

# INITIAL ATTITUDES OF MECHATRONICS STUDENTS TOWARD LEARNING ENGLISH FOR SPECIFIC PURPOSES

## INICIJALNI STAVOVI STUDENATA MEHATRONIKE O UČENJU ENGLSKOG JEZIKA U STRUCI

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**Abstract:** *This paper presents the results of a research that was conducted among mechatronics students for the purpose of identifying their attitudes toward learning English for specific purposes in their prospective profession. The main objective was to identify which elements of learning English as a foreign language for specific purposes are observed as being the most important from the students' perspective. The target population in this research included students enrolled in the first year of mechatronics studies for the purpose of collecting their initial attitudes toward learning English for specific purposes.*

**Keywords:** *English for specific purposes, ESL, initial attitudes, mechatronics*

Izvorni znanstveni članak

**Sažetak:** *Članak predstavlja rezultate istraživanja provedenoga među studentima mehatronike s ciljem utvrđivanja njihovih stavova prema učenju engleskog jezika kao jezika struke. Glavni cilj bio je utvrditi koje elemente učenja engleskoga jezika kao jezika struke studenti smatraju najvažnijima. Ciljana populacija u ovom istraživanju bili su studenti prve godine studija mehatronike, budući da je cilj istraživanja bio prikupiti podatke o njihovim inicijalnim stavovima prema učenju engleskoga jezika u struci.*

**Ključne riječi:** *engleski jezik za posebne namjene, engleski kao drugi jezik, inicijalni stavovi, mehatronika*

### 1. INTRODUCTION

The main objective of foreign language classes at Croatian higher education institutions is to provide students with a solid foundation necessary for developing language competences related to their prospective profession. As Kordić and Papa point out, teaching a foreign language for professional purposes differs from teaching a foreign language as a general language, because it is pragmatically oriented, as it should meet the learner's needs that are conditioned by the labor market [1]. As English language plays an important role in the contemporary labor market, the focus of this research was placed on English rather than other foreign languages that are traditionally taught at Croatian higher education institutions. The methodology that is usually applied in such classes is ESP (English for Specific Purposes), which implies that the learner's reason for learning affects all decisions related to the content and method [2]. As Dragičević [3] points out, everyone is aware of the need of knowledge transfer within a certain country and outside its borders. One of the most important roles therein is played by language as a means of communication. The difference between teaching a foreign language generally speaking and language of a certain profession, i.e. language for specific purposes is that teaching a language for specific purposes combines both the linguistic and

professional content. Dudley-Evans and St John [4] describe learning and teaching English for specific purposes in the following manner: ESP is defined in the way to meet the students' requirements, it uses the existing methodology and activities of the discipline it serves, and it is oriented towards the language suitable for these activities – grammar, lexicon, register, learning skills, discourse and genre. As Hutchinson and Waters [5] point out, there is no clear-cut boundary between learning and teaching general English and English for specific purposes.

This research focuses on the attitudes of mechatronics students toward learning English for specific purposes for the purpose of offering an insight into their reasons for learning English, which are vital from the aspect of ESP.

#### 1.1. Learning English for specific purposes in technical sciences

Most of bachelor-level study programs in the area of technical sciences in the Republic of Croatia include English language classes. The basic reason for implementing English classes in professional study program curricula is the fact that English has become the language of international communication. Furthermore, professional books, journals and other sources may

frequently be found only in English. Bearing in mind that the content of English classes in primary and secondary schools is usually confined within the scope of general English, many students do not get confronted with engineering terminology and professional literature in English language until they enroll in the first year of their studies.

This research was conducted among students of the Professional Program of Study in Mechatronics at the Technical College in Bjelovar. This program of study is organized in six semesters, i.e. three years. Foreign language (English or German) is taught in all six semesters.

## 2. METHOD

During the first English class within the first year of their studies in the academic year 2015/16 students were asked to fill in the questionnaire prepared for the purpose of conducting this research. The participation in the research was voluntary and anonymous.

The questionnaire consists of two parts. The first part includes general information about the subjects – previously completed secondary school, number of years of learning English before college, average grade in English in the last two grades in secondary school, self-assessment of English knowledge and skills, the information on spending a longer period of time abroad in a country where English is spoken as the first language, and the general attitude regarding the importance of learning English for future bachelors of mechatronics. The second part of the questionnaire includes the students' attitude related to the degree of significance of different areas of English acquisition (the four skills: reading, listening, speaking, writing, general vocabulary, technical terminology, grammar, presentation skills in English, creating a CV and a job application in English, business correspondence).

As the questionnaire includes ten key areas of English language acquisition, subjects were asked to award each area with one of the grades from 1 to 10, whereat 1 signifies the lowest grade (the least important area of English language acquisition) and 10 represents the highest grade (the most important area of English language acquisition). Subjects were instructed that each area should be awarded with a single, different grade for the purpose of representing the attitude towards each of the aforementioned areas of English language acquisition according to the level of significance.

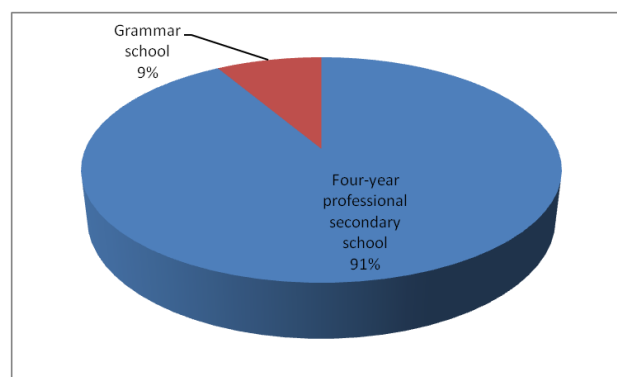
Methods of descriptive statistics were used for analyzing the sample and the results of the research.

### 2.1. Sample

The sample included a total of 47 full-time students of the Professional Program of Study in Mechatronics of the Technical College in Bjelovar who are enrolled in the elective course "English". Students enrolled in the elective course "German" were excluded from the sample due to the topic of the research which is related to learning English for specific purposes at college.

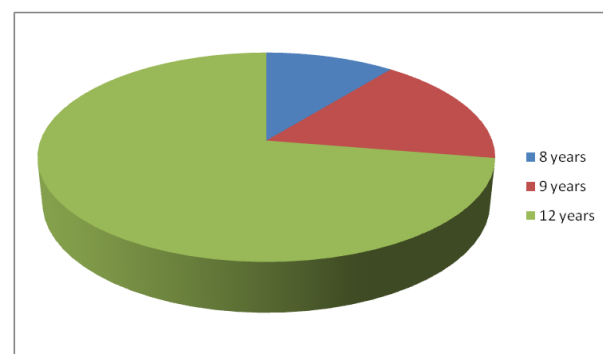
Figures 1, 2, 3 and 4 provide further information about the sample from the aspects of previously completed secondary school, number of years of learning English before college, average grade in English in the last two grades of secondary school and self-assessment of English knowledge and skills.

The majority of the students (91 %) included in the sample had completed a four-year professional secondary school, whereas 9 % of students had finished grammar school. The aforementioned percentages point to the relative homogeneity among subjects from the aspect of secondary school education.



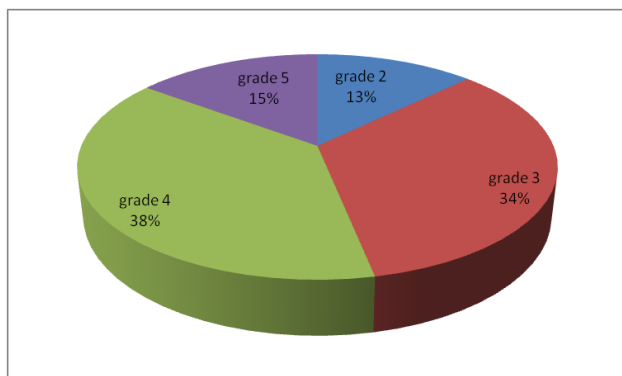
**Figure 1.** Sample distribution regarding the previously completed secondary school education

Regarding the number of years of learning English before college, the majority of students had learned English for 12 years. The number of years of learning English before college ranges between eight and twelve, which means that this should not be a relevant factor of differences in the attitudes towards learning English for specific purposes at college. A total of 72 % of students had learned English for 12 years before college, while the percentage of those learning English for eight and nine years amounted to 11% and 17 % respectively. The average period of learning English before college amounts to 11 years.



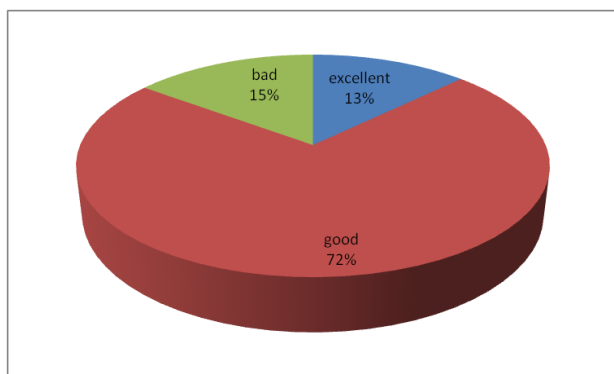
**Figure 2.** Sample distribution regarding the number of years of learning English before college

The average grade in English in the last two grades of secondary school was obtained by adding the two grades, dividing the sum by two and representing it as an integer. The average grade of the sample amounts to 3.



**Figure 3.** Sample distribution regarding the average grade in English in the last two grades of secondary school

The self-assessment of English knowledge and skills involved three grades – excellent, good and bad. As visible from Figure 4, most students assess their English knowledge and skills with the neutral grade “good”.



**Figure 4.** Sample distribution according to the students' self-assessment of English knowledge and skills

None of the students had spent a longer period of time abroad in a country where English is spoken as the first language.

All students regard learning English for specific purposes at college important for future bachelors in mechatronics.

### 3. RESULTS

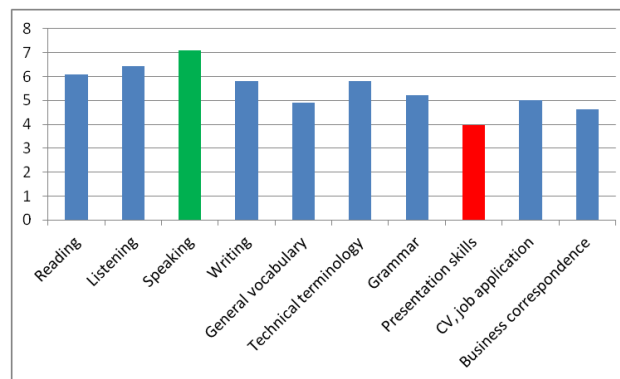
Among the ten areas listed in the questionnaire, speaking skill was in average evaluated as the most important element of English language learning at college, whereas presentation skills in English were averagely evaluated as being the least important among the ten elements.

The four skills of language learning (reading, listening, speaking and writing) as a whole were graded with high grades, whereas speaking was evaluated as the most important and writing as the least important.

Vocabulary was generally regarded as more important than grammar. However, when comparing grammar and general English vocabulary, grammar was graded as more important. Technical terminology was evaluated with higher grades than general English vocabulary and grammar.

If ordered according to the grade the elements of learning English within technical studies, according to the results of this research are as follows: speaking skill, listening skill, reading skill, writing skill, technical terminology, grammar, CV and job application in English, general English vocabulary, business correspondence, presentation skills in English.

The overall results may be found in Figure 5 and in Table 1. The element with the highest grade (speaking) is marked in green and the one with the lowest grade (presentation skills in English) in red.



**Figure 5.** Results

**Table 1.** Results

ELEMENT OF ENGLISH LANGUAGE LEARNING	AVERAGE	SD
speaking skill	7.11	2.70
listening skill	6.45	2.68
reading skill	6.09	2.55
writing skill	5.81	2.46
technical terminology	5.81	3.00
grammar	5.23	2.78
CV and job application in English	5.00	2.99
general English vocabulary	4.91	2.58
business correspondence	4.62	3.28
presentation skills in English	3.98	2.49

From the results it is visible that the standard deviation is high, which means that students' attitudes towards various elements of learning English for specific purposes in engineering and technology are not homogenous. However, a general trend may be noticed i.e. the fact that students consider the speaking skills to be the most important element (7.11 on the 1-10 scale), and presentation skills in English as the least important element (3.98 on the 1-10 scale) of learning English at college.

#### 4. DISCUSSION

Similar research studies have been conducted among students enrolled in various study programs. Research conducted by Miščančuk [6], which involved a similar sample of students (mostly engineering students), showed similar results as this one from the aspect of the importance of the speaking skill. Speaking was evaluated as the most important language competence, as 63.24 % of the sample considered it to be very important.

Jelovčić [7] carried out a similar research at the Faculty of Humanities and Social Sciences in Zagreb and obtained similar results from the aspect of the language learning skills. The speaking skill was evaluated as the most important by the majority of students.

It may be concluded, therefore, that mechatronics students share the standpoint of other engineering students and students of humanities and social sciences from the aspect that spoken communication represents a vital part of learning English for specific purposes in their profession.

#### 5. CONCLUSION

The objective of this paper was to determine the initial attitudes of mechatronics students about learning English for specific purposes at college. As expected and confirmed by previous research in the same field, most students consider the spoken communication to be the vital part of the overall English competence. As opposed to this, most students consider presentation skills in English to be least important part of learning English for specific purposes, which is partially contradictory to the claim that spoken communication is the most important element, as presentation skills belong to the area of spoken communication.

Further research may be conducted for the purpose of determining whether there is any difference between first-year students and their third-year colleagues from the aspect of the importance of presentation skills which may play an important role at their future workplace.

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