



Internationalization in Higher Education: an Analysis of Croatian Universities

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ABSTRACT

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Around the globe, non-anglophone universities and higher education institutions (HEIs) are trying to internationalize providing students with opportunities to take non-language courses in a foreign language. The usual medium of instruction is English (EMI), which has become a global phenomenon. This paper aims to examine a macro-level university and HEIs' policy on implementing non-language courses in four largest and oldest Croatian universities and their constituent units. Examining public records of the universities and HEIs and conducting qualitative research, this study will research types and levels of study programs, operationalization of language medium instruction, policy implementation and curriculum evaluation. Since English/Language for Specific Purposes (ESP/LSP) courses can be perceived as preparatory courses for EMI/LMI, types, (non) obligatory nature and workload of ESP/LSP courses taught at the examined HEIs will be studied using a textual analysis method following a pre-designed research protocol. The research showed that ESP courses are mostly taught as obligatory courses at the undergraduate level and occasionally as optional courses at the graduate study level. The highest workload of LSP courses is recorded at the HEIs from the Social Sciences fields and the lowest from the Natural Sciences fields, which consequently results in those HEIs (not) offering study programs in a foreign language.



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A. INTRODUCTION

The phrase “no man is an island” emphasizes that people who are isolated from the influence and cooperation with others simply cannot succeed and survive (Adam & Urquhart, 2009). This very idea can be applied to the field of higher education in today's society. Since no country in the world can remain isolated even outside of current social, political, and economic trends and advances, HEIs, which educate students, conduct research and disseminate results, cannot operate exclusively on a national level. Knowledge might be obtained on a national level but it is indeed shared globally. Therefore, international collaboration for know-how sharing becomes an important step in improving visibility to gain international academic credibility (Scholten & Schilder, 2015).

It is pointless to prove that today's society is highly globalized because all political and economic aspects are interconnected between many, if not all, countries in the world. The concept of globalization explains the phenomenon of widespread interconnectedness the result of which is internationalization spread in all spheres of our lives let alone the levels of education (Matyushok et al., 2021). That being said, it is of the utmost importance that Croatian HEIs apply the principles of internationalization to their study programs and academic qualifications if they want to be competitive and recognized at the regional and global levels.

Globalization and internationalization are intertwined phenomena but conceptually and practically, they do not mean the same thing. Globalization is a trend of economic tendencies in the 21st century that leads to interdependencies and interconnections among a large number of countries to create a single global economy with free trade and exchange of goods (Chase-Dunn et al., 2000). On the other hand, internationalization is a process of strategic planning by HEIs to be competitive in the international academic environment (Tanhueco-Nepomuceno, 2019). The term "internationalization" can be defined in many ways depending on the field, segment of society or political movement in which it is used. In higher education research, the term internationalization emerged in the late 1980s, and one of the first definitions was by Jane Knight (Knight, 2008). According to this definition, the concept of internationalization in higher education is defined as "*the process of integrating an international dimension into the teaching/learning, research and service functions of a university or college. An international dimension means a perspective, activity or service, which introduces or integrates an international/intercultural/global outlook into the major functions of an institution of Higher Education*" (Nekhoroshkov et al., 2019).

The scope of internationalization in higher education has varied in scale and interest in recent decades, ranging from traditional study abroad programs to taking courses at faculties or universities in other countries via the Internet or in person. Internationalization has been strategically used to transform higher education and align it to current trends outside the education sector such as turbulences related to migrations and workforce as well as newly coined terms of edugration (Bruner, 2023), i.e. migrating after earning a higher education degree. Therefore, there is a growing need to internationalize higher education at home, which resulted in an increasing dominance of English in teaching and research. Other activities include international partnerships, academic programs, and research activities focused on enhancing the skills and perspectives of foreign students, promoting foreign language programs, and providing access to intercultural understanding (Su, 2016). Student and staff mobility programs, branding and regional/global university branding, which is, among other things, based on the number of international students and scholars, have been the main tasks in internationalizing education, which has become a revenue and power source. However, there is a switch from physical mobility to virtual mobility and exchange (de Wit and Deca, 2020).

Results found that the textbooks generally legitimate the hegemony of American English and British English as the only acceptable varieties or standard forms of the language. Furthermore, most of the texts are limited to specific aspects of societal issues and regions that represent influential cultures and their commercial commodities. The United States receives the most attention, followed by the United Kingdom and certain dominant Western European nations, where the image of ethnic and cultural homogeneity prevails in the texts. Most content focuses on reporting achievements,

cultural practices, and perspectives of dominant groups in the United States, Great Britain, and Europe with little or no critical analysis of content

Using information from the 2018 Great (Fifth) Global Survey of Internationalization of Higher Education (IAU) conducted by the International Association of Universities (IAU), 90% of HEIs indicate the internationalization process in their strategic plans (Tanhueco-Nepomuceno, 2019). Research has shown that the most important benefits of internationalization are the improvement of international cooperation and the quality of teaching and learning. In addition, the research found that the major shortcomings of internationalization in higher education are that it is only accessible to students with financial means, it is difficult to recognize the quality of courses or programs offered by foreign institutions, and there is excessive competition with other higher education institutions. The survey confirmed insufficient institutional funding, administrative difficulties and barriers and the lack of foreign language skills as the biggest obstacles in the internationalization process (Cahen et al., 2016).

Positive aspects of internationalization of higher education are found in improving academic recognition and success, advising and raising awareness of students and institutional staff through international outreach, and providing education to students from less developed countries (Peterson et al., 1999). On the other hand, loss of cultural identity is cited as the biggest risk associated with the internationalization process (Figueira-de-Lemos et al., 2011). Universities are taking this internationalization process seriously and long-term strategic plans and development programs increasingly include developed policies and strategies within the framework of international competitiveness and sustainability (Zheng, 2013).

Internationalization can be done in two ways; one is through internationalization at home and the other is through internationalization abroad. Although both can be interpreted in the same way, there are certain differences between them. In the case of internationalization at home, the goal is to develop international awareness at the home institution by designing an appropriate curriculum. In the case of internationalization abroad, the focus is on the cross-border mobility of students, people, projects, and programs (Knight, 2012). Internationalization of higher education and its meaning can be seen in three modules: individual, institutional and social. The individual module implies working on improving students' employability (Fallows & Steven, 2000). The institutional module of internationalization implies improving the quality of study programs, promoting the mobility of teachers and students who return with new ideas and contacts, and improving international cooperation with other higher education institutions. These two modules can result in the development of innovations and research, which then have an impact on the improvement of the third module, general social development (Visser et al., 2010).

In terms of mobility and better internationalization, the presence of an international language is of great importance. All forms of qualification framework and teaching are in English and it has become a widely accepted feature of the internationalization of higher education. English has become a language of professional communication and the lack of knowledge and use can seriously affect competitiveness in the global market (Huang & Palvia, 2001). Therefore, English is not only used as an international communication language, but also occupies an important aspect within university study programs and teaching (Tella, 1991). In addition to listening to English as an integral part of

regular study programs, there are also lectures for students from other countries and university and postgraduate courses taught exclusively in English.

Nowadays, the internationalization of higher education is considered a leading trend that determines the value base on which modern universities operate. Due to the increasing presence of globalization in all spheres of society, economy and business, almost all countries in the world feel compelled to subject their higher education to internationalization (Stromquist, 2007). Therefore, they focus their efforts on international recognition and comparability and design programs that best meet the needs of “international” students (Álvarez-Huerta et al., 2022). Finally, we can point out that internationalization has become one of the top priorities of universities not only in Europe, but worldwide, so universities are applying it in planning their strategies and plans by developing English-language study programs, increasing the number of visiting lecturers, and participating in various activities aimed at attracting foreign staff and students (Liddicoat, 2016).

The processes of globalization on the international stage in recent decades have certainly not bypassed the Republic of Croatia, including its social, economic, political and educational policies. With the adoption of the Bologna Declaration (2001), Croatia opened the door to a policy of change and reform of higher education oriented towards international educational standards and thus being competitive on the international educational map. The implementation of the Bologna Process has systematically created administrative and academic opportunities in higher education, which included greater mobility of teachers, researchers and students and promoted cooperation between European and international HEIs on joint research projects. Accordingly, educational strategies at the state level followed the internationalization process of Croatian higher education.

The current Strategy for Education, Science and Technology (2014), in the area of defining strategic goals and higher education plans, sets Objective 7 “Internationalise higher education and enhance its integration into the European and global higher education area”. The set objective is further divided into 7.1. Increasing incoming and outgoing mobility of students and teaching staff, 7.2. Encouraging teaching in foreign languages, 7.3. Encouraging the establishment of joint study programs with world-class higher education institutions from Europe and beyond and 7.4. Increasing the number of foreign academic staff at higher education institutions (Altbach & Salmi, 2011). Based on the goals set in the Strategy, universities and faculties in the Republic of Croatia align their internal plans and development strategies with it, focusing their attention on the process of internationalization of study programs and enabling greater mobility of faculty and students.

B. METHODS

Our research aimed to study Croatian Universities’ and their constituent units’ policies on internationalizing study programs. Out of nine public universities, we selected four largest and oldest Croatian universities, namely the University of Zagreb, University of Split, University of Rijeka and Josip Juraj Strossmayer University of Osijek, as shown in Figure 1.



Figure 1. The four largest and oldest Croatian universities

Additionally, the selected universities comprise the highest number of constituent units (a total of 84 higher education institutions) and are located in such a way as to attract potential students from all parts of Croatia and six neighboring countries. Upon selecting the universities, we studied their official websites looking for developmental strategies, objectives and measures for internationalizing study programs. In their strategies, the Croatian Ministry of Science and Education as well as all four selected universities aim to provide more study programs taught in a foreign language and purposefully integrate international elements in tertiary education curricula thus introducing internationalization at home. That inspired us to analyze all 84 HEIs' public records, available on their websites, and examine types and levels of study programs taught in a foreign language as well as ESP/LSP courses, their (non)obligatory nature and workload thus studying the developmental strategies and policies implementation.

C. RESULT AND DISCUSSION

In the following four subchapters, we will briefly describe each university's mission and vision, list their constituent units stating study programs done in a foreign language as well as the number, workload and modality of LSP courses.

1. University of Zagreb

The University of Zagreb is the oldest Croatian and South East Europe University founded in 1669 by King Leopold I Habsburg. As stated on the website, the University pays special attention to study programs of strategic interest for Croatia and the development of regional and local communities aiming at sustainable development, artistic creativity and professional work. The Senate adopted the University of Zagreb's Internationalisation Strategy 2014-2025 on May 16, 2014. According to the Strategy (2014: 4), there are four fundamental Strategy directions, namely international cooperation and recognizability of the University, student, teacher and researcher mobility, study programs and courses and internationalization at home, partnership with international universities and other research institutions and promotion of Croatian language and culture to achieve a feedback effect of the internationalization. In 2010, the University started preparations for English-taught courses thus facilitating outgoing mobility and internationalization at home. It resulted in more than 300 English-taught courses taught at the University.

Under Article A.2 of the said Strategy, the University of Zagreb has been investigating great efforts to increase the number of foreign-language courses as well as joint international study

programs. For students to take courses or study programs in a foreign language, ESP/LSP courses, which prepare them for studying content in a foreign language, are crucial. The University of Zagreb consists of 31 faculties and 3 academies. All constituent units have their study programs available on their official website. Upon studying the study programs taught in a foreign language and ESP/LSP courses, we summarized the findings, as shown in Table 1.

Table 1. Constituent units of the University of Zagreb

Faculty	Study program taught in English	Number of LSP courses	Workload of LSP courses	Modality of LSP courses	Level LSP courses are taught at	Course
Faculty of Agriculture	None	1	30	optional	undergraduate graduate	English
		1	30	optional		English
Faculty of Architecture	None	2	30+30	obligatory	undergraduate graduate	English
		1	15	optional		English
Catholic Faculty of Theology	None	2	60+60	obligatory	undergraduate undergraduate	English
		2	60+60	obligatory		German or Italian
Faculty of Civil Engineering	None	1	30	optional	undergraduate graduate	English
		1	45	optional		German
Faculty of Chemical Engineering and Technology	Chemical and Environmental Technology	4	30+30+30+30	obligatory	undergraduate	English
Faculty of Croatian Studies	None	6	60+60+60+60+60+60	obligatory	undergraduate	English German Italian French
Faculty of Economics and Business	Business or Economics	2	60+60	obligatory	undergraduate	English or German
		4	60+60+60+60	optional	graduate	Business English, German, French, Spanish, Italian, Chinese
Faculty of Education and Rehabilitation Sciences	None	2	30+30	optional	undergraduate	English
Faculty of Electrical Engineering	Electrical Engineering and	2	30+30	optional	graduate	Chinese

and Computing	Information Technology/ Computing						
Faculty of Food Technology and Biotechnology	None	2	20+20	obligatory optional	undergraduate graduate	English or German	
		3	30+30+30				
Faculty of Forestry and Wood Technology	None	1	15	optional	undergraduate	English or German	
Faculty of Geodesy	None	2	30+30	optional	undergraduate	English or German	
Faculty of Geotechnical Engineering	None	2	30+30	obligatory optional	undergraduate graduate	English or German	
		2	45+45				
Faculty of Graphic Arts	None	4	30+30+30+30	obligatory	undergraduate	English or German	
Faculty of Humanities and Social Science	None	2	30+30	obligatory	undergraduate	English	
Faculty of Kinesiology	None	2	60+30	obligatory optional	undergraduate graduate	English or German	
		1	30				
		1	30	optional	graduate	Chinese	
Faculty of Law	None	4	30+30+30+30	obligatory	undergraduate	English or German	
		2	60+60	optional	graduate	English	
Faculty of Mechanical Engineering and Naval Architecture	None	4	30+30+30+30	obligatory optional	undergraduate graduate	English or German	
		1	45				
Faculty of Metallurgy	None	2	30+30	obligatory	undergraduate	English	
Faculty of Mining, Geology and Petroleum Engineering	Earth, energy, engineering, environment	1	30	obligatory	undergraduate	English	
		1	30	optional	undergraduate	English	
Faculty of Organization and Informatics	None	1	45	obligatory optional	undergraduate undergraduate	English or German	
		3	45+45+45				
Faculty of Pharmacy	None	0	0	-	-	-	

and Biochemistry						
Faculty of Philosophy and Religious Studies	None	1 2	45 60+60	obligatory obligatory	undergraduate undergraduate	Greek Latin
Faculty of Political Science	European Studies	4	60+60+60+60	obligatory	undergraduate	English
Faculty of Science	None	0	0	-	-	-
School of Dental Medicine	None	2	60+60	optional	undergraduate	English
School of Medicine	Medicine	6	30+30+30+30+ 30+30	obligatory	undergraduate and graduate	English
Faculty of Teacher Education	None	2	45+45	obligatory	undergraduate	English
Faculty of Textile Technology	None	5	30+30+30+30+ 30	obligatory	undergraduate	English or German
Faculty of Transport and Traffic Sciences	None	4	30+30+30+45	obligatory	undergraduate	English
Faculty of Veterinary Medicine	None	4	15+15+15+15	obligatory	undergraduate	English
Academy of Dramatic Art	None	0	0	-	-	-
Academy of Fine Arts	None	2	60+60	obligatory	undergraduate	English
Academy of Music	None	2 3	60+60 30+30+30	obligatory optional	undergraduate undergraduate	English Italian

Six study programs are taught in the English language. The study programs in *Business/Economics* and *Electrical Engineering and Information Technology/Computing* are offered at the both undergraduate and graduate level, *Medicine* is a 6-year integrated program, while the study programs in *Chemical and Environmental Technology*, *Earth, Energy, Engineering, Environment* and *European Studies* are done only at the graduate level. None of the study programs are government-funded. The other five columns point to a lack of uniformity regarding the number of ESP/LSP courses, workload, modality and the level of education they are taught at. The predominant medium of instruction is English, i.e. if a HEI offers more language classes, English is the first and other languages subsequent options. However, there are two exceptions. At the Faculty of Electrical Engineering and Computing there are no LSP courses, while at the same time they offer a study program in the English language. Students wishing to enroll in that study program need to prove a high level of the English language. Recognizing the need to potentially cooperate or work in the Chinese market, the HEI offers basic Chinese language classes taught by a retired engineer who lived

and worked in China. The other exception is the Faculty of Philosophy and Religious Studies, which offers Latin and Greek – languages more relevant to that field.

In the majority of the studied HEIs, English is taught as an obligatory course at the undergraduate level. If taught at the graduate level, it is usually an optional course. The workload of obligatory LSP courses ranges from 60 to 240 man-hours with the former associated with the Faculty of Architecture and Faculty of Veterinary Medicine and the latter with the Faculty of Croatian Studies and Faculty of Political Sciences, i.e. the average is roughly 120 man-hours. The widest language choice is at the Faculty of Economics and Business, where students can choose between six languages (5 most widespread languages in Europe) one of which is Chinese, so the HEI also recognizes the need to educate their students for potential work at/with the Chinese labor market.

2. University of Split

The University of Split is a middle-sized Mediterranean-oriented university aiming to become a regional leader in this part of Europe. As stated on the University website, the University is “involved in the research and protection of art and construction heritage, philology, field crops, oceanography and fishing, Adriatic botany and zoology, island and coastal economy, Adriatic tourism, maritime law, nautical science, naval architecture and a range of other specific disciplines such as chemical engineering, civil engineering, architecture, electrical and mechanical engineering, social sciences, kinesiology, humanities, health sciences and forensics.”

The Senate adopted the Strategy of the University of Split 2015-2020 in October 2015. Some of the strategic goals are to increase incoming and outgoing mobility by 10%, increase the number of foreign citizens studying at the University by at least 2%, increase the number of signed cooperation agreements with foreign higher education institutions and economic operators and offer joint degree programs with eminent foreign higher education institutions. In order to realize these strategic goals, students need to take ESP/LSP courses. The University of Split consists of 11 faculties, 4 departments and 1 academy. With the exception of the Department of Health Studies, whose website is under construction, all constituent units have their study programs available on their official websites. Upon studying the study programs taught in a foreign language and ESP/LSP courses, we summarized the findings, as shown in Table 2.

Table 2. Constituent units of the University of Split

Faculty	Study program taught in English	Number of LSP courses	Workload of LSP courses	Modality of LSP courses	Level LSP courses are taught at	Course
Faculty of Economics, Business and Tourism	None	6	60+60+45+45+45+45	obligatory	undergraduate	Business English
		3	30+30+30	optional	graduate	Business English/German/Italian

Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture	None	3	30+30+30	obligatory	undergraduate	English
Faculty of Civil Engineering, Architecture and Geodesy	None	2	30+60	optional	undergraduate or graduate	English
Faculty of Teacher Education	None	4	60+60+30+30	obligatory	undergraduate	English
Catholic Faculty of Theology	None	2	30+30	optional	undergraduate	English
Faculty of Chemistry and Technology	Chemical and Environmental Technology	0	0	-	-	-
Faculty of Sports	None	0	0	-	-	-
Faculty of Medicine	Medicine	4	40+40+40+40	obligatory	undergraduate	English
Faculty of Maritime Studies	None	6	60+45+45+45+45+45+45	obligatory	undergraduate	English
		2	30+30	optional	undergraduate	Italian
Faculty of Law	None	4	45+45+45+45	obligatory	undergraduate	English/German/French
Faculty of Science	None	2	30+30	obligatory	undergraduate	English
Arts Academy	None	4	30+30+30+30	obligatory	undergraduate	English
Department of Marine Studies	Marine Fishery	1	45	obligatory	undergraduate	English
Department of Professional Studies	None	5	30+30+30+45+45	obligatory	undergraduate	English or German
University Study Center for Forensic Sciences	None	2	30+30	obligatory	undergraduate	English

The University of Split offers three study programs taught in the English language. With the exception of the 6-year study program in *Medicine*, the other two programs last for 2 years and are done at the graduate study level. None of the programs are government-funded. The data show a lack of uniformity regarding the number of ESP/LSP courses, workload and modality. In the majority of the studied HEIs, English is taught as an obligatory course at the undergraduate level. It is offered as

an optional course at the Faculty of Civil Engineering, Architecture and Geodesy, which is a bit surprising because it is a field students can learn from globally, and the Catholic Faculty of Theology, which shows openness to international content even though the majority of their graduates work in Croatia. The workload ranges from 45 to 300 man-hours with the former associated with the Department of Marine Studies and the latter with the Faculty of Economics. The Department of Marine Studies does a contradictory thing – their students are taught 45 classes of English at the undergraduate level, which is supposed to prepare them to continue their studies at the graduate level in English. Two HEIs, namely the Faculty of Chemistry and Technology and the Faculty of Sports, do not offer any LSP. Finally, at some HEIs students can choose other languages (German, French and Italian), which comes as no surprise because the University of Split is located on the Adriatic coast with lots of international tourists every year.

3. University of Rijeka

According to their website, the University of Rijeka is a “socially responsible and open university to international students, teaching staff, researchers and recent developments in higher education. Having embraced an organized and systematic approach to mobility, the University supports scientific and artistic careers alike, enabling each individual to express their talents and entrepreneurial potential”. Unlike the University of Split, the University of Rijeka adopted a new strategy entitled *European University of the Future* for the period 2021-2025. Pursuant to the Strategy, the University of Rijeka tends to increase the number of international strategic partnerships and study programs in foreign languages thus enhancing students’ and researchers’ mobility. More precisely, the University aims to increase the number of exchange or enrolled students by 84% and the number of study programs on all levels by 150% by 2025. They plan to increase academic staff mobility by 37%, cooperation with international institutions by 15% and international activities (summer/winter schools, doctoral programs, seminars and conferences) by 43%. The University of Rijeka consists of 11 faculties, 5 departments and 1 academy. All constituent units have their study programs available on their official websites. Upon studying the study programs taught in a foreign language and ESP/LSP courses, we summarized the findings, as shown in Table 3.

Table 3. Constituent units of the University of Rijeka

Faculty	Study program taught in English	Number of LSP courses	Workload of LSP courses	Modality of LSP courses	Level LSP courses are taught at	Course
Academy of Applied Arts	None	4	30+30+30+30	optional	undergraduate	English or German
Faculty of Economics and Business	International Business	4	30+30+30+30	obligatory	undergraduate	English Business
		2	30+30	optional	undergraduate	Italian or German
Faculty of Tourism and Hospitality Management	Hospitality Management	4	30+30+30+30	obligatory	undergraduate	English German,
		2	30+30	optional		Italian, French

					undergradua te	
Faculty of Health Studies	None	2	30+30	obligatory	undergradua te	English
Faculty of Humanities and Social Sciences	None	1	30	obligatory	undergradua te	English or German
Faculty of Civil Engineering	None	1 1	60 20	obligatory optional	undergradua te undergradua te	English or German
Faculty of Medicine	Medicine	6	20+20+20+20+20+20	obligatory	undergradua te	English
Faculty of Maritime Studies	None	4 2	60+60+45+45 5	obligatory optional	undergradua te undergradua te	English
Faculty of Law	None	4	30+30+30+30	obligatory	undergradua te	English or German
Faculty of Engineering	None	2	45+45	obligatory	undergradua te	English or German
Faculty of Teacher Education	None	2	60+45	obligatory	undergradua te	English
Faculty of Dental Medicine	Dentistry	0	0	-	-	-
Department of Biotechnology	None	1	30	obligatory	undergradua te	English
Department of Informatics	None	1	60	obligatory	undergradua te	English
Department of Mathematics	Discrete Mathematics and its Applications	2	30+30	obligatory	undergradua te	English
Department of Physics	None	1	30	optional	undergradua te	English
Department of Polytechnics	None	3	30+30+30	obligatory	undergradua te	English

The University of Rijeka offers four study programs taught in the English language. The Faculty of Economics and Business offers its study program at both undergraduate and graduate levels, the Faculty of Tourism and Hospitality Management offers theirs at the undergraduate level, while the Department of Mathematics carries out the study program in *Discrete Mathematics and its Applications* only at the graduate level. Since all study programs in medical sciences are integrated, the study programs in *Medicine* and *Dentistry* are offered as 6-year integrated study programs. None of the aforementioned programs are government-funded.

Other data demonstrate a lack of uniformity regarding the number of ESP/LSP courses, workload, modality, the level of education they are taught and the language per se. As a rule, English is taught as an obligatory course at the undergraduate level in the majority of the studied HEIs. Students can choose between English and German at five HEIs, which is a bit surprising given Rijeka's proximity and orientation to Italy (there are numerous bilingual or Italian primary and secondary schools in Rijeka). The two HEIs, which offer the highest number of language courses, are the Faculty of Economics and Business and the Faculty of Tourism and Hospitality Management, which is a rather intuitive result because these HEIs have to be internationally oriented since their graduates will conduct business and cooperate with their customers globally. The workload ranges from 30 (Department of Biotechnology and Physics) to 210 man-hours (Faculty of Maritime Studies). There is a potential pattern with HEIs in the field of Natural and Biotechnical Sciences, i.e. they offer the lowest number and workload of language courses. Similarly to the situation at the University of Split, the Department of Mathematics offers only 60 classes of English at the undergraduate level, which is supposed to prepare students to continue their studies at the graduate level in English. The Faculty of Dental Medicine makes their students choose – they can either study Dentistry in English or Croatian, i.e. they cannot start their studies in Croatian and transfer to the study program in English. Theoretically, they probably can but since students have no ESP classes in the Croatian study program, they are hardly able to transfer to the English study program should they decide.

4. Josip Juraj Strossmayer University of Osijek

As a higher education institution, whose work is determined by the Act on Scientific Activity and Higher Education and the University Statute, the University of Osijek transfers knowledge and prepares graduates for professional work. The University's purpose is to engage students in conducting research, develop moral and ethical principles, critical thinking and teamwork skills as well as involve students in the European knowledge community. Being the only university in eastern Croatia, i.e. a regional university oriented towards residents from 5 Slavonian counties and 3 neighboring countries, the University of Osijek plays a significant role in encouraging cooperation between students, faculty and the labor market in both Croatia and abroad.

The Senate and University Council adopted the Strategy of Josip Juraj Strossmayer University of Osijek 2011-2020 at their joint session on December 19, 2011. Even though the Strategy includes activities up to 2020, a new version has not been published yet so the aforementioned one is still in force. According to the Strategy, the University responds to challenges of internationalization by carrying out international activities within Erasmus (non) teaching and student study programs and participating in international research projects and conferences. Participating in the Erasmus+ Key Action 1 2014-2020 exchange program, the University encourages students to take part in their studies abroad thus achieving a higher autonomy degree, developing ability to work in multicultural environments and practicing their foreign language skills.

A prerequisite for participation in international exchange programs is the acquisition of foreign language skills. Since Croatian students study English or German from grade 1 of the primary school, they acquire good general foreign language skills. At a tertiary education level, students take ESP/LSP courses thus truly preparing to study abroad or continue their studies in a foreign language in Croatia. Under Article III.1.8.1. *Studies in the English language* of the Strategy, the University of Osijek will

modernize existing curricula and support joint graduate and postgraduate study programs in English or other foreign languages to facilitate internationalization at home and create a competitive learning environment. The University of Osijek consists of 12 faculties, 4 departments and 1 academy. All constituent units have their study programs available on their official websites. Upon studying the study programs taught in a foreign language and ESP/LSP courses, we summarized the findings, as shown in Table 4.

Table 4. Constituent units of Josip Juraj Strossmayer University of Osijek

Faculty	Study program taught in English	Number of LSP courses	Workload of LSP courses	Modality of LSP courses	Level LSP courses are taught at	Course
Faculty of Agriculture	ICT in agriculture	2	75+75	obligatory	undergraduate	English or German
		1	75	optional		
Faculty of Civil Engineering and Agriculture	None	3	30+30+30	optional	undergraduate	English or German
Faculty of Electrical Engineering, Computer Science and Information Technology	Automotive Computing	3	30+45+30	obligatory	undergraduate	English
		2	30+30	optional		graduate
Faculty of Food Technology	None	2	60+60	obligatory	undergraduate	English or German
		1	30	obligatory		
Faculty of Mechanical Engineering	None	3	30+30+30	obligatory	undergraduate	English or German
Faculty of Medicine	Biotechnology Medicine	6	30+30+30 + 30+30+30	obligatory	undergraduate and graduate	English German
Faculty of Dental Medicine	None	5	25+25+25 + 25+25	obligatory	undergraduate	English
Department of Biology	None	2	30+30	obligatory	undergraduate	English
Department of Chemistry	None	2	30+30	obligatory	undergraduate	English
Department of Mathematics	None	2	30+30	obligatory	undergraduate	English
Department of Physics	None	4	60+60+60 + 60	optional	undergraduate	English
Faculty of Economics	Entrepreneurial management and entrepreneurship	4	30+30+30	obligatory	undergraduate	Business English
		2	30 45+45	optional		
Faculty of Education	None	2	30+30	obligatory	undergraduate	English

Faculty of Humanities and Social Sciences	None	4	30+30+30 + 30	obligatory	undergraduate	English or German
Faculty of Law	None	4	60+60+60 + 60	obligatory	undergraduate	English
Catholic Faculty of Theology	None	0	0	-	-	-
Academy of Arts	None	4	30+30+30 + 30	obligatory optional	undergraduate graduate	English or German
Faculty of Sports	None	0	40+40+40 0	-	-	-

There are only three study programs taught in the English language. All of them are carried out at a two-year graduate level with no government funding. However, there is one study program taught in the German language. Funded by the Croatian Ministry of Science and Education and European Social Fund and supported by AMEOS (one of the largest semi-private medical groupations in Germany), the study program in *Medicine* is designed in a way that students do first five semesters in Croatia, then six semesters in AMEOS clinics in Germany and the last semester back in Croatia. Compatible with European standards and accredited, this study program is a prototypical example of internationalization at home.

As expected, the other five columns point to a lack of uniformity regarding the number of ESP/LSP courses, workload, modality and the level of education they are taught. Generally, English is predominantly taught as an obligatory course at the undergraduate level in the majority of the studied HEIs. The workload ranges from 60 to 240 man-hours with the former associated with the Departments of Mathematics, Biology, and Chemistry and the latter with the Faculty of Law, i.e. the average is 100 man-hours. Two HEIs, namely the Catholic Faculty of Theology and the Faculty of Sports, do not offer any LSP. A possible explanation is that the Catholic Faculty of Theology offers courses in Latin and Greek, relevant for this field, so an additional language course would be superfluous, especially given the fact that the majority of their graduates work in Croatia. The Faculty of Sports is the most recent constituent unit at the University of Osijek and they might still not have qualified personnel to introduce language courses.

According to their strategies, all four universities aim to increase the number of study programs taught in a foreign language. However, the actual number of such programs is still very low. Since none of the study programs taught in a foreign language is government-funded, there might be some administrative restrictions imposed by the Ministry of Science and Education. It seems that the Ministry does not financially support HEIs to carry out study programs in a foreign language. If this is the case, a low number of such study programs comes as no surprise because HEIs have personnel and maintenance expenses and no guarantee that they will be able to cover tuition fees. However, that would not be in line with the Ministry's Strategy for Education, Science and Technology whose Objective 7 deals with the internationalization of higher education. More precisely, Measure 7.2 of the said Strategy (2014: 193) reads "Increased incoming student mobility is only possible if Croatian higher education institutions increase the availability of courses/modules or entire study programs

in English (or another foreign language). Introducing a few courses in English is a good start to increase mobility. However, in the long term it should lead to the provision of structured units with 30 ECTS points that students can accumulate over one semester. In addition, it is important to ensure the availability of entire study programs in foreign languages in all parts of Croatia.” So the Ministry theoretically encourages study programs in foreign languages but it does not financially support it. If studying the subfields the study programs in a foreign language are offered, we can see that the fields of Business/Economics and Medicine are offered at almost all four universities followed by the subfields of Technical Sciences, which might be due to these fields’ global nature.

D. CONCLUSION AND SUGGESTIONS

Upon examining the relevant documents uploaded on 84 HEIs’ official websites and studying the types and levels of study programs taught in a foreign language as well as ESP/LSP courses, their (non) obligatory nature, and workload, it can be concluded that all four studied universities recognize the need for internationalization at home as well as introducing study programs taught entirely in a foreign language, which is in line with (Milloy et al. 2022) research. All these universities list this in their developmental strategies. However, there are only 19 study programs in a foreign (predominantly English) language, which points to a gap between strategic aims and their realization. In the majority of the HEIs ESP courses are taught at the undergraduate level as obligatory courses and some of them, they are offered as optional courses at the graduate study level. Some of the studied HEIs offer other languages (e.g. German, Italian, French, etc.) but there is no recognizable pattern, which might mean that an HEI offers a language course based on which languages their language teachers had majored in. The HEIs, which have the highest number of LSP courses, are related to the Social Sciences fields and those which offer the lowest number of such courses are from the Natural Sciences field. The reason for this might be the (non) global nature of their diploma’s applicability. Taking the fact that the national and universities’ strategies accentuate the need for internationalization, the HEIs with a low number and workload of LSP courses should reconsider their study programs if they want to introduce the study programs in a foreign language thus providing their graduates with necessary skills to be competitive on a global labor market.

REFERENCES

- Adam, M. S., & Urquhart, C. (2009). No man is an island: Social and human capital in IT capacity building in the Maldives. *Information and Organization*, 19(1), 1–21. <https://doi.org/10.1016/j.infoandorg.2007.11.002>
- Altbach, P. G., & Salmi, J. (2011). The Road to Academic Excellence: The Making of World-Class Research Universities. In *The Road to Academic Excellence*.
- Álvarez-Huerta, P., Muela, A., & Larrea, I. (2022). Disposition toward critical thinking and creative confidence beliefs in higher education students: The mediating role of openness to diversity and challenge. *Thinking Skills and Creativity*, 43(December 2021). <https://doi.org/10.1016/j.tsc.2022.101003>
- Brunner, L. R. (2023). Settler nation-building through immigration as a rationale for higher education: A critical discourse analysis. *Higher Education Research & Development*, 42(5), 1086–1102.
- Cahen, F. R., Lahiri, S., & Borini, F. M. (2016). Managerial perceptions of barriers to internationalization: An examination of Brazil’s new technology-based firms. *Journal of Business Research*, 69(6), 1973–1979. <https://doi.org/10.1016/j.jbusres.2015.10.143>

- Chase-Dunn, C., Kawano, Y., & Brewer, B. D. (2000). Trade globalization since 1795: waves of integration in the world-system. *American Sociological Review*, 65(1), 77–95. <https://doi.org/10.2307/2657290>
- de Wit, H., Deca, L. (2020). Internationalization of Higher Education, Challenges and Opportunities for the Next Decade. In: Curaj, A., Deca, L., Pricopie, R. (eds) *European Higher Education Area: Challenges for a New Decade*. Springer, Cham. https://doi.org/10.1007/978-3-030-56316-5_1
- Fallows, S., & Steven, C. (2000). Building employability skills into the higher education curriculum: A university-wide initiative. In *Education + Training* (Vol. 42, Issue 2, pp. 75–83). <https://doi.org/10.1108/00400910010331620>
- Figueira-de-Lemos, F., Johanson, J., & Vahlne, J. E. (2011). Risk management in the internationalization process of the firm: A note on the Uppsala model. *Journal of World Business*, 46(2), 143–153. <https://doi.org/10.1016/j.jwb.2010.05.008>
- Huang, Z., & Palvia, P. (2001). ERP implementation issues in advanced and developing countries. *Business Process Management Journal*, 7(3), 276–284. <https://doi.org/10.1108/14637150110392773>
- Knight, J. (2008). Internationalization: Concepts, Complexities and Challenges. In *International Handbook of Higher Education* (pp. 207–227). https://doi.org/10.1007/978-1-4020-4012-2_11
- Knight, J. (2012). Student mobility and internationalization: Trends and tribulations. *Research in Comparative and International Education*, 7(1), 20–33. <https://doi.org/10.2304/rcie.2012.7.1.20>
- Liddicoat, A. J. (2016). Language planning in universities: teaching, research and administration. In *Current Issues in Language Planning* (Vol. 17, Issues 3-4, pp. 231–241). <https://doi.org/10.1080/14664208.2016.1216351>
- Matyushok, V., Krasavina, V., Berezin, A., & García, J. S. (2021). The global economy in technological transformation conditions: A review of modern trends. *Economic Research-Ekonomiska Istrazivanja*, 34(1), 1471–1497. <https://doi.org/10.1080/1331677X.2020.1844030>
- Milloy, J., Benea, C.-B., Askins, K., Lin, W., Wilson, A., Mitra, R., Pardesi, M. S., Mashayekhi, A., Santos Françoso, M., Trojbic, B., Alencar Silva Mello, P., Hiratuka, C., Rogers, D., Koh, S. Y., Chen, W., Krieger, N., Wilson, H. F., Lin, H., LEE, T.-L., ... Pommerolle, M.-E. (2022). Nationalism, Geopolitics, And Naval Expansionism: From the Nineteenth Century to the Rise of China. *Geopolitics*, 23(1), N.PAG – N.PAG. <https://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,shib&db=bsu&AN=54329743><http://10.0.73.90/1231-1952.26.1.08><https://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,shib&db=asn&AN=137623586><http://10.0.4.153/00420859221131814><https://>
- Nekhoroshkov, V., Kobeleva, E., Komkova, A., & Krutko, E. (2019). *Internationalization of Higher Education in Russia: A Case Study of Siberian Transport University*. <https://doi.org/10.2991/hssnpp-19.2019.94>
- Peterson, D. M., Briggs, P., Dreasher, L., Horner, D. D., & Nelson, T. (1999). Contributions of International Students and Programs to Campus Diversity. *New Directions for Student Services*, 1999(86), 67–77. <https://doi.org/10.1002/ss.8609>
- Scholten, K., & Schilder, S. (2015). The role of collaboration in supply chain resilience. *Supply Chain Management*, 20(4), 471–484. <https://doi.org/10.1108/SCM-11-2014-0386>
- Stromquist, N. P. (2007). Internationalization as a response to globalization: Radical shifts in university environments. *Higher Education*, 53(1), 81–105. <https://doi.org/10.1007/s10734-005-1975-5>
- Su, Y. C. (2016). The international status of English for intercultural understanding in Taiwan's high school EFL textbooks. *Asia Pacific Journal of Education*, 36(3), 390–408. <https://doi.org/10.1080/02188791.2014.959469>

- Tanhueco-Nepomuceno, L. (2019). Internationalization among selected HEIs in the ASEAN region: Basis for a proposed framework for an internationalized campus. *International Journal of Educational Development*, 65, 152–171. <https://doi.org/10.1016/j.ijedudev.2018.07.003>
- Tella, S. (1991). Introducing international communications networks and electronic mail into foreign language classrooms. *Educational Studies in Mathematics*, 61(1-2), 133–162. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.18.1100&rep=rep1&type=pdf>
- Visser, T. C., Coenders, F. G. M., Terlouw, C., & Pieters, J. M. (2010). Essential Characteristics for a Professional Development Program for Promoting the Implementation of a Multidisciplinary Science Module. *Journal of Science Teacher Education*, 21(6), 623–642. <https://doi.org/10.1007/s10972-010-9212-1>
- Zheng, C. (2013). Theoretical contexts of managing people in emerging Chinese multinational enterprises. In *Journal of Chinese Human Resources Management* (Vol. 4, Issue 1, pp. 58–76). <https://doi.org/10.1108/JCHRM-10-2012-0023>