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# Diversity in unity: an instrumental case study of World Englishes in an academic medical setting


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## Ključne reči:

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sociolinguistic case study,  
pronunciation  
intelligibility,  
linguistic diversity

## Abstract

This study examines the concept of World Englishes within medical education, highlighting the global reach of English and its culturally diverse variations. Its primary aim is to investigate how medical students from Europe, Africa, and Asia, enrolled in an English-medium program, navigate diverse English varieties and the challenges these pose in academic communication. The authors analyse students' preferences, perceptions, and difficulties in understanding different dialects, while evaluating broader implications for glottodidactics. The article discusses English as both a lingua franca and a set of regionally distinct varieties, emphasising its role in international healthcare collaboration. It also addresses pedagogical challenges of integrating diverse English varieties into medical curricula and considers the impact of students' linguistic backgrounds, years of study, and self-confidence on their ability to adapt. These arguments contribute to understanding how exposure to World Englishes shapes linguistic flexibility, cultural competence, and communication effectiveness. An instrumental sociolinguistic case study approach was employed. Data were collected from 122 participants through a questionnaire, analysed using descriptive statistics, Chi-squared ( $\chi^2$ ) tests, Pearson's correlation, and Kruskal-Wallis tests. This framework enabled exploration of correlations between language learning duration, preferred English varieties, self-assessed proficiency, and communication challenges. Findings show that prolonged exposure fosters neutral or mixed dialect usage, reflecting adaptability, whereas less experienced learners favour specific varieties such as British or Indian English. Familiarity with World Englishes correlates positively with favourable perceptions of its relevance, and higher self-confidence aligns with fewer communication difficulties. Native speakers value exposure to multiple dialects, while non-native speakers display more varied attitudes. No significant link was found between continent of origin and grammar or vocabulary difficulties, though pronunciation challenges were more prominent among Asian students. The study demonstrates how linguistic diversity influences academic performance and professional readiness. While limited to one institution, it provides a foundation for further research and practical applications in curriculum design. (примљено: 13. јула 2025; прихваћено: 20. новембра 2025)

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## 1. Introduction

### 1.1. World English, World Englishes or Global Englishes?

The field of medical education has become increasingly globalized, with students, educators, and healthcare professionals from diverse linguistic backgrounds participating in English-medium instruction (EMI) programs (Lu/Corbett, 2012; Ferguson, 2013). English has emerged as the dominant language of medical education, research, and clinical communication due to the widespread influence of Western medical institutions, scientific journals, and standardised examinations (Crystal, 2003). However, how English is used in medical settings varies significantly across different regions, giving rise to the concept of *World Englishes* encompassing multiple meanings and interpretations. In medical contexts, English is not merely a tool for communication but a necessity for ensuring patient safety and effective collaboration among professionals from diverse linguistic backgrounds (Carraro, 2022). It is essential to delineate the distinction between the concepts of *World English* and *World Englishes*, as these terms are frequently conflated. *World English* denotes the English language functioning as a global lingua franca, serving as a medium of communication in diplomatic, commercial, and various international contexts. In contrast, *World Englishes* refers to the varieties of English and English-based creoles developed in different regions worldwide (Jenkins, 2009). As an alternative, the term *Global Englishes* has been used by linguists to highlight the more recent spread of English, which has resulted in increased usage of English as a lingua franca (Seidlhofer, 2013; Galloway/Rose, 2015). Braj Kachru was the first linguist to introduce the term *World Englishes*, which promotes and describes the significance of inclusivity and pluricentricity in exploring varieties of English around the world. According to the so-called *Three Circles Model*, English is categorised into the following circles:

1. The Inner Circle (countries where English is the native language, such as the United Kingdom, the United States, Canada, and Australia),
2. The Outer Circle (countries where English is an institutional or second language, including India, Nigeria, the Philippines, and Singapore).
3. The Expanding Circle (countries where English is primarily a foreign language but used in academic and professional domains, such as China, Japan, Brazil, and Russia) (Kachru, 1985: 252).

The concept of *World Englishes* deserves special attention in applied linguistics, which is associated with the remarkable influence of English globally. Recent research indicates that there are around 400 million English speakers in Inner Circle countries, a similar number in the Outer Circle nations (English as a second language – ESL), and approximately 1 billion in the Expanding Circle (English as a foreign language (McArthur, 2001: 101). Statistical data also show over 600 million English speakers in Asia, including more than 300 million in India and over 200 million in China. The overall trend indicates that a growing number of Asians use English mainly while communicating with other Asians (Kachru, 2006).

## 1.2. English in medicine within a Content and Language Integrated Learning (CLIL)-based program

The English language plays a pivotal role in global healthcare communication, acting as a bridge between diverse cultures and facilitating effective interactions among medical professionals and patients from various linguistic backgrounds (Schkinder, 2024; Hull, 2013). Medical English as a Lingua Franca (MELF) represents a specific communication setting characterised by the need for precision and accuracy, which sets it apart from other English as a Lingua Franca (ELF) contexts (Tweedie/Johnson, 2022). Medical vocabulary is context-dependent and varies according to the communicative environment, making it essential for learners to adapt to diverse linguistic registers and interactional conventions (Goluart et al., 2020). English facilitates smooth cross-cultural interaction in healthcare settings, empowering medical professionals to work together across language barriers and enhance the safety and quality of patient care (Jacobs et al., 2004). Its widespread use is not merely a matter of convenience but a fundamental necessity, enabling collaboration, the exchange of research, and the global implementation of medical advancements. (Ferguson, 2013: 250; Schkinder, 2024: 66). Medical universities worldwide vary in their teaching methodologies, language policies, and communication norms, presenting both challenges and opportunities for medical students and practitioners. Although English is intended to facilitate international communication in medicine, the linguistic diversity within English itself – including accents, variations in medical terminology and differing discourse styles – can lead to potential miscommunication, comprehension challenges, and educational disparities (Hull, 2013; Choudhary/Gupta, 2015). The Faculty of Medicine at the University of Niš, Serbia, offers a six-year CLIL-based medical program conducted in English, culminating in the Doctor of Medicine degree. In recent years, the faculty has enrolled students from various parts of the world, presenting a heterogeneous study environment due to the diverse levels of English language proficiency among students. The curriculum includes courses such as *English Language* in the first year and *English Language in Medicine* in the second year, which aim to enhance students' awareness of using Medical English for effective communication. These courses help students develop all language skills, master the writing of medical articles, and comprehend elements of medical reports and case studies. Medical English instruction is customised to meet students' academic and clinical needs, with a focus on specialised vocabulary, medical literature, scientific exchange with colleagues worldwide, and effective doctor-patient communication (Antić/Milosavljević, 2014: 130). Integrating cultural awareness into medical English training cultivates empathy, enhances patient care, and equips students for international healthcare environments (Canagarajah, 2012). Exposure to various English varieties enables future healthcare professionals to cultivate cultural competence, improve global communication skills, and contribute to developing more pluralistic healthcare systems

### 1.3. The Case Study Foci

Our case study is fundamentally rooted in applied linguistics and sociolinguistics, while methodologically it follows the instrumental case study approach, which means that a larger phenomenon is explored through the lens of a particular case. The primary aims of the study were to:

- determine the most frequently used varieties of English among medical students enrolled in the Medicine in English study program at the Faculty of Medicine in Niš,
- identify common challenges faced by students in understanding and applying various English dialects within academic settings,
- analyse differences in communication challenges among students from diverse world regions, with an emphasis on accent variations, terminology differences, and cultural nuances.

The specific objectives of the case study were to:

- assess the frequency with which students encounter difficulties when interacting with diverse English dialects,
- identify the linguistic components that students find most challenging within an academic context,
- explore the relationship between students' year of study and their self-assessed English language proficiency.

## 2. Methods

This paper presents a cross-sectional case study involving 122 first- to sixth-year students enrolled in the Medicine in English study program at the Faculty of Medicine, University of Niš, Serbia. The research was conducted between February and March 2025, using an anonymous online questionnaire containing 21 questions. Our research employed a quantitative statistical method alongside a qualitative descriptive-explicative analysis. The questionnaire design was partially based on the model from an Iranian study (Tamini, 2018: 25).

The questionnaire is divided into four sections:

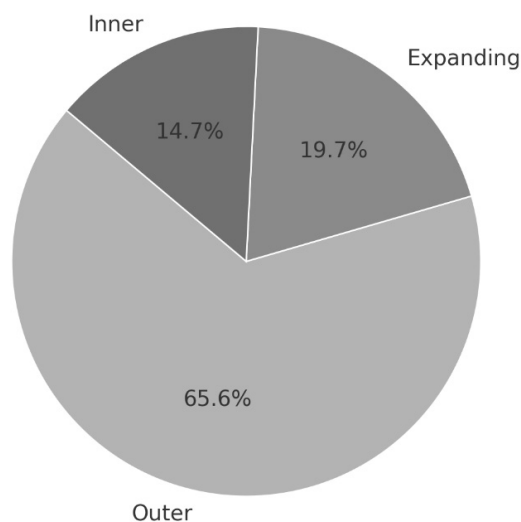
1. General Information: This section gathers details about the participants, such as their year of study, country of origin, and years spent learning English;
2. Self-assessment of English Knowledge: In this part participants evaluate their proficiency in various aspects of academic English, including grammar, professional terminology, and pronunciation;
3. Understanding World Englishes: This part explores students' comprehension of the concept of World Englishes, their awareness of English language variations encountered during their studies, and the frequency of exposure to these variations;
4. Overcoming Challenges: The final section addresses students' perspectives on overcoming difficulties related to understanding the different variations of English.

The data collected through the questionnaire were analyzed using standard descriptive statistical methods, including measures such as mean, standard deviation, and percentage distribution. The results were further examined through appropriate statistical tests, selected based on the sample size, the variables' nature, and the data distribution type. These tests included the Chi-squared ( $\chi^2$ ) test, Pearson's correlation test, and the Kruskal–Wallis test. The statistical analysis was conducted using Microsoft Excel in a Windows environment, with the findings presented in both tabular and graphical formats.

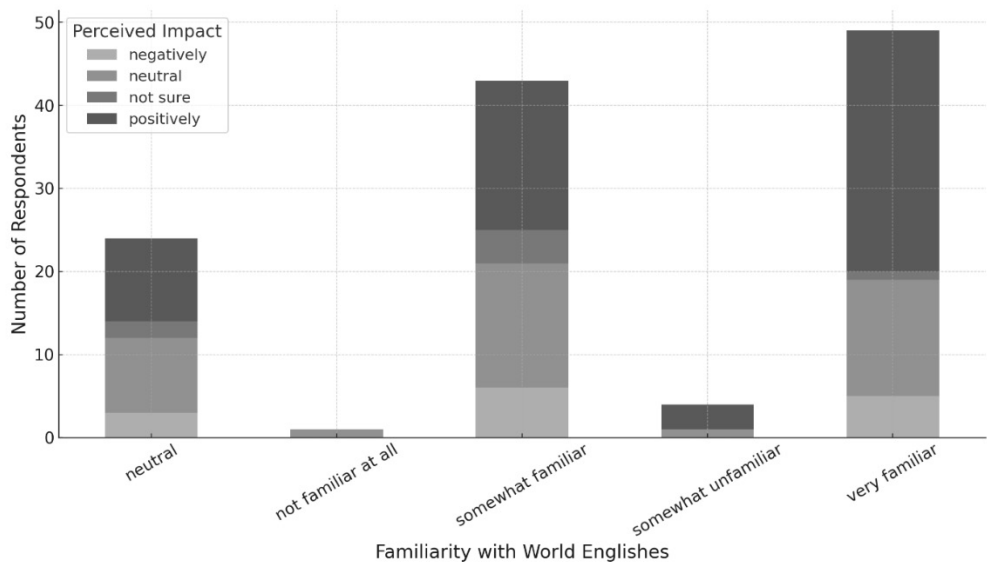
### 3. Results and discussion

#### 3.1. Classification of World Englishes

Following Kachru's classification of World Englishes, we categorized students from all study groups into three circles. Of the 122 respondents, the majority (80 students, or 65.6%) belong to the Outer Circle, representing countries where English is institutionalized or used as a second language. Additionally, 24 students (19.7%) belong to the Expanding Circle, comprising countries where English is learned as a foreign language. Finally, 18 students (14.7%) belong to the Inner Circle, representing countries where English is the native language. (Figure 1).



**Figure 1.** Distribution of students by Kachru's circles



**Figure 2.** Distribution of students by continents

Of the total 122 students, the majority (59.1%) are from Asia, followed by 27% from Europe, and 13.9% from Africa.

3.2. Different English accents: preferences and challenges in understanding

As shown in Table 1, the Inner Circle encompasses standard native varieties such as American, British, and Australian English. These varieties dominate global medical literature, and students’ preference for them reflects a tendency toward internationally recognized standards in academic communication.

| English Variety    | Count |
|--------------------|-------|
| American English   | 25    |
| Australian English | 1     |
| British English    | 24    |

**Table 1.** Preferred varieties in the Inner Circle

The Outer Circle encompasses institutionalized varieties such as Indian and Nigerian English. Preferences for these reflect the backgrounds of students from countries where these forms are widely used. However, their presence is less prominent when compared to the dominance of the Inner Circle (Table 2).

| English Variety  | Count |
|------------------|-------|
| Indian English   | 20    |
| Nigerian English | 2     |

**Table 2.** Preferred varieties in the Outer Circle

The Extending Circle includes students who either use a mix of varieties or have no clear preference. This reflects linguistic flexibility and potentially a neutral distance toward standard English norms.

| English Variety                  | Count |
|----------------------------------|-------|
| I don't have a preference        | 22    |
| I use a mix of various varieties | 28    |

**Table 3.** Preferred varieties in the Expanding Circle

Next, we analysed the most common challenges students face when understanding different English dialects, categorized by Kachru's Three Circles: Inner, Outer, and Expanding. The data were derived from students' responses to multiple-choice question (Question 19: *What challenges have you faced in understanding different English dialects during your medical studies?*) where they indicated the types of difficulties they face when dealing with different varieties of English in academic settings. These responses were grouped into three primary categories: Accent/Pronunciation Issues, Lexical Issues, and No Challenges. Table 4 below presents the frequency of each challenge reported by students within their respective circles.

| Challenge Category     | Expanding Circle | Inner Circle | Outer Circle |
|------------------------|------------------|--------------|--------------|
| Accent / Pronunciation | 19               | 12           | 69           |
| Lexical Issues         | 4                | 4            | 10           |
| No Challenges          | 1                | 2            | 1            |

**Table 4.** Challenges in understanding different English dialects

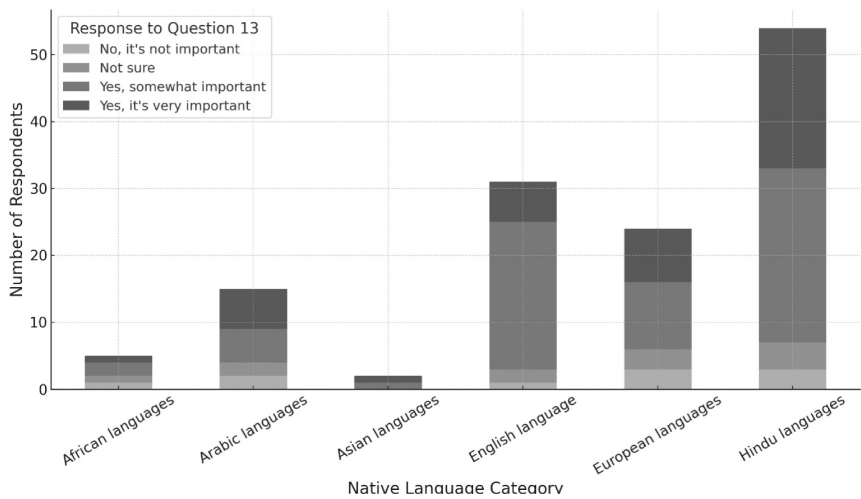
Students from the Outer Circle reported the highest number of difficulties, particularly with accent and pronunciation (69 students), students from the Expanding Circle also identified accent-related issues, though to a lesser extent (19 students). Lexical challenges were more evenly distributed across the circles but were still more prominent in the Outer Circle. Inner Circle students reported the fewest overall difficulties, with some even stating that they had 'No Challenges' at all. However, statistical difference revealed no significant correlation between the circles, as indicated by a  $\chi^2$ -squared value of 6.16, and a p-value of 0.187.

### 3.3. Duration of English language learning and preferred variety

This analysis aimed to examine the relationship between the duration of English language learning (Question 4: *If English is not your mother tongue, how long have you been learning it as a foreign language?*) and the preferred variety of English in a medical context (Question 17: *Which variety of English do you prefer to use in your medical studies and clinical work?*). Students' responses were analyzed



using the  $\chi^2$  test of independence, which yielded a  $\chi^2$  value of 36.50 with a p-value of 0.0490 and 24 degrees of freedom (Figure 3). The results reveal a statistically significant correlation between the duration of English learning and the preferred variety of English ( $p < 0.05$ ). Students who have been studying English for more than 11 years or since childhood tend to express a neutral attitude toward varieties of English (e.g., *I don't have a preference*) or use a mixture of varieties, suggesting greater linguistic flexibility and exposure to diverse language norms. In contrast, students who have been learning English for a shorter period more often show a preference for specific varieties, such as British or Indian English. These findings indicate that the duration of language learning can influence how students develop their preferences for English varieties. This information could inform the design of educational programs that take into account variations in students' linguistic backgrounds (Robinson-Jones et al., 2024). Figure 3 illustrates how preferences for English varieties evolve based on the respondents' duration of English learning. Each bar represents a grouped duration range, while the colored segments depict the different varieties of English preferred by respondents.



**Figure 3.** Preferred English varieties grouped by the duration of the English learning experience

As the duration of English learning increases, the number of respondents rises, and the diversity of preferred English varieties becomes more pronounced. Beginners (Group 0) predominantly favor British English, whereas more advanced learners (Group 4) often exhibit no clear preference, use a mix of varieties, or favour Indian English. American English is consistently represented across all groups, but it is never the dominant choice. These findings suggest that prolonged exposure and extended learning duration contribute to a more nuanced and diversified perception of English varieties.



### 3.4. Year of study & language skills

A series of Kruskal-Wallis H tests were performed to evaluate whether students' perceptions of the importance of four core language skills – reading, writing, listening, and speaking – varied based on their year of study. This non-parametric test was selected due to the ordinal nature of the data and the potential for violations of normality assumptions.

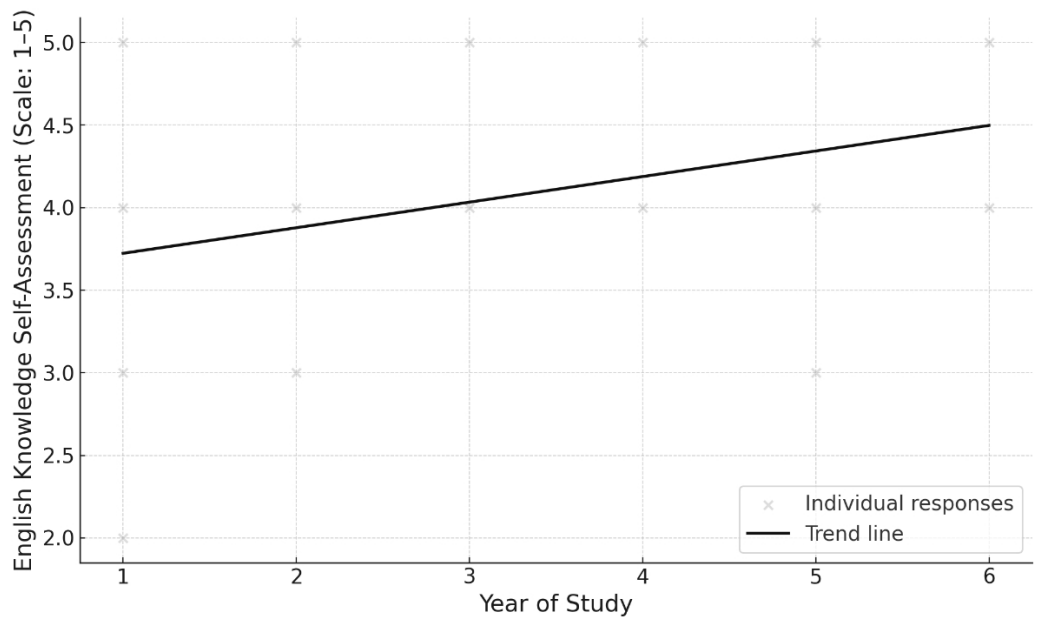
| Language Skill | H-statistic | p-value |
|----------------|-------------|---------|
| Reading        | 5.69        | 0.338   |
| Writing        | 5.09        | 0.405   |
| Listening      | 6.20        | 0.287   |
| Speaking       | 6.37        | 0.272   |

**Table 5.** Language skill importance by year of study

The Kruskal-Wallis H tests reveal no statistically significant differences in the perceived importance of reading, writing, listening, or speaking skills across different years of study, as shown in Table 5. This indicates a consistent recognition of the importance of language skills throughout students' academic progression. These findings suggest that students, regardless of their academic year, consistently view all four language skills as equally important in the context of their education. The absence of significant variation may reflect a stable awareness of the relevance of language competencies across the study program. In all four areas – reading, writing, listening, and speaking – students' perceptions remain relatively consistent, regardless of their academic stage. In contrast to our findings, in a recent study performed in South Arabia, the students particularly highlighted the importance of writing for academic purposes, emphasising its role in their academic success and communication abilities (Alanazi/Curle, 2024).

### 3.5. Self-evaluation of the English language proficiency

To examine the relationship between the year of study (Question 1: *What is your current year of study?*) and students' self-assessed English language proficiency (Question 8: *How would you assess your English language knowledge on a scale from 1–5?*), a Pearson correlation analysis was performed. The year of study was numerically represented from 1 to 6, while English language proficiency was rated on a scale from 1 to 5, and the results are presented in Figure 4. The analysis revealed a weak but statistically significant positive correlation between the year of study and self-assessed English language proficiency ( $r = 0.18$ ,  $p = 0.042$ ). This indicates that students in higher years of study tend to rate their English language proficiency slightly higher than those in earlier years. Similarly, the research conducted by Hamad et al. (2025) reports that students' confidence and proficiency improve over time, implying that later-year students rate their skills slightly higher and show adaptation to academic English.



**Figure 4.** Relationship between year of study and self-assessed English language knowledge

3.6. Year of study and students’ attitudes about varieties of the English language

This analysis presents the final correlation between the year of study and students’ attitudes toward the varieties of English used in medical education and communication. The survey questions included:

- Q1: *What is your current year of study?*
- Q12: *Do you find it challenging to understand English varieties other than the one you are most familiar with?*
- Q13: *Do you believe that exposure to multiple varieties of English is important for medical students?*
- Q14: *Do you think your medical education places enough emphasis on understanding and using different varieties of English in clinical practice?*
- Q15: *How confident are you in your ability to effectively communicate with fellow students and teaching staff from different English-speaking countries?*

The results are presented in Table 6:

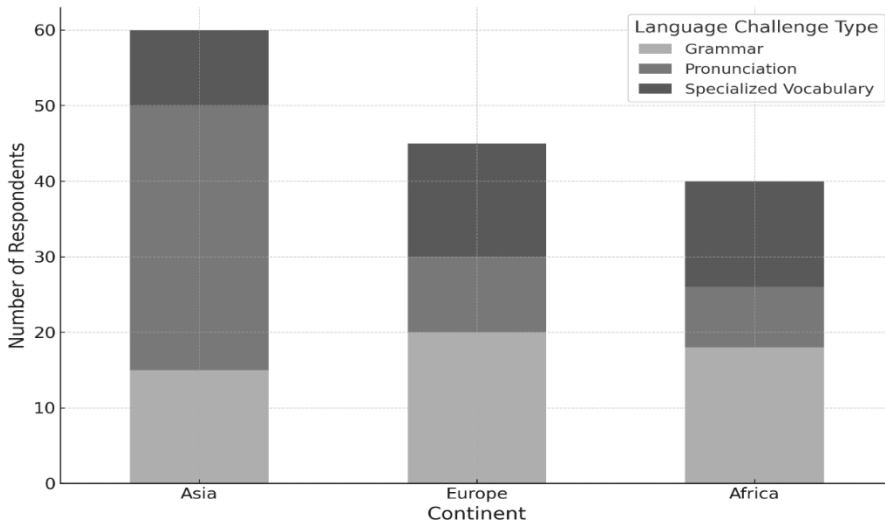
|                          | Year of Study | Understanding challenge | Exposure importance | Curriculum emphasis | Communication confidence |
|--------------------------|---------------|-------------------------|---------------------|---------------------|--------------------------|
| Year of Study            | 1.00          | -0.10                   | -0.27               | -0.13               | 0.12                     |
| Understanding challenge  | -0.10         | 1.00                    | 0.09                | 0.02                | -0.23                    |
| Exposure importance      | -0.27         | 0.09                    | 1.00                | 0.18                | 0.01                     |
| Curriculum emphasis      | -0.13         | 0.02                    | 0.18                | 1.00                | 0.07                     |
| Communication confidence | 0.12          | -0.23                   | 0.01                | 0.07                | 1.00                     |

**Table 6.** Pearson correlation table

The Pearson correlation coefficients provide valuable insights into the relationship between the year of study and students' attitudes toward English varieties in medical education. A weak negative correlation ( $r = -0.27$ ) was observed between the year of study and the perceived importance of being exposed to multiple varieties of English. This leads to the conclusion that students in higher years of study may slightly undervalue the significance of such exposure, potentially due to increased familiarity with the academic environment or a narrowed focus on clinical content. Other correlations, such as those with perceived curriculum emphasis ( $r = -0.13$ ) or challenges in understanding varieties ( $r = -0.10$ ), were very weak and likely not statistically significant. These findings indicate that students across different years of study share relatively similar attitudes in these areas. Overall, the results do not demonstrate strong correlations; however, they do suggest subtle trends. Students' growing confidence and reduced concern regarding exposure may indicate adaptation to academic English, although these relationships remain nuanced. Similarly, the results of the study performed at the University of Costa Rica show that the majority of students consider the incorporation of various types of English accents in their major fundamental (Charpentier-Jiménez, 2019: 72).

### 3.7. Native language versus perception of English varieties

This report examines the potential relationship between students' native language and their perception of the importance of exposure to multiple varieties of English in medical education. Specifically, it compares responses to Question 13 (*Do you believe that exposure to multiple varieties of English is important for medical students?*) with the categorised native languages from Question 3 (*What is your primary or first language?*). Responses to Question 13 were grouped by the language categories from Question 3. A contingency table was then created, followed by a chi-square test of independence. The bar chart in Figure 5 illustrates the distribution of responses to Question 13 across the different native language categories.

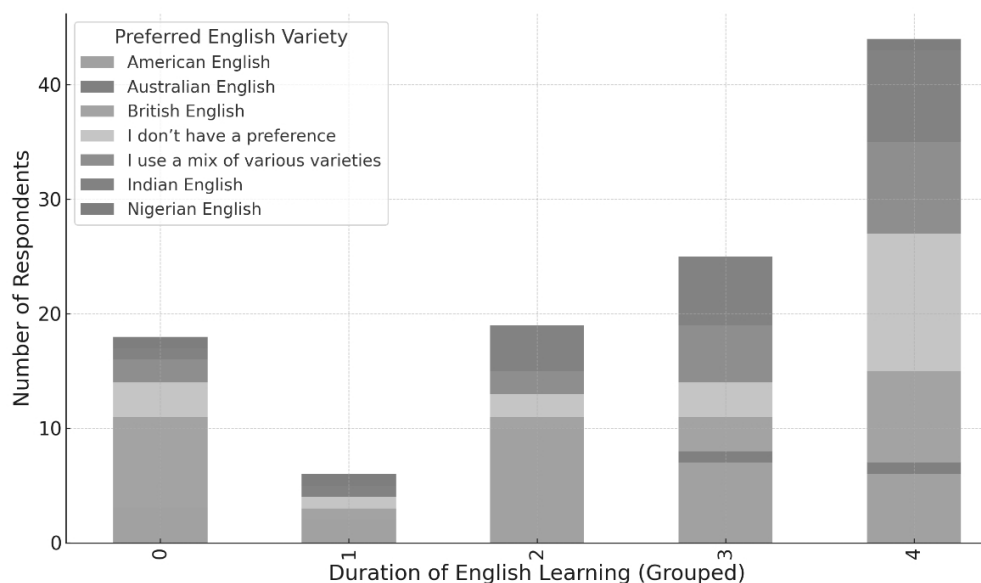


**Figure 5.** Perceived importance of exposure to English varieties by native language category

The chi-square test revealed a statistically significant relationship between categorized native language and students’ perceptions of the importance of exposure to multiple English varieties in medical education ( $\chi^2 = 33.39$ ,  $df = 21$ ,  $p = 0.042$ ). This indicates that students’ native linguistic backgrounds may shape their attitudes toward the relevance of diverse English varieties. Students whose native language is English overwhelmingly consider such exposure very important, whereas other groups display more varied perspectives. These differences could be attributed to factors such as prior linguistic exposure, levels of familiarity with international communication, or variations in educational systems.

3.8. Familiarity with the concept of World Englishes and perception of its impact

The analysis explored the relationship between students’ familiarity with the concept of World Englishes and their attitudes toward how these varieties impact medical education. Responses to Question 9 (*How familiar are you with the concept of World Englishes?*) were numerically coded on a scale from 1 (not familiar at all) to 5 (very familiar). Similarly, responses to Question 18 (*How do you think the use of different English variations affects medical education?*) were coded on a scale from 1 (negatively) to 5 (very positively). The results are illustrated in Figure 6.

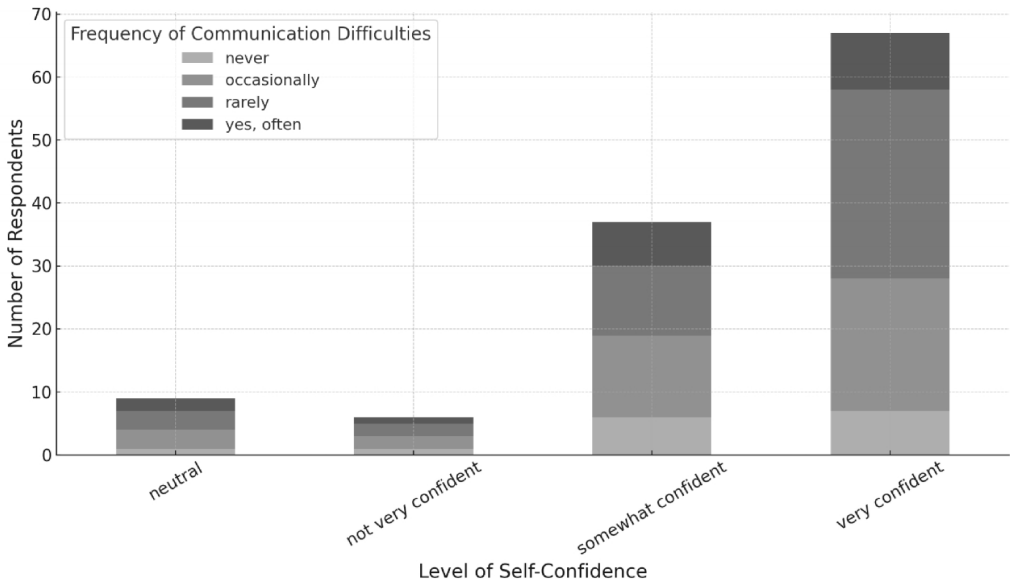


**Figure 6.** Perception of the impact of English variations in medical education by familiarity with the concept of World Englishes

The calculated Pearson correlation between familiarity and attitude is 0.206, with a corresponding p-value of 0.0227. This statistically significant result indicates a positive correlation between familiarity with different varieties of English and a favourable attitude toward their impact on medical education. These findings align closely with the conclusions drawn by Nelson in his extensive research on intelligibility within World Englishes (Nelson, 2012). In other words, the more familiar students are with the concept of World Englishes, the more positive their attitude toward its importance.

### 3.9. Relationship between self-confidence and communication difficulties

To explore the relationship between self-confidence in communication and the frequency of difficulties experienced when communicating in English, a correlation analysis was conducted. This analysis examined responses to Question 15 (*How confident are you in your ability to effectively communicate with fellow students and teaching staff from different English-speaking countries?*) and Question 16 (*Have you ever faced any difficulties in communicating with fellow students or teaching staff due to differences in English usage, such as accent, terminology, or cultural context?*). The results are presented in Figure 7.



**Figure 7.** Relationship between self-confidence and frequency of communication difficulties

The responses were first converted into numerical values to facilitate quantitative analysis. Self-confidence was coded on a scale from 1 (not confident) to 5 (very confident), while communication difficulties were coded on a scale from 1 (never) to 4 (yes, often). The Pearson correlation coefficient for these variables was calculated as -0.331, with a corresponding p-value of 0.0003. This negative coefficient indicates an inverse relationship: as self-confidence increases, the frequency of communication difficulties decreases. The results are consistent with findings from research conducted in Australia (Edwards/Roger, 2015). Since the p-value is less than 0.05, the correlation is statistically significant, suggesting a relationship between lower self-confidence and greater communication difficulties.

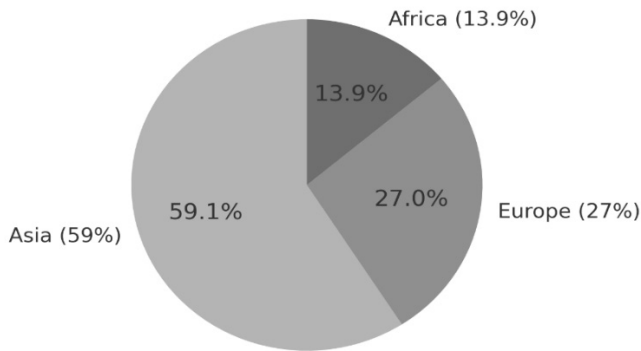
### 3.10. Difference in the perception of language challenges by continent

The relationship between students' geographical origin (continent) and the type of challenges they perceive as the greatest in learning English at the academic level was analyzed. A contingency analysis was conducted to examine the number of responses by continent and type of problem. Additionally, a chi-square ( $\chi^2$ ) test was performed to determine whether there is a statistically significant difference in the distribution of challenges across continents. The analysis examined three key aspects: specialized vocabulary, pronunciation, and grammar. No statistically significant correlation was found between students' continent of origin and their selection of specialized vocabulary as the biggest challenge. However, a statistically significant correlation was observed between students from Asia and their identification of *pronunciation* as the greatest challenge in learning English at

the academic level. Additionally, no statistically significant correlation was found between the continent of origin and choosing 'grammar' as the primary challenge. The results are summarized in Table 7 and illustrated in Figure 8.

| Difficulty Type        | Chi2 Statistic | p-value | Degrees of Freedom |
|------------------------|----------------|---------|--------------------|
| grammar                | 4.46           | 0.1074  | 2                  |
| pronunciation          | 10.97          | 0.0041  | 2                  |
| specialized vocabulary | 0.46           | 0.7951  | 2                  |

**Table 7.** The difference in the perception of language challenges by continent



**Figure 8.** Distribution of perceived language challenges by continent

Figure 8 highlights a notable difference in the pronunciation category, with a significantly higher number of respondents from Asia identifying pronunciation as their primary difficulty compared to respondents from Europe and Africa. This visual observation is consistent with the results of the chi-square test ( $\chi^2(2) = 10.97$ ,  $p = 0.0041$ ), which confirms a statistically significant association between the continent of origin and perception of pronunciation as the predominant challenge in academic English use.

#### 4. Conclusion

This paper evaluated the presence of English language variations among students enrolled in the English language medical study program, examined the impact of these variations on medical education and identified the challenges students faced when navigating different English dialects. It was concluded that students from the Outer Circle faced the most difficulties, particularly with accent and pronunciation, followed by those in the Expanding Circle, though less frequently. Lexical challenges were more common in the Outer Circle but fairly distributed. Inner Circle students reported the fewest issues, with some stating they had none. Despite these trends,



statistical analysis showed no significant difference between the groups. Students who have studied English for over 11 years or since childhood tend to have a neutral stance on English varieties or use a mix, showing greater linguistic flexibility. In contrast, those with less experience more often prefer specific varieties like British or Indian English. The findings highlight that learning duration influences language preferences, which can inform educational program development. As study time increases, preferences become more diverse, with beginners favoring British English, and advanced learners showing no strong preference, or leaning towards Indian English. American English appears consistently but is never dominant, suggesting longer exposure fosters a more nuanced view of English varieties. The Kruskal-Wallis H tests show no significant differences in how students perceive the importance of reading, writing, listening, and speaking across academic years. This suggests a stable recognition of the relevance of language skills throughout their studies, with consistent views on their importance regardless of study progression. The findings show a weak but significant positive correlation between study year and self-assessed English proficiency, indicating that students in later years tend to rate their language skills slightly higher than those in earlier years. Likewise, students' growing confidence and reduced concern about exposure likely indicate their adaptation to academic English, though the effect is modest. It was determined that native linguistic background may influence students' perspectives on English varieties. Native English speakers overwhelmingly consider exposure to different varieties as crucial, whereas non-native speakers exhibit more diverse opinions. Additionally, greater familiarity with World Englishes is positively correlated with a more favorable attitude toward its importance. Furthermore, higher self-confidence is associated with fewer communication difficulties, as evidenced by the negative coefficient reflecting an inverse relationship. Also, there is no significant correlation between the continent of origin and the selection of specialized vocabulary or grammar as the biggest challenge. However, students from Asia show a notable tendency to identify pronunciation as their primary difficulty in academic English. Building on the findings discussed, we propose that future research on this topic should extend to other higher education institutions within the country and the broader region where medical education for international students is conducted in English. Expanding the scope of research would enable the collection of a larger volume of data and parameters, ultimately leading to more precise and high-quality conclusions on the subject. Additionally, we recommend that the topic of World Englishes and education from teachers' and students' perspectives be more prominently featured in the agendas of international linguistic and pedagogical conferences. This inclusion would encourage a greater number of researchers to contribute to this highly important field of study.

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Sažetak

### **RAZNOLIKOST U JEDINSTVU: KONCEPT *WORLD ENGLISHES* (SVETSKI VARIJETETI ENGLESKOG JEZIKA) U AKADEMSKOM MEDICINSKOM OKRUŽENJU – INSTRUMENTALNA STUDIJA SLUČAJA**

Predmet ove instrumentalne sociolingvističke studije slučaja kojom je obuhvaćeno 122 studenta medicine od prve do šeste godine koji studiraju na engleskom jeziku jeste istraživanje koncepta *World Englishes* (svetskih varijeteta engleskog jezika) i njegova primena u akademskom i profesionalnom kontekstu. Osnovni ciljevi istraživanja bili su da se utvrde najčešće korišćeni varijeteti engleskog jezika, da se ispita stepen važnosti izloženosti različitim varijetetima engleskog jezika, kao i da se identifikuju jezičke poteškoće sa kojima se studenti iz različitih regiona sveta (Evrope, Azije i Afrike) suočavaju u pomenutom okruženju. U radu se ističe značaj koncepta *World Englishes* u primenjenoj lingvistici i globalni domet engleskog jezika i njegovih kulturno-regionalnih varijeteta prema Kačruovom modelu tri kruga – *Inner*, *Outer* i *Expanding Circle* (*Unutrašnji*, *Spoljni* i *Ekspanzivni krug*). Razmatra se uloga engleskog kao *lingua franca* u medicini, gde razlike u dijalektima, terminologiji i diskursu mogu dovesti do grešaka u komunikaciji. Posebna pažnja posvećena je heterogenosti studenata na programu CLIL (*Content and Language Integrated Learning*), gde se integriše medicinsko znanje sa jezičkim veštinama. Podaci su prikupljeni putem anonimnog upitnika sa 21 pitanjem, a zatim analizirani korišćenjem deskriptivne statistike, hi-kvadratnog ( $\chi^2$ ) testa, Pirsonove korelacije i Kruskal-Valisovog testa. Ovaj metodološki okvir omogućio je detaljno sagledavanje obrazaca u jezičkoj upotrebi i stavovima studenata. Rezultati, između ostalog, pokazuju da duže izlaganje engleskom jeziku (>11 godina) vodi ka

neutralnoj ili mešovitoj upotrebi varijeteta ( $p=0,049$ ), dok manje iskusni studenti preferiraju specifične varijetete poput britanskog ili indijskog engleskog. Utvrđeno je da poznavanje koncepta *World Englishes* pozitivno korelira sa povoljnijim stavovima o njegovoj relevantnosti, dok veće samopouzdanje smanjuje učestalost komunikacionih poteškoća ( $r=0,206$ ,  $p=0,0227$ ). Izvorni govornici naglašavaju nužnost izloženosti različitim dijalektima, dok neizvorni govornici pokazuju raznovrsnije stavove. Ove razlike se mogu pripisati faktorima kao što su prethodna jezička izloženost, stepen međunarodne komunikacije ili razlike u obrazovnom sistemu. Nije utvrđena značajna povezanost između kontinenta porekla i problema sa vokabularom ili gramatikom, iako su studenti iz Azije češće isticali poteškoće sa izgovorom ( $\chi^2=10,97$ ,  $p=0,0041$ ). Studenti iz Spoljnjeg kruga (65,6%) najviše imaju problema sa akcentom i izgovorom, dok studenti iz Unutrašnjeg kruga (14,7%) beleže najmanje poteškoća. Ovaj rad doprinosi razumevanju lingvističke fleksibilnosti u medicinskoj edukaciji, nudeći praktične implikacije za nastavne programe koji promovišu izloženost različitim varijetetima engleskog jezika, a sve sa ciljem poboljšanja akademske i kulturne komunikativne kompetencije studenata, uz smanjenje diskursnih ograničenja. Značaj istraživanja nalazi se u kvantitativnoj analizi heterogenog uzorka, uz sugestiju da bi podaci iz drugih visokoškolskih institucija omogućili preciznije zaključke u predmetnoj oblasti.

### **Ključne reči:**

svetski varijeteti engleskog jezika, medicinsko obrazovanje, nastava na engleskom jeziku (EMI), akademska komunikacija, sociolingvistička studija slučaja, izgovor i razumljivost, jezička raznolikost

## Appendix

### Appendix 1. Questionnaire

Dear colleagues, please, fill out the anonymous questionnaire relating to varieties of English used in medical education. The results will be used only for the scientific and research purposes.

1. What is your current year of study?
  - a. 1<sup>st</sup> year
  - b. 2<sup>nd</sup> year
  - c. 3<sup>rd</sup> year
  - d. 4<sup>th</sup> year
  - e. 5<sup>th</sup> year
  - f. 6<sup>th</sup> year
2. What is your country of origin? \_\_\_\_\_
3. What is your primary language or first language? \_\_\_\_\_
4. If English is not your mother tongue, how long have you been learning it as a foreign language? \_\_\_\_\_
5. What do you consider the most difficult problem in learning English at an academic level?
  - a. grammar
  - b. specialized vocabulary
  - c. pronunciation
6. What do you consider the most important language skill in learning English? Scale 1–5, (1 – the least important, 5 – the most important)
  - a. reading – \_\_\_\_\_
  - b. writing – \_\_\_\_\_
  - c. listening – \_\_\_\_\_
  - d. speaking – \_\_\_\_\_
7. What do you consider the most difficult language skill in learning English? Scale 1–5, (1 – the least important, 5 – the most important)
  - a. reading – \_\_\_\_\_
  - b. writing – \_\_\_\_\_
  - c. listening – \_\_\_\_\_
  - d. speaking – \_\_\_\_\_
8. How would you assess your English language knowledge on a scale from 1-5?
  - a. 1 bad
  - b. 2 not bad
  - c. 3 Good
  - d. 4 Very good
  - e. 5 Excellent

9. How familiar are you with the concept of World Englishes (varieties of English spoken in different parts of the world)?
- Very familiar
  - Somewhat familiar
  - Neutral
  - Somewhat unfamiliar
  - Not familiar at all
10. Which varieties of English are you aware of? (Select all that apply)
- American English
  - British English
  - Australian English
  - Indian English
  - Nigerian English
  - Other (Please specify) \_\_\_\_\_
11. How often do you encounter different varieties of English (e.g., British, American, Australian, Indian, etc.) in your medical studies?
- Very often
  - Often
  - Occasionally
  - Rarely
  - Never
12. Do you find it challenging to understand English varieties other than the one you are most familiar with (e.g., British English, American English)?
- Yes, often
  - Occasionally
  - No, I find all varieties easy to understand
  - Not applicable (I only encounter one variety of English)
13. Do you believe that exposure to multiple varieties of English is important for medical students?
- Yes, it's very important
  - Yes, somewhat important
  - No, it's not important
  - Not sure
14. Do you think your medical education places enough emphasis on understanding and using different varieties of English in clinical practice?
- Yes, definitely
  - Somewhat
  - No, not enough
  - Not sure
15. How confident are you in your ability to effectively communicate with fellow students and teaching staff from different English-speaking countries?
- Very confident
  - Somewhat confident
  - Neutral

- d. Not very confident
  - e. Not confident at all
16. Have you ever faced any difficulties in communicating with fellow students or the teaching staff due to differences in English usage (e.g., accent, terminology, cultural context)?
- a. Yes, often
  - b. Occasionally
  - c. Rarely
  - d. Never
17. Which variety of English do you prefer to use in your medical studies and clinical work?
- a. British English
  - b. American English
  - c. Canadian English
  - d. Australian English
  - e. Indian English
  - f. Nigerian English
  - g. I use a mix of various varieties
  - h. I don't have a preference
  - i. Other (Please specify) \_\_\_\_\_
18. How do you think the use of different English variations affects medical education?
- a. Positively
  - b. Negatively
  - c. Neutral
  - d. Not sure
19. What challenges have you faced in understanding different English dialects during your medical studies? (Select all that apply)
- a. Vocabulary differences
  - b. Pronunciation differences
  - c. Slang/Colloquialisms
  - d. Accent differences
  - e. Other (Please specify) \_\_\_\_\_
20. How do you overcome these challenges?
- a. Additional study/research
  - b. Asking for clarification
  - c. Using translation tools
  - d. Other (Please specify) \_\_\_\_\_
21. What resources or support would help you better understand and use different English dialects?
- a. Workshops/training sessions
  - b. Online resources
  - c. Peer support groups
  - d. Access to tutors