# Language progress of EMI and non-EMI economics undergraduates: A comparative perspective

Kornelija Čakarun, University of Rijeka
Faculty of Economics and Business, Croatia

Branka Drljača Margić, University of Rijeka
Faculty of Humanities and Social Sciences, Croatia

## Abstract

Despite a growing interest in English-medium instruction (EMI), research on students' English language proficiency advancement in EMI has been scarce. Hence, this study investigates the general and business English language proficiency of EMI and non-EMI students at a Croatian university at the beginning and the end of their BA studies, with the aim of analysing and comparing their English language progress. The data were collected by means of a questionnaire looking at the students' experiences, expectations and language self-assessment, the Oxford Quick Placement Test, as well as a C-test and a business English test designed by the authors of the study. Interviews with the students were also conducted to further enquire into the data gathered from the questionnaire and the tests. The findings point to greater English language proficiency of EMI students at the beginning and the end of their BA studies, and to their better progress in business English. They also reveal non-EMI students' greater progress in general English.

Keywords: *English-medium instruction, students, language proficiency, language progress*

## Introduction

Notwithstanding an increasing body of literature on English-medium instruction (EMI) and a wide perception of language proficiency increase as one of the greatest strengths of EMI (cf. Drljača Margić & Vodopija-Krstanović, 2017, 2020; Rose et al., 2019), only few studies empirically enquired into the impact of EMI on students' language proficiency, and even fewer compared EMI and non-EMI students' language gains (cf. Macaro et al., 2018). Among them, several emphasize more positive effects of EMI on English language learning (e.g. Cosgun & Hasırcı, 2017; Vidal & Jarvis, 2018; Yang, 2015), while others indicate that EMI is not more efficient in language proficiency improvement than English for specific purposes (ESP) courses (e.g. Lei & Hu, 2014; Mahboob, 2014), which might also be due to the fact that language-related learning

outcomes are not specified in the curriculum (Pecorari & Malmström, 2018). Additionally, Lei and Hu (2014) and Ament and Pérez Vidal (2015) conducted studies which also included a comparison group, and reported similar language gains for both groups.

In Croatia, research on EMI has been done solely at the University of Rijeka, primarily looking into language-related strengths, challenges and measures (Drljača Margić & Vodopija-Krstanović, 2017, 2018, 2020). However, the interrelation of EMI and students' language advancement has remained underexplored.

Given the importance of this contentious topic and the scarcity of studies examining EMI students' English language proficiency progress, this study, as a part of a larger, longitudinal study, aims to analyse whether there is an increase in EMI students' general and business English language skills at the end of their BA studies and compare EMI and non-EMI students' language progress. Additionally, students' perceptions of expectation fulfilment related to their language proficiency advancement were investigated.

## Research methods

The study was conducted at the University of Rijeka, Faculty of Economics and Business, which offers a Bachelor and a Master EMI programme in international business. It was carried out in the academic year 2019/2020: in October 2019, it was conducted with 197 first-year students (FYSs) (162 non-EMI and 35 EMI students), and in June 2020 with 125 third-year students (TYSs) (102 non-EMI and 23 EMI students). Firstly, students completed a questionnaire reporting on their previous English learning, self-assessing their English language skills and sharing their expectations (fulfilment) regarding language proficiency increase in their course of study. The questionnaire was designed and answered in Croatian. Secondly, students were given the Oxford Quick Placement Test (OPT), as well as a C-test and a business English test designed by the authors of the study, with the purpose of testing their general English and their business English proficiency respectively. The C-test consisted of five short texts in which every second word had missing letters[1], whereas the business English test was based on students' ESP courses final exams, containing five tasks related to English business terminology. Lastly, interviews with both EMI and non-EMI students (24 FYSs and 17 TYSs) were held to further enquire into the obtained data. These findings were used to support the discussion.

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[1] Since every second word has missing letters, the words that have to be completed are random; therefore, the test investigates multiple skills, such as reading comprehension, as well as spelling and grammar skills.

All participants are Croatian and learned English for approximately 12 years prior to enrolment on university. Regarding ESP courses, EMI students take an obligatory ESP course in their first year of study, as does the majority of non-EMI students. The latter can also take elective ESP courses in the second and third year.

The statistical analysis of the test results and the quantitative data obtained via the questionnaire was performed using the Stata software. The statistical significance of the differences between the test results of EMI and non-EMI FYSs and TYSs was examined with the help of independent two sample t-tests, where a p-value smaller than 0.05 indicates the statistical significance of the results. Prior to conducting the t-tests, normality of distribution was investigated, showing that the normality of data is not satisfied. Therefore, all the t-test results were re-examined with the help of the Mann-Whitney U test, as well as with the median test. The results of both tests confirmed the t-test results, that is, the statistical significance of the differences between the results. Descriptive statistics were also utilized to describe certain data from the questionnaire.

### Research questions

The study seeks to answer the following research questions:

(1) Do EMI students have greater prior knowledge of English than non-EMI students?

(2) Is EMI students' English language proficiency higher at the end of their BA studies than that of non-EMI students?

(3) Are there any differences between EMI and non-EMI students' progress in their general and business English language skills during their studies?

(4) What are students' perceptions regarding the fulfilment of their expectations of language proficiency increase?

## Results

### First-year students

With regard to the FYSs' self-assessment on the CEFR scale (from A1, represented as 1, to C2, represented as 6), the mean for non-EMI students is 3.56 (corresponding to the B2 level), and for EMI students 4.30 (B2). These means differ by 0.74 points, a difference that has been shown to be statistically significant (t(250) = -3.84, p = 0.0002). Concerning the levels achieved in the OPT, the mean is 3.24 for non-EMI students (B1), and 4.25 for EMI students (B2), and the difference of 1.01 points is also statistically significant (t(195 = -4.97, p = 0.00). In the C-test, out of 100 points, non-EMI

students gained 49.45 points on average (SD 18.71), and EMI students obtained 70.51 points (SD 11.97). The difference of 21.06 points is statistically significant (t(195) = -6.37, p = 0.00). In the business English test, non-EMI students obtained 8.34 points on average out of 30 (SD 4.07), whereas EMI students obtained 11.88 points (SD 4.44). The difference of 3.54 points is also statistically significant (t(195) = -4.58, p = 0.00).

Additionally, both EMI and non-EMI students believe that their studies will help them improve their language proficiency in English, particularly in terms of (discipline-specific) vocabulary.

## Third-year students

Regarding TYSs' self-assessment, the mean for non-EMI students is 4.23 (B2) and for EMI students 4.46 (B2). The difference of 0.23 points is not statistically significant (t(124 = -1.02, p = 0.3056). The average levels achieved in the OPT are 3.70 for non-EMI students (B2) and 4.52 for EMI students (C1). These means differ by 0.81 points, a difference that has been shown to be statistically significant (t(123 = -3.05, p = 0.0028). Concerning the C-test, non-EMI students obtained 57.96 points on average (SD 17.24), while EMI students obtained 74.30 points (SD 12.71). The difference of 16.34 points is statistically significant (t(123) = -4.28, p = 0.00).  In the business English test, non-EMI students obtained 15.95 on average (SD 5.22), whereas EMI students obtained 22.13 points (SD 3.13). The difference of 6.17 is also statistically significant (t(123) = -5.44, p = 0.00).

As to the fulfilment of students' expectations related to language proficiency progress, half of non-EMI and 70% of EMI students claim that their expectations were fulfilled.

## Comparison

With regard to the students' self-assessment results, the mean for non-EMI FYSs is 3.56, and for non-EMI TYSs 4.23. This indicates a 0.67 point rise, which is statistically significant (t(264) = 5.20, p = 0.00). As for EMI students, the mean for FYSs is 4.30, and for TYSs 4.46 and the 0.16 rise is not statistically significant (t(56) = 0.73, p = 0.4639).

As the results of the OPT demonstrate in Table 1, the average score of non-EMI FYSs is 36.17 points out of 60, and of non-EMI TYSs 40.12. (3.95 points rise, statistically significant). With respect to EMI students, the average score of FYSs is 45.05, and of TYSs 47.34 (2.29 points rise, not statistically significant).

Concerning the results of the C-test, the average score of non-EMI FYSs is 49.32 out of 100, and of non-EMI TYSs 57.96 (8.64 points rise, statistically significant). In relation to EMI students, the average score of FYSs is 70.51, and of TYSs 74.30 (3.79 points rise, not statistically significant).

The results of the business English test taken by non-EMI students indicate an average of 8.31 points out of 30 for FYSs, and 15.95 for TYSs (7.63 points rise, statistically significant). Regarding EMI students, the average score of FYSs is 11.88 points, and of TYSs 22.13 (10.24 points rise, statistically significant).

*Table 1. The comparison of EMI and non-EMI FYSs and TYSs' test results*

| Group | Mean | Standard deviation | Difference | Significance/ p-value |
|---|---|---|---|---|
| OPT | | | | |
| non-EMI FYSs | 36.17 | 9.96 | 3.95** | 0.0017 |
| TYSs | 40.12 | 9.71 | | |
| | | | | |
| EMI FYSs | 45.05 | 7.85 | 2.29 | 0.2847 |
| TYSs | 47.34 | 7.96 | | |
| C-test | | | | |
| non-EMI FYSs | 49.32 | 18.72 | 8.64*** | 0.0002 |
| TYSs | 57.96 | 17.24 | | |
| | | | | |
| EMI FYSs | 70.51 | 11.97 | 3.79 | 0.2547 |
| TYSs | 74.30 | 12.71 | | |
| Business English test | | | | |
| non-EMI FYSs | 8.31 | 4.08 | 7.63*** | 0.00 |
| TYSs | 15.95 | 5.22 | | |
| | | | | |
| EMI FYSs | 11.88 | 4.44 | 10.24*** | 0.00 |
| TYSs | 22.13 | 3.13 | | |

Note: * $p < 0.05$, ** $p < 0.01$, ***$p < 0.001$

FYSs have rather optimistic expectations related to language advancement throughout their course of study, which are reported to be met by half of non-EMI and the majority of EMI students. Non-EMI students whose expectations have not been met attribute that to the insufficient number of ESP classes, while EMI students relate that to the lack of language-specific feedback and, to an extent, to limited classroom interaction in content classes.

## Discussion

The findings indicate that EMI students enrol on university with greater prior knowledge of English (cf. Cosgun & Hasırcı, 2017; Ekoç, 2020). Additionally, their language self-assessment is higher (cf. Drljača Margić and Vodopija-Krstanović, 2017). The self-assessment of both groups increases in their course of study, although the self-assessment rise of EMI students is not statistically significant.

The test results also point to greater English language proficiency of EMI TYSs, and to language progress of both EMI and non-EMI students. Our findings indicate that EMI students progress better in business English, primarily with regard to English business

terminology. However, non-EMI students make greater progress in general English. EMI students' better progress in business English comes as no surprise. They are in contact with English business terminology in all their classes, and additionally have an ESP course in their first year. Conversely, non-EMI students are predominantly exposed to Croatian terminology. Their contact with English disciplinary discourse is confined to an ESP course in the first year, and only a limited number of students enrol on ESP courses in later years. In relation to students' general English, better results among EMI students were expected due to their better prior knowledge of English and their exposure to English at university and outside it (cf. Vidal & Jarvis, 2018). However, they are largely motivated to continue their education and start their career abroad, and are therefore more dedicated to and spend more time on their studies (cf. Drljača Margić & Vodopija-Krstanović, 2017; Rose et al., 2019). On the other hand, as confirmed in the interviews, non-EMI students spend more time on activities and interests outside their studies, and are more in contact with contents in general English, which leads to its greater progress.

Regarding their expectation fulfilment, half of non-EMI students and 70% of EMI students consider their expectations of language proficiency increase to be satisfied. In line with the above discussion, the interviews reveal that EMI students predominantly hold that their expectations were met in the area of business English, while non-EMI students believe the same for general English.


## Conclusion

Language improvement is frequently mentioned in discussions on EMI, but only few studies delved into the topic. Thus, this study empirically enquires into the general and business language progress of EMI and non-EMI students, and provides useful findings for the field of EMI. The findings show that although EMI students' language proficiency at the end of their BA studies is greater than that of non-EMI students, they progress better in business English, whereas non-EMI students advance better in general English. The results confirm that involvement in EMI leads to greater progress in English for specific purposes, in this case business English. As for general English, further research is necessary. Nevertheless, non-EMI students' greater progress in general English indicates that general English language proficiency relies on a series of factors, many of which residing outside the realm of formal instruction, irrespective of its medium.


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