage involved the implementation of the selected material. The authors selected the activities that would be used to motivate and activate students, but also that would reduce the level of anxiety students can feel when using a foreign language. The methods used included workshops and digital material, some of which taken over from training institutions and some designed by the authors themselves. The teaching material available encompassed textbooks specialized for teaching maritime and marine engineering English, like *Maritime English* (Pritchard, 1999), *English for the Maritime Industry* (Grice, 2012), *English for Maritime Studies* (Blakey, 1987), *MarEngine English Underway* (Buczowska, 2014), *An English Textbook for Marine Engineers* (Spinčić & Pritchard, 2002), and online interactive activities, like MarEng project. The textbooks are very well organized and designed according to methodological principles and they may serve as a good basis in the class, but as they do not cover the entire content of the mentioned courses, they have to be supplemented with additional material. Online programmes, as de la Maza established (2009), are a useful methodological tool in the classroom, but not as a self-learning tool. Different practitioners have provided their contribution in the area of maritime English teaching, aiming at improving specific skills, like the communicative ability (Kuo, 2008), phonetic skills (Wang & Lin, 2008), translation skills (Raluca Vişan, 2009), or suggesting a learning strategy, like learning from authentic situations (Łozińska, 2009), genre-based approach (Dževerdanović, 2009), but none of them has focused on raising and maintaining the level of motivation, keeping the students focused and interested in the matter during class. This is why the authors drew upon some EGP activities, adjusting them for this purpose and making customized activities for raising motivation in maritime English class.

Finally, the last stage involved evaluation and analysis of the results. The outcome of using the mentioned materials was evaluated firstly from the point of view of the teacher, evaluating the students' needs, expectations and attitudes and taking into consideration that ESP requires a particular methodology that differs from EGP (Dudley-Evans & St. John, 1998). Secondly, the outcome of using the mentioned materials was assessed from the point of view of the students by conducting a survey about the implemented strategies to verify whether they achieved the expected impact. For the purposes of the research, a survey was conducted among the students of Marine Engineering and Nautical Studies at the Faculty of Maritime Studies in Rijeka. The subjects were 85 students, 51 first-year students of marine engineering English (48 male and 3 female, average age 19) and 34 second-year students of nautical English (30 male and 4 female, average age 20). The number of subjects was about half of the



total number of students on the course. They had already had some previous knowledge of English at B level gained from high school, but at the courses offered at the Faculty of Maritime Studies they were introduced to the maritime English, that is the variety of English they had not used before. None of the subjects had had any experience at sea.

The survey was composed as a questionnaire with 15 questions (see Appendix) in which the students had to grade their answer on a scale from 1 to 5, depending on how much it applied to them, 1 being the least applicable. As the authors required a customized survey for their research, we compiled the questions ourselves. The survey represented a combination of Attitude/Motivation Test Battery (AMTB) survey (Gardner & MacIntyre, 1993) and a survey conducted in Croatia in 2009 in the framework of the project “Tesla u školi” which was aimed at stimulating the use of digital teaching materials in class. The questions were all in Croatian to avoid any possible misunderstandings or confusion.

4 Motivational activities

On the basis of the conducted needs analysis and the research of available relevant literature, the authors have selected several types of materials to stimulate and maintain motivation in their ESP classes. The activities were chosen to cater for various student needs and satisfy various learning styles. The purpose of these activities was firstly to motivate students during class when the level of interest and concentration drops, while at the same time they would learn and use language structures.

Two of the teaching materials selected, the Seagull training course and MarEng programme, were taken over from available online training providers, which offer a library of training courses for seafarers. Original materials were construed using the available e-learning platform Merlin and the online application Puzzlemaker, while online applications like Dvolver and Kahoot! were used to get the students more involved and active in the classroom. Furthermore, communication workshops with native speakers were organized for smaller groups of students.

4.1 Online training courses

In the field of maritime English teaching and training of seafarers, there are some training courses developed with the goal of improving communication skills in this specific work environment, which directly affects the safety and security on board ships.

One of the most famous training platforms, Seagull Maritime, offers a comprehensive library of training and onboard courses for improving seafarer knowledge. The courses are not free of charge, so the Faculty of Maritime Studies provides a partial subscription to some of the courses offered online by Seagull. These were used in class as materials produced by professionals for professionals which makes it relevant and significant to students. The other online learning tool, MarEng, was developed in the framework of Leonardo da Vinci project with the aim of improving the knowledge of English in the maritime industry. It is free-of-charge and can be downloaded and installed on any computer.

Both tools offer listening and reading practice as well as various exercises, like matching, filling in the gaps, grammar exercises, etc. All materials aim to simulate real-life situations and to teach standard marine communication phrases, proscribed by the International Maritime Organization. The use of the materials requires adequate equipment, like computers and headphones. The students work and practise by themselves, at their own pace, which makes the learning process highly individualized. The students can go through the units in class and at home, at any time. Seagull stores their results online

under their username. The other advantage is the audio-visual nature of the programmes, as well as their user-friendliness. However, as language implies interaction and communication, this aspect is lost in this way of learning, so it is extremely important not to rely solely upon such materials, but to use them in combination with other more interactive strategies.

4.2 E-learning platform

Merlin is an e-learning platform established to perform university courses with the use of e-learning technologies. It is based on Moodle platform designed to provide educators, administrators and learners with a single robust, secure and integrated system to create personalised learning environments. It contains test materials, lectures, presentations, various files, video clips, etc. Students can access it by means of their electronic identity provided by the faculty. The materials on this learning platform are tailor-made by the authors to cater for the needs of a particular group of students. It was chosen precisely because it offers a large variety of activities, which may be used as warm-up activities, follow-up activities, grammar practice, or just for raising the level of concentration after a longer activity or when the students are tired. Furthermore, the activities may be adjusted to the needs of particular students and they may access them at any time. Most importantly, in this case, the process of learning is not performed on learners, but it is what learners do themselves (Ambrose, Bridges, DiPietro, Lovett, & Norman, 2010).

4.3 Online applications

There is a variety of online sources and applications to choose from. The applications used for the purposes of this research were selected to fulfil the specific goal of maintaining and raising the level of motivation during class. They were meant to be introduced at a specific point during the lesson when the students' concentration, and consequently motivation, is falling so they require an activity which would engage their interest and imagination and in which they would practice their language skills without much effort. Of course, such activities require the use of computers in class.

One of such activities offering a well-structured vocabulary practice is the Puzzlemaker. It is a puzzle generation tool for creating customized word searches and other various types of puzzles. As puzzles represent a pastime activity for enjoyment, this can certainly help to maintain motivation in class and relieve the tension related to learning a foreign language. As the authors wanted to engage the students more through interactive activities, pair activities and group work, we selected applications like the Dvolver Moviemaker. In this free online application the students can use their imagination, whether by themselves, in pairs or in groups, and use specific language in specific situations, usually provided by the teacher, to make short conversations in the form of movies. This activity aims to be entertaining, but at the same time to practise specific vocabulary in context. Most importantly, the students do not consider it as actual practice, but as an entertaining break from learning. Another motivation-sustaining online application used in the research was Kahoot!, a free game-based learning platform that makes it fun to learn any subject, in any language, on any device and for all ages. The application supports the integration of photos, videos, words or sentences and can be played on a tablet, a PC or a mobile phone. The activity aims to stimulate the students' motivation and concentration through a competition, while at the same time to practise their vocabulary or grammar skills.

These online applications can be used at any moment in class, as a warm-up or follow-up activity, for revising or practice, or when the teacher feels the motivation in class has dropped for any reason. However, it is time-consuming to create such an activity which still needs to cater for the students' needs, i.e. it must not be too commonplace or obvious, but challenging enough for their level of knowledge.



4.4 Communication workshop

The communication workshop with native speakers was organized in cooperation with the City Library Rijeka and the crew of the American warship Mount Whitney. The students had the opportunity to speak to native speakers who were actually their colleagues as well. The students were divided into several groups and each group could talk to one of the crew members. One of the workshops was structured and the students had specific tasks to do, i.e. to find out specific information about their guests. The other workshop was loosely structured in which the goal was to use the language in a more relaxed environment. This activity does not require any equipment, but it does require a certain amount of engagement by the teacher to organize, coordinate and monitor the course of the workshop. On the other hand, the students can use the language in a real-life situation, they can relax and enjoy a casual conversation while still practising language and being aware of their own knowledge of language.

5 Survey results

In order to evaluate the impact of the mentioned learning materials, a survey was conducted among the students. The goal of the survey was to establish their basic motivation for learning, the students' attitude towards the use of the selected materials in class, their opinion about each of the materials used, and their level of participation in class.

Table 1 shows the differences and similarities in some key questions between students of different courses. Only the answers with the highest grade 5 have been singled out in the table, as they are the most numerous. The first two questions referred to the kind of motivation that drives the students. The students of Nautical Studies are highly aware of the importance the English language has in their future work where they have to use it on a daily basis, while significantly fewer students of Marine Engineering (60%) feel the same. However, basically, their motivation is instrumental, i.e. they learn English for pragmatic, practical reasons. The use of relevant literature and manuals is not perceived as their goal for learning the language, especially among the students of Marine Engineering (13.73%). This is probably because they feel that their communicative skills are more important for their job than reading skills. This is also in line with our needs analysis whereby communication and the use of language in context were the primary goals. The fact that still does surprise is the number of students of Marine Engineering who graded this question with the lowest grade, although the use of professional manuals is a large part of their job. However, as they are more visual and kinetic type of learners, they probably do not like learning from manuals and similar reading material.

Another interesting issue is the students' attitude towards the selected material in class, which is mostly positive. The students of Marine Engineering gave fewer answers with the highest grade, but there were a lot of answers graded with the second highest grade 4 (the percentage provided in the brackets in table 1 below), which may indicate a certain amount of scepticism towards this method of learning, probably because they are not used to it. The final question further checks their attitude towards the use of the selected materials and the answers were mostly positive, which corroborates our initial thesis about the use of this kind of material as motivating in class. When they had to assess how interesting the lessons were, the students also gave mostly highest or second highest grade, which is considered positive. On the other hand, they all agreed that learning from textbooks was not motivating for them.

Table 1: *The differences and similarities in opinions between the students of Marine Engineering and the students of Nautical Studies*

| Question | Students of Marine Engineering | Students of Nautical Studies |
|---|--------------------------------|------------------------------|
| I believe my knowledge of English is important for the progress in my future job. | 60.78% | 93.75% |
| I am learning English to be able to use professional manuals. | 13.73% | 46.88% |
| My opinion about the use of digital material in the process of education is positive. | 37.25% (45.10%) | 56.25% |
| How interesting was the lesson in which digital materials were used? | 42.00% (48.00%) | 40.63% (37.50%) |
| I prefer learning from a textbook. | 3.92% | 6.25% |
| I think that the use of digital teaching materials is appropriate and desirable. | 58.82% | 46.88% |

Table 2 demonstrates the distribution of answers, regardless of the course the students are taking. As the majority of answers were graded with 4 and 5, they were the ones singled out. We can see that students themselves noticed that their level of participation in class actually rose when these motivational strategies were used. Therefore, they felt more involved, challenged and stimulated, which raised their level of motivation. Entertainment is also an important stimulus in class, which was in this case achieved with Kahoot!. Overall, the students' answers showed that the selected motivational strategies managed to get their attention and stimulate them to participate more, therefore the lessons were more interesting and challenging. The feedback was also positive for the communication workshop, because the students found it enjoyable and desirable.

Table 2: The opinions of the students of Marine Engineering and the students of Nautical Studies about motivational activities

| Question | Grade 4 | Grade 5 |
|---|---------|---------|
| How much did the use of digital material in class motivate you to participate more? | 47.06% | 31.37% |
| The atmosphere in class when digital materials were used was active and motivating. | 45.10% | 49.02% |
| Learning with Kahoot! is fun. | | 100.00% |
| Learning with Kahoot!, Dvolver and MarEng is challenging and stimulating. | 49.02% | 31.37% |
| I think that organizing communication workshops with native speakers is appropriate and desirable. | 28.13% | 62.50% |
| How would you assess your participation in lessons when the communication workshop with native speakers was organized in comparison with classical lessons? | 28.13% | 43.75% |

6 Conclusions

The motivational activities selected according to the needs analysis, conducted by the authors, proved successful in class, which is corroborated by the student survey. These activities, originally created



for EGP, were modified according to the needs of the Maritime English course. The activities used targeted the students' attitudes and level of involvement in class, considering the kind of motivation which underlies their language learning and the learning types. The results of the survey showed that the activities used in class developed a positive attitude towards such learning and stimulated the students' participation in class. The students themselves confirmed that they participated more in classes when such activities were used.

The research may serve as the basis for future studies of the relation between the level of motivation and actual final achievement in class. The issue raised is whether such motivational activities, besides the advantages already mentioned, actually have an impact on the final grade the students achieve in class, because although they may have a momentary influence on students, their long-term effects on students' success should be researched. Furthermore, as teachers adjust their teaching style to the educational context in which they work, it would be interesting to see how much the students' behaviour affects the level of autonomy that the teacher gives to the students and the strategies the teacher will use.

Finally, it may be concluded that teachers themselves have to re-evaluate their work in class and monitor the process of learning constantly, adjusting it to the students and their needs. This is an ongoing process and the activities presented here demonstrate some of the ways of stimulating and enhancing learning of maritime English.

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Appendix

The survey conducted among the students of Marine Engineering and Nautical Studies at the Faculty of Maritime Studies in Rijeka

| Students of Nautical Studies | 1 | 2 | 3 | 4 | 5 |
|---|--------|--------|--------|--------|--------|
| I believe my knowledge of English is important for the progress in my future job. | 0.00% | 0.00% | 0.00% | 6.25% | 93.75% |
| I am learning English to be able to use professional manuals. | 0.00% | 3.13% | 21.88% | 28.13% | 46.88% |
| My opinion of using digital material in the process of education is positive. | 0.00% | 3.13% | 21.88% | 18.75% | 56.25% |
| How would you assess your participation in lessons when the communication workshop with native speakers was organized in comparison with classical lessons? | 3.13% | 0.00% | 25.00% | 28.13% | 43.75% |
| How much did the use of digital material in class motivate you to participate more? | 0.00% | 0.00% | 5.18% | 37.51% | 57.31% |
| How interesting was the lesson in which digital materials were used? | 0.00% | 6.25% | 15.63% | 37.50% | 40.63% |
| How interesting was the lesson in which you had the opportunity to talk with native speakers? | 0.00% | 3.13% | 12.50% | 28.13% | 56.25% |
| I prefer learning from a textbook. | 34.38% | 40.63% | 6.25% | 12.50% | 6.25% |
| I prefer learning with the help of digital learning strategies such as Kahoot!, MovieMaker and MarEng than learning in the classical way. | 0.00% | 0.00% | 17.85% | 42.12% | 40.03% |
| Learning with Kahoot! is fun. | 0.00% | 0.00% | 0.00% | 3.49% | 96.51% |
| Learning with Kahoot!, MovieMaker and MarEng is challenging and stimulating. | 0.00% | 0.00% | 14.12% | 42.59% | 43.29% |
| The atmosphere in class when digital materials were used was active and motivating. | 0.00% | 0.00% | 15.17% | 33.25% | 51.58% |
| I think that the use of digital teaching materials is appropriate and desirable. | 0.00% | 0.00% | 9.38% | 43.75% | 46.88% |
| I think that organizing communication workshops with native speakers is appropriate and desirable. | 0.00% | 3.13% | 6.25% | 28.13% | 62.50% |
| The atmosphere at the communication workshop was active and motivating. | 0.00% | 0.00% | 12.50% | 28.13% | 59.38% |
| | 2.50% | 3.96% | 12.24% | 27.89% | 53.42% |

| Students of Marine Engineering | 1 | 2 | 3 | 4 | 5 |
|---|--------|--------|--------|--------|---------|
| I believe my knowledge of English is important for the progress in my future job. | 0.00% | 1.96% | 9.80% | 27.45% | 60.78% |
| I am learning English to be able to use professional manuals. | 17.65% | 17.65% | 29.41% | 21.57% | 13.73% |
| My opinion about the use of digital material in the process of education is positive. | 1.96% | 0.00% | 15.69% | 45.10% | 37.25% |
| How would you assess your participation in lessons when digital materials were used in comparison with classical lessons? | 1.96% | 1.96% | 17.65% | 50.98% | 27.45% |
| How much did the use of digital material in class motivate you to participate more? | 1.96% | 1.96% | 17.65% | 47.06% | 31.37% |
| How interesting was the lesson in which digital materials were used? | 0.00% | 2.00% | 8.00% | 48.00% | 42.00% |
| How interesting was the lesson in which you had the opportunity to talk with native speakers? | 0.00% | 1.96% | 11.76% | 54.90% | 31.37% |
| I prefer learning from a textbook. | 25.49% | 27.45% | 31.37% | 11.76% | 3.92% |
| I prefer learning with the help of digital learning strategies such as Kahoot!, MovieMaker and MarEng than learning in the classical way. | 2.00% | 0.00% | 24.00% | 30.00% | 44.00% |
| Learning with Kahoot! is fun. | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% |
| Learning with Kahoot!, MovieMaker and MarEng is challenging and stimulating. | 0.00% | 1.96% | 17.65% | 49.02% | 31.37% |
| The atmosphere in class when digital materials were used was active and motivating. | 0.00% | 0.00% | 5.88% | 45.10% | 49.02% |
| I think that the use of digital teaching materials is appropriate and desirable. | 0.00% | 0.00% | 15.69% | 25.49% | 58.82% |
| I think that organizing communication workshops with native speakers is appropriate and desirable. | 0.00% | 1.96% | 19.61% | 47.06% | 31.37% |
| The atmosphere at the communication workshop was active and motivating. | 0.00% | 1.96% | 21.57% | 43.14% | 33.33% |
| | 3.40% | 4.05% | 16.38% | 36.44% | 39.72% |

