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Students smarter than teachers? Gen Z EFL students' perceptions of English pronunciation learning and teaching

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ABSTRACT

EN Generation Z L2 learners, who are immersed in English audiovisual content from an early age, might feel more comfortable with the pronunciation of English than their Generation X or Millennial non-native EFL teachers. This paper explores how Gen Z L2 learners in Northeastern Europe use English extramurally, how they rate their own and their teachers' English pronunciation, and whether they aspire to sound native-like. The data was collected from 140 college-level first year students through questionnaires and interviews. The main findings are that, first, Gen Z students rate their own pronunciation as fairly advanced, reporting extramural English as a greater influence than their English teachers' input, and second, view their non-native English teachers' pronunciation as less native-like than their own, yet generally rate their teachers as acceptable models of English pronunciation. Consequently, this paper proposes that Gen Z students might benefit from an alternative type of pronunciation teaching.

Key words: PRONUNCIATION TEACHING, EXTRAMURAL ENGLISH, INFORMAL LANGUAGE LEARNING, NON-NATIVE ENGLISH TEACHERS, GEN Z, ACCENTEDNESS

ES Los aprendientes de L2 pertenecientes a la Generación Z, expuestos al contenido audiovisual en inglés desde una edad temprana, pueden sentirse más cómodos con la pronunciación del inglés que sus profesores de EFL no nativos pertenecientes a la Generación X o a la generación Millennial. Este trabajo analiza cómo el alumnado de L2 de la Generación Z del noreste de Europa utiliza el inglés en contextos extraescolares, cómo evalúan su propia pronunciación y la de sus docentes, y si aspiran o no a sonar como hablantes nativos. Los datos de este estudio se recopilaron a partir de cuestionarios y entrevistas realizadas a 140 estudiantes de primer curso universitario. Los principales resultados muestran, en primer lugar, que el alumnado de la Generación Z valora su propia pronunciación como bastante avanzada, atribuyendo al inglés extracurricular una influencia mayor que al *input* recibido de sus docentes. En segundo lugar, perciben la pronunciación del profesorado no nativo de inglés como menos cercana al modelo nativo que la suya propia, aunque en general la consideran un modelo aceptable. En consecuencia, este artículo propone que el alumnado de la Generación Z podría beneficiarse de un enfoque alternativo en la enseñanza de la pronunciación.

Palabras clave: ENSEÑANZA DE LA PRONUNCIACIÓN, INGLÉS EXTRACURRICULAR, APRENDIZAJE INFORMAL DE IDIOMAS, PROFESORES DE INGLÉS NO NATIVOS, GENERACIÓN Z, ACENTO

IT È verosimile che i membri della Generazione Z, grazie all'esposizione costante all'inglese attraverso contenuti audiovisivi fin dall'infanzia, si sentano più a loro agio nella pronuncia dell'inglese L2 rispetto ai loro docenti millennial o appartenenti alla generazione X. Questo articolo esplora come gli apprendenti L2 della generazione Z dell'Europa nord-orientale usino l'inglese in contesti extrascolastici, come valutino la propria pronuncia e quella dei loro insegnanti, e se aspirino o meno a una pronuncia simil-nativa. I dati per questo studio sono stati raccolti tramite questionari e interviste a 140 studenti universitari del primo anno. I principali risultati mostrano, in primo luogo, che gli studenti della generazione Z considerano il livello della propria pronuncia piuttosto avanzato, grazie più all'inglese extramurale che all'*input* dei loro insegnanti. In secondo luogo, percepiscono la pronuncia dei loro insegnanti non nativi come meno simile a quella nativa rispetto alla propria, pur considerandoli generalmente modelli accettabili di pronuncia inglese. Di conseguenza, questo articolo propone che gli studenti della generazione Z possano trarre beneficio da un modo diverso di insegnare la pronuncia.

Parole chiave: INSEGNAMENTO DELLA PRONUNCIA, INGLESE EXTRAMURALE, APPRENDIMENTO INFORMALE DELLE LINGUE, INSEGNANTI DI INGLESE NON MADRELINGUA, GEN Z, ACCENTO

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1. Introduction

Due to advances in technology and media, learners in EFL contexts now experience much greater exposure to English than in the past. Individuals born slightly before the year 2000 and later, often referred to as "digital natives", have grown up surrounded by technologies; as a result, their exposure to screen devices and audio-visual content in English is unprecedented. Generation Z, or, unofficially, the YouTube Generation, are characterized by skilful mastery of digital technologies and fully immersed in the digital world. They are constantly connected and can hardly imagine a world with no access to Wi-Fi; losing their phone would mean losing a part of themselves (Luttrell & McGrath, 2021). This has undeniably left a mark on their level of comfort with the English language. This generation now attends institutions of secondary and tertiary education, which must adapt to learners who receive as much—or often more—English input outside the classroom as inside it (Lindgren et al., 2013; Puimège & Peters, 2019). Pronunciation, one of the hardest aspects of the English language to teach, now seems to be within an easy reach for Generation Z. This can potentially change the power dynamic in the classroom, with the students often finding themselves in a more favourable position than their teachers, who are most likely Generation X or Millennials and have not had the luxury of an early exposure to the sound of English, as is often reflected in their pronunciation (e.g., Hendriks & van Meurs, 2022).

All of these considerations motivated the current study, which aims to explore students' exposure to English outside the classroom: the sources they use, the variety of English they are exposed to the most in a Northeastern-European setting, and whether the age of exposure and the amount of time spent on extramural English has had an effect on their confidence with English pronunciation and their views of their teachers. Does it matter to them that their teacher speaks with an accent that may be more pronounced than their own? How do Gen Z students rate their own pronunciation compared to that of their teachers? Do students look down on teachers who fail to reach native pronunciation? These are relevant concerns that affect every non-native English teacher who might feel more and more insecure about their own pronunciation (Kralova, 2019; Whitehead, 2023) in relation to the growing abilities of their students. Additionally, it is unclear whether the exposure to mostly native-generated content has made the students more eager to attain a native-like accent. Admittedly, the pronunciation classroom has changed: for many students immersed in digital media, intelligibility and comprehensibility goals are becoming increasingly redundant, and teachers might need to find new goals, which will also be discussed in this paper. Overall, this study is an attempt to explore the new realities of the digital world from a student's perspective—an effort which might either alleviate teachers' fears and insecurities or, conversely, exacerbate them.

2. Literature Review

Generation Z learners have been surrounded by digital technology since early childhood. The age at which young children have been reported to actively engage with screen media themselves has reached as little as four months, compared to four years in 1970 (Radesky & Christakis, 2016). As many parents will admit, these days screen media often work as a pacifier for children up to the age of 3 and as a solution for parents under stress (Brauchli, 2024). Not only has the age of exposure changed, but also the amount of screen time young children accumulate: the amount of time young children are exposed to screens has been found to range from an average of 12 h in a typical week in the UK (Funk et al., 2009) up to 2.5 hours a day in the U.S., with older children getting progressively more screen time (Rideout & Robb, 2020). In such a context, the presence of English in contemporary media is overwhelming: out of the top 20 most popular and highest-grossing YouTube channels in the world, at least 10 are in the English language, mostly American English (World Population Review, 2025); moreover, on-demand entertainment and video streaming services such as Netflix offer a wide variety of child-directed options such as cartoons, movies and TV shows in English, and English serves as the primary language for video games.

Language learning effects of the exposure to audiovisual content via television, social media or gaming beyond formal instruction have been reported quite extensively in the research literature (De Wilde et al., 2020; Muñoz et al., 2018; Reinhardt, 2019; Sockett & Kusyk, 2015; Toffoli et al., 2013). The term used in the field for out-of-class, incidental language learning experience, where learning happens while the learners' attention is devoted to a specific activity, such as listening to music or playing computer games, is "extramural English" (EE), established by Sundqvist (2009). Research reveals that exposure to extramural English has positive effects on language proficiency both before formal instruction starts and during it. Puimège and Peters (2019) found that Dutch-speaking children of ages 10 – 12 who had still not received formal English instruction but were frequently exposed to English via computer gaming, streaming videos, or watching TV, already demonstrated

knowledge of 2,356 – 3,157 word families in English that they acquired independently. Both the amount of exposure to digital audio-visual input and the number of words learned incidentally while involved in the process increased with age. A study by De Wilde and Eyckmans (2017) with 30 Flemish primary-school-age children demonstrated their substantial knowledge of English—listening, reading comprehension, writing and speaking—before they started formal English classes in school, and further tests revealed that their English scores were strongly related to their computer use and computer gaming—a finding corroborated by Lefever (2010) with Icelandic children of primary school age without any formal training in English who demonstrated significant gains in English learning based on their exposure to media and computer games alone.

The effectiveness of gaming has specifically been explored by a number of studies, which have consistently found encouraging results: Jensen (2017) reported significantly better performance on vocabulary tests in Danish young learners who were actively engaged in gaming. Similarly, in a study with 11-12-year-old Swedish children Sylvén & Sundqvist (2012) demonstrated significant gains in vocabulary growth among frequent players versus those who played less or did not play at all. Additionally, video gaming has been shown to have far-reaching effects that extend beyond vocabulary acquisition: larger vocabulary has been associated with improved writing performance and higher grades in English overall (Sundqvist & Wikström, 2015), and playing video games has been shown to promote autonomous, self-directed language learning (Chik, 2014).

Research is mixed and gender-specific with regard to which extramural activities young learners engage with most: in terms of the mean hours that young learners devote to them daily, according to a study that surveyed the parents of 10-11 year-old children from seven different European countries on their incidental language learning habits (Lindgren et al., 2013), listening to music in English took the lead, followed by watching subtitled movies and TV programs, and playing online video games. Other studies (e.g., Jensen, 2017; Peters, 2019), however, found that gaming was the top activity among boys, and significantly contributed to their English proficiency. However, the relative learning benefits of these different modes of incidental English learning—gaming, watching, or listening to music—have still not been clearly established in the literature. While some studies show that subtitled movies and television programs contribute most to language learning in general (Kuppens, 2010; Lindgren et al., 2013), gaming has been shown to have the strongest effect on boys' language proficiency specifically because gaming is more popular among boys than girls (Jensen, 2017; Muñoz, 2016). Additionally, the learning benefits of exposure to films and animated series in English are most pronounced in countries that provide subtitled rather than dubbed or voiced-over TV programming. This allows children in Belgium (Peters, 2018), Sweden (Sundquist, 2009), Denmark (Muñoz et al., 2018), or Iceland (Jóhannsdóttir, 2018), for example, to be immersed in authentic English in their households from an early age. In contrast, in European countries such as Germany, Switzerland, France or Italy, dubbing or voice-over programming have traditionally been the norm (De Riso, 2025; Krüger, 2023; Pavesi & Ghia, 2020). This may reduce learners' access to original-English audio, thus potentially delaying the onset of extramural English exposure and limiting the amount of English input they receive. This is also the case in Northeastern Europe, which is the focus of this study, where children's programming on TV is generally dubbed and thus creates less favourable conditions for language acquisition in childhood.

Passive exposure to English via television and online media has been shown to also have positive effects on pronunciation learning. A study with young French adult learners of English showed that their speech contained a mixture of British and American phonetic features; the fact that they were only exposed to British English in school led to the conclusion that they had inadvertently picked up American English sounds from the media they consumed (Yibokou, 2023). Similarly, research with Norwegian teenage learners showed a blend of British and American phonetic features, with the American ones likely prevailing due to the pervasive influence of American English in media and popular culture (Rindal & Piercy, 2013). In a study with adult learners, Wisniewska and Mora (2020) showed that watching captioned audiovisual material led to improvements in speech processing and gains in pronunciation production when the focus was on meaning, which is the most natural way of viewing TV. In a similar experiment, Scheffler and Baranowska (2023) demonstrated that watching a TV series with and without subtitles while attention is actively directed to the meaning of the audiovisual material led to improvements in production—but not when L1 subtitles were provided. Together, these findings suggest that frequent exposure to authentic English-language audiovisual media with a focus on meaning can have a positive effect on learners' pronunciation. The studies focus on adult or young-adult learners, for whom pronunciation learning from media can be partially intentional, and who can make use of subtitles to advance their speech learning. More research is needed to assess how and to what extent early onset and intensity of extramural English exposure influence the phonetic dimension of learners' speech. The current study focuses on students' self-perceptions and therefore contributes to the field by showing how

students' self-assessment of their pronunciation correlates with the onset and amount of exposure to audiovisual input in English.

Having outlined the effects of extramural English learning on the learners themselves, we now turn to their non-native English teachers, who are increasingly confronted with the reality of self-taught digital natives—students who enter school with a substantial command of English acquired prior to formal instruction and who continue to expand their language skills alongside their classroom learning. Generally, as Hannibal Jensen & Lauridsen (2023) demonstrate, teachers recognize the vocabulary-building benefits of extramural learning and appreciate the increased motivation to learn English that extramural exposure brings to the classroom. And yet, on a more personal level, this often presents a challenge to non-native English teachers who are Generation X or mostly Millennials, meaning that digital English entered their lives at a much later age; to a certain extent, this defines their English proficiency and pronunciation. A number of studies document the anxieties and sense of inadequacy experienced by non-native English teachers: in the Asian context, Korean EFL teachers often sensed a great deal of insecurity about their own pronunciation (Whitehead, 2023) and Chinese EFL teachers admitted that they felt inferior to native English speakers in terms of speaking, pronunciation, vocabulary, reading and listening (Tang, 1997). Research on European non-native English teachers demonstrates a similar sense of inferiority and anxiety, for example, among Slovak English teachers (Kralova, 2019) and Dutch English teachers (El Ouastani, 2022). Such feelings of inadequacy and fraudulence, self-doubt, low self-efficacy have been described in research literature on non-native English teachers as the so-called Impostor Syndrome, and have been reported among pre-service English teachers (Bernat, 2009).

Non-native English-speaking teachers (NNESTs) are right to feel anxious, as students are often prejudiced against and critical of them, often believing that accentedness is an indication of their subpar competence and poorer teaching abilities overall, in comparison to what a native speaker could bring (e.g., Hendriks & van Meurs, 2022; Rubin & Smith, 1990). The idealized native-speaker model is often still the norm among non-native English learners, who view native English-speaking teachers (NESTs) more favourably (Ghanem & Kang, 2021; Kelch and Santana-Williamson, 2002) and also wish to sound native-like (Aiello & Mongibello, 2019; Newbold, 2022; Timmis, 2002). This occurs despite the strong advocacy for NNESTs as being just as effective as NESTs and the obvious misalignment between native-speaker ideals and the global nature of English (Mahboob, 2010). Gen Z students, however, are immersed in English content daily—mostly of American origin— which may result in even higher expectations of native-like proficiency and raise the bar for NNESTs. Given these added pressures from increasingly English-savvy learners, where does the non-native English teacher stand from the perspective of Gen Z students? Do NNESTs live up to the models Gen Z students hear daily on social media – and do they expect them to? The current study thus focuses specifically on the pronunciation aspect of the English language to explore Gen Z's perceptions of their own pronunciation, the pronunciation of their teachers, and students' exposure to extramural English. No other studies have explored this aspect, so this study sought to answer the following research questions:

1) What are Gen Z students' perceptions of which audiovisual activities in the English language have shaped their pronunciation skills the most? How frequently do Gen Z students receive audio visual input outside the classroom, and is there a correlation between the intensity of this input and the age at which it started, and self- and peer-assigned pronunciation scores?
2) How do Gen Z students rate their non-native English teachers' pronunciation in comparison to their own pronunciation and evaluate its acceptability?
3) How important is sounding native-like to Gen Z students? What are their aspirations with regard to their English pronunciation?

We hypothesize that it is audiovisual input, rather than their teachers at kindergarten or school, that has mostly shaped students' pronunciation, and that such input is most likely American. While television programs and films in the Northeastern European context are typically dubbed or voiced-over rather than subtitled, which limits learners' exposure to authentic content, we assume that children's active engagement with the rich online audiovisual content on digital devices may have partly compensated for the lack of subtitled television. As a result, we also expect that students have adopted a more critical stance of their Gen X or Millennial teachers' pronunciation in response to the intensive audiovisual input they are exposed to daily. In keeping with the findings of Newbold (2022), we anticipated that students would set the bar high for their own pronunciation and wish to sound native-like, which might make them evaluate the lack of native-like speech patterns in their non-native teachers' pronunciation more critically. We hypothesized that there could be a

negative association between one's self score and the teacher score, whereby the more inflated self-perceived pronunciation score is, the lower the score s/he might assign to their teacher.

To answer these questions, a survey was selected as the primary data collection method to gather quantitative and qualitative data with elements of peer assessment for greater reliability; interviews with 14 participants were also conducted to triangulate the data.

3. Methods

3.1 Participants

The participants of this study were 18- and 19-year-old first-year university students attending a business and economics program in Latvia (n = 141), where English was the medium of instruction. The sample was a convenience sample, with 59% male and 41% female participants, as there are traditionally more male students in the business and economics program. While the group was international, most of the students were Latvian (n=108). The rest of the nationalities were divided as follows: 16 were Russian, 5 were Estonian, 4 were Lithuanian, and 1-2 students were from China, Belarus, Ukraine, Georgia, Uzbekistan, and Kazakhstan. All participants had received formal instruction in English at school and passed a rigorous written English entrance test, which selected candidates at the C1 level of the European CEFR system, as well as an interview for the business and economics program.

Since the focus of this study is on students' experiences with non-native English teachers, 12 participants who reported having had native English teachers in school or studying in a high school abroad were removed from the sample. However, not all respondents replied to all the questions in the questionnaire, therefore the number of responses in the analysis varied between 141 and 117. The data were collected at the end of the first semester, after semester grades were assigned and course evaluations received, using the Qualtrics platform, on student laptops while in the classroom environment; participation in the survey was entirely voluntary and anonymous, with students creating code names for themselves.

3.2 Data collection instruments and procedure

Student perceptions were first gathered via a questionnaire consisting of 18 short questions (see Appendix 1 for the complete questionnaire). The study is based on students' perception, so the measures of hours spent on out-of-class activities and the age of activity onset were self-reported. While other studies have used parental surveys to gather this information, we speculated that that would not be an appropriate instrument at the fairly mature age of 18-19 and relied on self-reported data. The questionnaire was administered in class, in person, as it had an interactive component to it that could not have been completed in an online format at home. To this end, the researcher approached the students at the end of a microeconomics lecture, held in a large auditorium that could accommodate all 140 students, and prompted them in English to open their laptops and access the questionnaire that had been emailed to them shortly before the class.

After entering the demographic information, the students were instructed by the researcher (and the written prompt) to form random groups of 3 to 4 students, create code names for themselves to ensure anonymity for research purposes, and share these with their partners. Then, they were each asked to read aloud the first 5 sentences of the Rainbow Passage, a standard text that features most English phonemes and is commonly used by speech-language professionals to assess speech, and rate each other's pronunciation in a real-time setting on a scale from 0 – 100, assigning a score to each individual under a code name. The peer-score was used to assess the validity of the self-perception score. Afterwards, the students continued completing the questionnaire on their own, either in class or later at home. The survey included quantitative questions, such as whether the participants wished to sound native-like or whether they believed their non-native English teacher was a good model of English pronunciation, and qualitative questions, such as students' earliest memories with English or the perceived greatest influences on their English pronunciation. We purposefully kept the questions open (e.g., "Who/what has affected your pronunciation the most?") to allow a wide range of responses, varying from "teachers in formal education" to out-of-school activities such as "gaming" or "watching TV". The quantitative questions included 13 multiple-choice, numeric-scales, and Likert-scale questions with 5 responses (see Appendix 1).

All tests were run in IBM SPSS Statistics 30. The data were analysed as follows: first, a Pearson correlation analysis was performed to examine the relationships between self-reported hours spent on extramural English, the age at which exposure to extramural English had started, and student self-scores. A multiple regression analysis was then conducted to examine the impact of hours spent on extramural English

and the age of exposure to extramural English on student self-scores, the dependent variable. The association between self-reported scores, peer scores and teacher scores was explored with the help of correlation analyses and t-tests. Additionally, a MANOVA was conducted to examine gender effects in the dataset as previous research has identified gender as a strong variable (e.g., Jensen, 2017; Peters, 2019).

The questionnaire was followed by individual interviews with the researcher three weeks later. Once again, the sample was a convenience sample, as the interviews were conducted in English with the same year-one students, but this time as part of a speech and accent elective course that is taught by the researcher. The speech and accent elective course traditionally features individual face-to-face meetings, the first of which discusses the speech learning experiences and preferences that are instrumental to the course. For the purposes of this study, up to 5 open and closed questions that were specific to and informative for the study were added to the existing questions. The researcher took notes during these interviews. After the course was completed and grades assigned, a permission to use the data for the purposes of this study was asked and obtained from each student, thus ensuring the utmost confidentiality. Thematic analysis, which is a data analysis method that helps identify, code and analyse reoccurring patterns of meaning or themes within the data, was used to analyse the interview data. Braun & Clarke (2006) proposed a 6-phase coding framework for thematic analysis—familiarization with the data, generation of codes, searching for themes, reviewing themes, defining themes, reporting the findings—and this method was used to identify themes and patterns in the data.

4. Results

4.1. The Survey

The quantitative part of the survey started with questions about the frequency of audiovisual input students have received ("How many hours a day did you spend on English media (audio, video) before entering our school?") and the age of exposure ("At what age did you start consuming English content (audio, video)?"). Student responses indicated that the average number of hours they spent on watching, listening to, or interacting with English media was 4 hours daily (M = 4.47; SD = 2.48), and that the average age they started to actively engage with English audiovisual media was 7 years old (M = 7.21; SD = 3.04). The majority of the students—81%—reported that they consumed American-speaking media; only 9% reported using British-speaking media and 6% indicated that they were exposed to both varieties; 4% preferred Australian, Canadian and "non-native" media. To identify the type of the input received, students were asked to report the main influences on their pronunciation by answering an open-form question (see Figure 1).

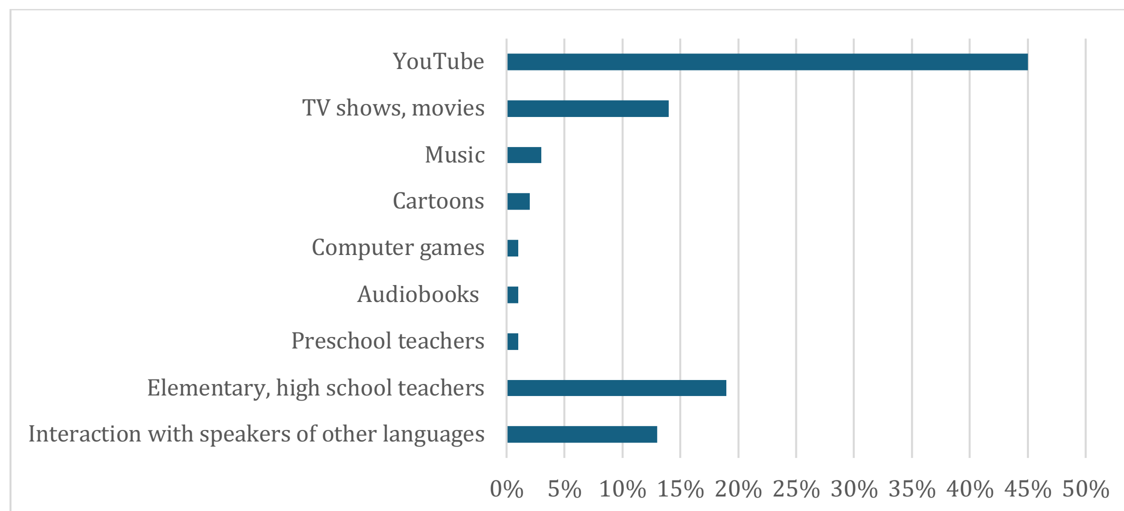

Figure 1. Student responses to the question "What/Who has affected your pronunciation the most?", expressed as percentages.

The majority of respondents (97 students, or 66%) cited their exposure to audiovisual input via media (YouTube; cartoons; TV programs and movies; audiobooks; music) and computer games as the main sources of influence that have shaped their speech; 29 students, or 20%, indicated that their kindergarten, primary and secondary teachers were their main influence; finally, 13% mentioned their experiences abroad or communication with English speakers as their main sources of influence. Finally, students were asked to

describe their earliest childhood memory associated with English in an open format that would reveal whether it included technologies, which would be in line with the "digital natives" narrative. The results showed that the human factor was the most memorable, with students most vividly remembering their English learning experiences in preschool (28%) or later in school (24%), followed by 39% of students who recalled watching cartoons or playing videogames (Cartoon Network, Nickelodeon, YouTube videos and Xbox were the most often mentioned sources of input), and finally 9% of students remembered actually using English with friends from abroad or when travelling abroad as their first memory. Interestingly, although students mentioned more experiences in preschool as their first exposure than at later stages of education, only 2 out of 29 responses included kindergarten teachers as the main influence on their pronunciation.

Given the intensity of the mostly American input students receive daily, the next questions assessed students' perceptions of their own pronunciation skills in relation to the input they receive, the assessment of their pronunciation skills by their fellow students compared to their own assessment, and students' views on their high school English teachers' pronunciation compared to their own. Bivariate correlations of these variables are provided in Table 1.

Table 1.
*Pearson's correlation coefficients for the self-assigned self-scores and teacher scores, and self-scores and peer scores. ** p < 0.01.*

			Significance	
Scores	**N**	**Correlation**	One-Sided p	Two-Sided p
Self-score & Teacher score	117	-0,044	0,320	0,640
Self-score & Peer score	117	0,332**	0,000	0,000

Pearson's correlation analyses revealed a significant positive correlation between self-scores and peer scores (r = 0.33; p = 0.000), but no correlation was found between self-scores and teacher scores (r = -0.04; p = 0.64), which goes against the hypothesis we established. Further, a statistically significant yet moderately strong negative correlation was found between the age of exposure to audiovisual media and the hours put in daily (r = -0.32; p = 0.000), whereby the lower the age of first exposure, the more hours the participants were likely to spend on extramural English. By the same token, a moderately strong and statistically significant positive association was observed between one's self-score and hours spent on extramural English activities daily (r = 0.31, p < 0.01). However, no significant correlation was found between the age of first exposure to extramural English and one's self-score (r = -0.17; p = 0.03). These findings informed the subsequent multiple regression analysis by highlighting potential key predictors.

We conducted a multiple regression analysis with students' pronunciation self-scores as the dependent variable, and two predictors: hours of received audiovisual English input and the age at which frequent exposure began (Table 2).

Table 2.
*Results of the multiple regression model for pronunciation self-scores (**p≤0.01).*

	Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	Std. Error	Beta		
1	(Constant)	74,435	4,005		18,584	0,000
	Age of exposure	-0,301	0,364	-0,078	-0,828	0,409
	Hours of EE	1,462	0,488	0,281	2,996	0,003
	R	0,315**				
	R^2	0,1**				
	Adjusted R^2	0,08**				
	F	6,28**				
	N	116,0				

The regression model could explain 32% of the variance ($R^2 = 0.32$, *Adjusted* $R^2 = 0.08$). Despite the low R^2, which indicates more scattered data around the regression lines, the overall model was significant ($F(2, 114) = 6.28$, $p < 0.01$), demonstrating a trend. Hours of English input received daily were positively associated with pronunciation self-scores ($\beta = 0.28$, $p < 0.01$), while the age of exposure had no predictive value.

With regard to the relationship between self-scores and teacher scores, and self-scores and peer scores, paired sample t-tests were further performed to compare the means between these groups (Table 3).

Table 3.
Mean ratings and 95% confidence intervals of the differences between students' self-rated pronunciation, peer assessment, and student assessment of their teachers' pronunciation.

		95% Confidence Interval of the Difference	
Scores	**M**	**Lower**	**Upper**
Self-score	78,59829	76,4330	80,7635
Peer score	81,14530	79,4385	82,8521
Teacher score	71,18803	66,8333	75,5428

A critically important aspect lies in the fact that the scores students assigned to their own pronunciation (M = 78.60; SD = 11.82) were significantly higher than the scores they assigned to their English teachers' pronunciation (M = 71.19; SD = 23.78), t (117) = 2.97, p < 0.01, d = 0.27). There was no significant difference between self-scores (M = 78.60; SD = 11.82) and peer scores (M = 81.19; SD = 9.29) at the $\alpha = 0.01$ level (t (117) = 2.18; p = 0.03) (see Table 3). To examine the potential gender effects, a MANOVA with three dependent variables—self-, peer- and teacher-scores—was further performed; the analysis did not detect any statistically significant gender effects on the combined dependent variables (Wilks' $\Lambda = 0.95$, $F(3,96) = 1.82$, $p=0.15$, $\eta2=0.05$).

As a follow-up question to students rating their teachers' pronunciation, students were asked to assess whether their teacher, was a good model of English pronunciation, with 4 Likert-scale answers: "Excellent", "Good", "Average", and "Poor" (Figure 2).

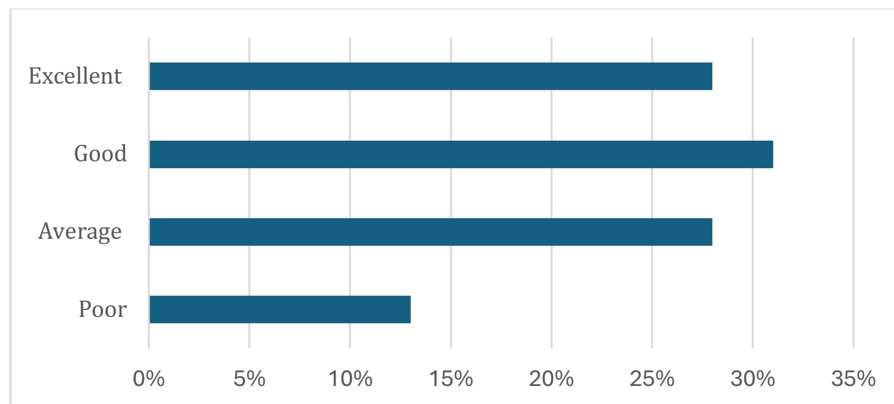

Figure 2. Student responses to the question:" Was your high school English teacher a good model of English pronunciation?

The responses ranged evenly across the "Excellent" to "Poor" continuum, with 39 students (28%) believing their teachers were excellent role models, 43 students (31%) assessing them as "good" role models, and an identical number of students—38, or 28%—deeming them to be average role models. Only 18 students (13%) considered their teachers to be poor role models of English pronunciation.

The subsequent question returned the focus to students, asking if they believed their own pronunciation needed improvement. Out of the 5 Likert scale options, most students (44%) gave a "probably yes" answer, 24% were less sure about that, selecting "might or might not", and an equal number of students (14%) were either of the opinion that they "definitely" needed improvement or "probably not". Finally, 4% answered with "definitely not".

Further, we inquired whether students wished to sound native-like, by asking "How important is sounding native-like to you?" (Figure 3).

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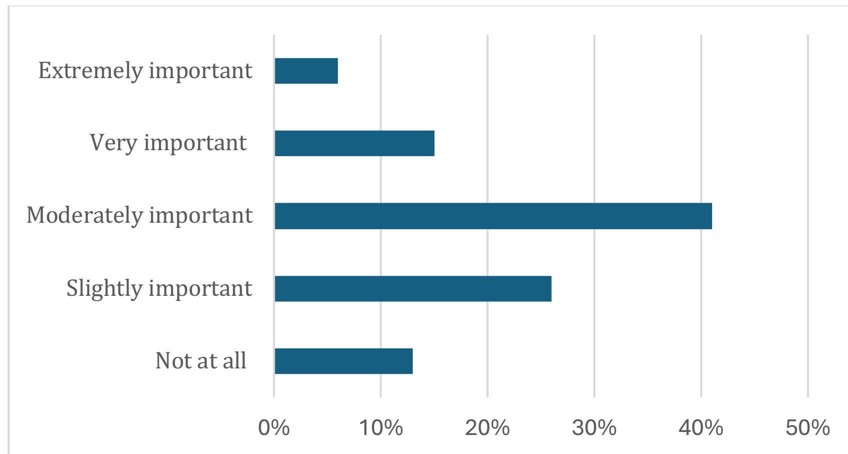

Figure 3. Student responses to the question: "How important is sounding native-like to you"?

The majority of students—41% and 26%—responded that it was "moderately important" or only "slightly important", respectively. 15% admitted that it was "very important", while 13% indicated it was "not at all important". The minority (6%) admitted it was "extremely important" for them to sound native-like.

The next question zeroed in on the specific variety of English to see whether students' exposure to mostly American content defined their aspirations, by asking "Are you striving for British or American pronunciation?" with 4 options, "American", "British", "other" and "not striving" (Figure 4).

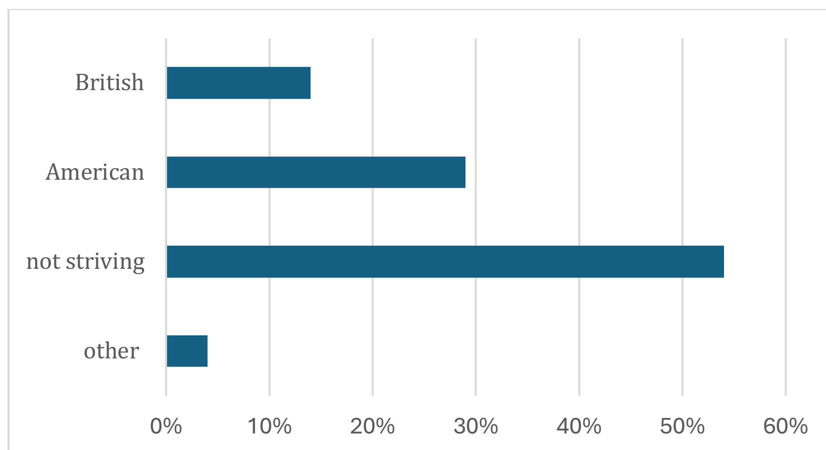

Figure 4. Student responses to the question: "Are you striving for a British or American pronunciation?"

The majority of respondents—54%—indicated that they were "not striving" at all; 29% were pursuing "American" English, 14% were pursuing "British", while 4% were aiming for some "other variety". Finally, when asked "If you were given a chance to sound more native-like in English or more persuasive in English, which one would you pick?", the overwhelming majority (75%) selected "sounding persuasive" rather than "sounding native-like", indicating that sounding native-like was in fact not the priority for most.

4.2. The Interviews

In this study, a thematic analysis was conducted to examine data from the interviews with the students (N = 14). Thematic analysis was carried out following the six phases outlined by Braun and Clarke (2006), which include familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the final report. The themes identified in the data included: (1) American

content on social media as a dominant influence; (2) the increasing use of English with same-language peers; (3) English teachers' pronunciation not matching the native speaker model; (4) students' tolerance of non-native English accents; (5) the low priority given to pronunciation instruction in schools; (6) the preference for native English-speaking teachers.

Most interviewees noted that their teachers were non-native speakers who aimed for a British accent with different success rates ranging from "a nice British accent" to "she pronounced "this" and "three" as [zis] and [sri:]". The most common verb used among the respondents was "tried"—"the teacher *tried* to sound British"—acknowledging the teachers' effort yet subtly suggesting that the outcome fell short of the students' expectations. However, only two interviewees admitted that the accent bothered them because it was "forced" or "Russian", which was a native language not shared with the interviewee; 12 out of 14 respondents indicated that they were either not bothered by the accent at all, did not pay attention to it, or even liked it – "it was pleasant to listen to". One student pointed to the generational gap by tolerantly stating that "At that time, teachers were taught that way, and that's how they continue". Moreover, as seems to be the reality in most schools according to the interviewees, the pedagogical focus was on building vocabulary, developing writing skills and preparing for the final exams, so students ranked pronunciation much lower than the other skills due to external factors. As one respondent noted in a sweeping statement, "in Latvian schools, no-one cares about pronunciation", thus referring both to the pronunciation of the teachers and the generally low priority given to pronunciation teaching in class in general. Most of the respondents noted that pronunciation instruction in class was limited to "the teacher only correcting mispronounced words if there were any" and "teaching how to pronounce advanced vocabulary" by "asking us to repeat the words", thus taking the form of incidental corrections rather than a planned, systematic component of classroom teaching. One student noted that the teacher would only correct students' pronunciation when reading Shakespeare plays, indicating that instruction was also context-dependent. Interestingly, with respect to the variety of English promoted in class, a few students reported that the teacher was accepting of different varieties and advised students "to stick to one way of pronouncing, and she did not say which was better, but asked us to be consistent". One respondent, however, remarked that "the teacher enforced British pronunciation, but she failed miserably" because the students, according to the respondent, were not willing to give up their existing accents. This issue emerged only in the last few interviews, therefore its extent could not be fully explored, but the limited data indicate that treating a specific accent as a prescriptive norm creates student resistance, especially in a context where global media have already shaped learners' pronunciation preferences. Most students, however, agreed that having a native-English-speaking teacher would be nice as "it could motivate me" in general, but there was no special interest in learning the pronunciation aspect of the language.

Next, the interviews uncovered another interesting observation: with the exception of two interviewees, most claimed to regularly engage in code-switching between their native language and English when talking to their friends who share the same first language. Two individuals claimed to hold extended conversations exclusively in English with their same-language peers. This serves as additional evidence for the great influence of extramural English on Gen Z learners. The reasons cited for code switching were the fact that "certain topics are easier to express in English", "emotions and everyday topics are easier to convey in English", or "we use it just for practice". These responses underscore the level of comfort students have developed with the English language, or, as some interviewees put it, "I often think in English" or "English is in our heads, and we don't want to translate it". This finding aligns with De Wilde and Eyckmans (2017), who found that Flemish children would sometimes use English rather than their L1 among themselves; the motivations behind such a choice, however, were not explored.

5. Discussion

This study was motivated by the practical concerns and questions that surround classroom pronunciation teaching and might be on many English teachers' minds: if students have been exposed to native-like English since an early age, what does their increased proficiency mean for NNESTs and pronunciation teaching in general? Previous research has shown that extramural English has positively affected children's vocabulary and grammar, and studies with young adults and adolescents have demonstrated a link between extramural English and pronunciation; the extent to which early and frequent exposure to extramural English can shape learners' pronunciation and perceived accentedness, however, remains unclear.

The present study is an exploration of English learners' perceptions and relies on self-reports, thus it cannot make claims of causality, and reliability can be questioned in some instances (e.g., students citing their age of exposure to English, which will be addressed in greater detail in the next section). Nevertheless, the study

does yield some interesting findings about their pronunciation learning patterns, how the youth view their teachers' pronunciation in response to the digital input they receive daily, how they rate their own performance, and whether they believe there is room for improvement. These observations are mostly placed in the geographical context of Northeastern Europe. Despite variability in students' and teachers' linguistic and cultural backgrounds, the shared regional characteristics among these countries provide a meaningful context. The geographical area does matter, as studies from countries that broadcast subtitled movies and programs, such as Belgium, the Netherlands, Denmark, Iceland, or Sweden show that children acquire English early, and to a great extent, due to subtitled TV that lets them hear original English input (Kuppens, 2010; Lindgren & Muñoz, 2013; Peters, 2018; Lefever, 2010). In Latvia, for example, voice-overs are commonly used in broadcast television programs, especially in children's programming; the option to manually switch the media language to English is a fairly recent addition, and even then, it is not always possible. It is not surprising, then, that watching YouTube has been cited as the main and most reliable source of accessible English-language content for students, likely due to the platform's easy access. Students also report watching movies and TV shows in English, all of which they identify as the most significant influences on their pronunciation—surpassing the influence of their teachers. That answers our first research question about whether it is in-class experiences or out-of-class experiences that students feel have contributed to their pronunciation learning the most, and it seems that these days the influence of extramural English is so profound that classroom teaching in many cases is merely assisting the learning that is happening outside the classroom. This carries important implications for classroom teaching.

Students' responses indicated that the average number of hours they spent on extramural English was 4 hours daily; the question specifically targeted their experiences *before* they started college, the intense curriculum of which might have affected this number considerably. The current study demonstrated that the input participants received was mostly American English (81%), which is not surprising, given that the most popular TV and YouTube channels are American. Consequently, 70% of respondents indicated that it was YouTube, cartoons, TV programs and movies, and in very few instances, audiobooks and podcasts that had shaped their speech. This content forms the lens through which they see and hear English, and it is what teachers encounter in the classroom. The results confirm previous findings of out-of-school exposure to English (Kuppens, 2010; Lindgren & Muñoz, 2013; Peters, 2018), which demonstrated that the main sources of extramural English were cartoons, TV shows, movies, YouTube videos, songs, and computer games.

Contrary to the hypothesis that exposure to English audiovisual media would occur at an earlier age, the average age at which the respondents started to actively engage with it was cited as 7 years old. Compared to studies that described preschool children's active engagement with technologies (e.g., Radesky & Christakis, 2016), this might appear relatively late. A potential explanation is that children's television programming in Northeastern Europe is generally dubbed or voiced-over, with the exception of music channels, leaving parents' digital devices as the primary—and not particularly convenient—source of English-language media. Another explanation for this might be that 18- and 19-year-olds, or any adult for that matter, have difficulty providing a precise date for their first exposure at an early age due to the so-called "childhood amnesia" that prevents people from recalling early memories consistently up until the age of 6 – 8 (Nelson et al., 2004) – precisely the age that the average respondent dated their first experiences to in our case. It was our hope that through parents' reminiscing, photos and videos from that age, or via inferential strategies participants could reconstruct memories from that time, but the relatively high age of extramural English onset data suggests otherwise. Furthermore, the correlational analyses showed that the age of exposure showed no correlation with pronunciation self-scores and had no predictive value in multiple regression, which is in line with Ojima et al. (2011), who showed – in the case of Japanese primary school children – that the hours spent on extramural English was a better predictor of their ability to semantically process spoken English than the age of their first exposure, or Munoz (2014), who demonstrated that there is a stronger correlation between the amount of input received and measures of oral performance than the age at which exposure to English began. These and other studies (e.g., Muñoz & Singleton, 2011) challenge the long-standing Critical Period Hypothesis (Lenneberg, 1967; Johnson & Newport, 1989), which traditionally posits that earlier exposure to a language leads to more native-like attainment. While success in pronunciation acquisition is often associated with an early start, studies on L2 phonetic/phonological learning have similarly found that it is possible for late learners to achieve native-like performance in pronunciation (Bongaerts et al., 1997), suggesting that attainment depends less on the mere age of onset and more on the extent and quality of the input received (Flege et al., 2021). Indeed, we found a moderately strong and significant correlation between the hours spent on extramural English and one's self-reported and peer-assessed pronunciation skills, indicating that the amount of input does matter—not only

for speaking, reading and writing but also for pronunciation. The correlation, however, was not as strong as we expected, and we hypothesize that the age of 18 might be too late to reliably establish a connection between the amount of input and pronunciation proficiency as the audiovisual exposure may have changed considerably over the years (especially, if it started early); therefore, recent years might not be representative of the amount of exposure received in childhood.

In response to Research Question 2, we further hypothesized that the intensive English input that Gen Z students receive outside the classroom would have made them competent and confident English users, and this confidence would make them rate their own pronunciation fairly highly while being excessively critical of pronunciation that does not match the native-like pronunciation norms they have been exposed to via media; in many cases, this would include their non-native teachers. The findings of our study showed that on a continuum from 0 to sounding native-like, the average student rated their own pronunciation in the top quartile of the scale (M = 78.60), which is fairly close to sounding native-like and indicates a high level of confidence or competence, or both. This score showed a high correlation with the score their peers provided and there was no statistically significant difference between the means, which provides some validity to the self-assessment. The next question of interest to this study then was how the students viewed their English teachers' pronunciation in comparison to their own. The results revealed that their teachers' pronunciation was rated as slightly *below* the students' skill level (M = 71.90), showing that we have reached a point where students believe they are in fact doing better than their non-native teachers in certain aspects of English, which confirms some of the fears and insecurities that teachers have about their own pronunciation. There is naturally great variability in their teachers' pronunciation, with some having attained a more native-like pronunciation than others, so the finding that students consistently rated themselves higher than their teachers—even across a diverse range of teacher pronunciation skills—adds to the robustness and generalizability of the results. Additionally, there was no correlation between one's self-score and teacher score: we anticipated that a high self-score could show a negative association with teacher score, making the self-assured student more critical of the non-native speakers around them. That, however, was not the case as no relationship was found. The question that arises, however, is whether the perceived lower score automatically marks the teacher as inferior and not a good model of English pronunciation because of their (mild) accent. Are non-native accents viewed more negatively? The good news is that only 13% of students believed their teachers were poor role models; the majority, or 59% of students, believed that their non-native teachers were "excellent" or "good" role models in terms of pronunciation, demonstrating a great degree of acceptance of accents that might not perfectly match native-like norms.

In fact, acceptance is a common pattern that interweaves the data and describes the Gen Z participants – acceptability in terms of the pronunciation of those around them and being content with their own pronunciation, which is also the answer to Research Question 3. Contrary to our hypothesis that we advanced based on Duryagin and Dal Maso (2022), Newbold (2022) and Timmis (2002) that demonstrated students' eagerness to sound native-like, our respondents did not exhibit a comparable level of enthusiasm or preoccupation with achieving native-like speech. If anything, there was doubt palpable in student responses in whether their pronunciation need improvement – only 14% clearly indicated that they needed improvement, with most providing a cautious "probably yes" response, but 42% stating openly that they probably or clearly did not need any improvement. Moreover, only 21% admitted that sounding native-like to them was "very" or "extremely important", with most settling for a more modest "moderately" (41%) or "slightly important" (26%), or "not important at all" (13%). In line with this demonstrated contentment with the current state of their pronunciation, students also indicated that they were not particularly interested in sounding American – only 29% were pursuing American English, with most —54%—pointing out that they were happy with their current pronunciation and were not striving for any particular variety. This finding mirrors earlier research from Norway, which demonstrated a widespread preference among teenagers for a neutral accent over a native-like pronunciation (Rindal & Piercy, 2013). Overall, Gen Z students come across as less critical and less fault-finding of themselves and those around them, and such acceptance of differences and deviations from the "norm" has indeed been shown to characterize this generation (Pew Research Center, 2020). This is good news for the multilingual, non-native-English-speaking world, where the shift from native-speaker-focused English toward international mutual intelligibility—the essence of which is captured in Jenkins' (2000) Lingua Franca Core—and toward a multilingual, multicultural approach emphasizing language functionality and the teacher's expertise rather than the variety they speak (Mahboob, 2010) has been slow. The students thus seem to be accepting of local English varieties and practices, and their digital experience with the native-variety evidently

does not prevent them from appreciating—and speaking—the local variety, which then enables them to operate in a variety of phonetic environments.

At the same time, it should be noted that the observed fairly moderate ambition to sound native-like in the current study could not be attributed to a less rigorous program or less motivated students, as ours is a top school in the region, and competition is fierce. As proof that students are in fact motivated, the next question offered a choice between pragmatic and functional pronunciation teaching/learning goals and purely aesthetic goals; namely, students were offered a choice in the last question to pick *persuasive English* or *native-like English* as a goal. Subsequently, an overwhelming 75% admitted that if given a chance, they would wish their English teacher would help them sound more persuasive or charismatic, which could help them in their careers. Since students in the European context have often reached a high degree of intelligibility and comprehensibility, to a large degree owing it to their frequent and intensive exposure to English extramurally, teachers can offer their students new goals that can help them advance professionally, namely, sounding more assertive and persuasive. Persuasiveness in certain instances is language-specific and can be achieved with specific phonetic means. For example, in the English language, consonant reinforcement, or extreme consonant lengthening with added articulatory energy, is a frequently used feature to convey a greater degree of assertiveness, importance and authority (see Banzina, 2024); practicing a lower pitch and a deeper, hallower sound via lowering of the larynx would help students convey their leadership potential and sound more native-like at the same time (Esling & Wong, 1983; Klofstad, 2016); similarly, falling intonation patterns—unlike rising, which are common in student production nowadays—would signal confidence and certainty (Jiang & Pell, 2017). Working on persuasiveness goals lets students focus on select native-like pronunciation aspects that are of professional significance and yield tangible benefits. Such communicative goals could serve as a realistic alternative to sounding simply native-like, as most features can be easily mastered by non-native speakers.

6. Conclusions

Teachers now have to adapt their teaching practices not only to include the latest technologies, but also to accommodate the fact that, due to these technologies, students feel more comfortable with English than ever. The fact that they grew up with a tablet or a smartphone means that they have been exposed to English content way earlier in their lives than their teachers, who had to adapt to the digital world at some point in their lives. Generation Z, in fact, were born into the digital world and were exposed to their share of English via social media sites and cartoons starting from at pre-school age, *as per* learners' account of their earliest memories. They spend hours every day listening to and watching native speakers online, and this input has undoubtedly shaped their own pronunciation. This study zeroed in on digital natives' perception of the importance of native-like pronunciation, their teachers' pronunciation and their own, and showed that students are confident about their pronunciation, with intelligibility and comprehensibility—the fundamentals of one's ability to be understood in a foreign language—generally not being a problem in the setting of Northeastern Europe. Conditioned by the native input they receive daily, they tend to view their non-native English teachers' pronunciation as slightly inferior to their own. However, they generally do not see it as a problem and exhibit the same relaxed confidence about their own pronunciation, not striving to sound perfectly native-like but being fairly content with the level of functional pronunciation they have already achieved. For teachers in the European context, this often means they can focus on goals other than pronunciation, or on more advanced pronunciation goals, such as persuasiveness in communication. With respect to research in general, the limitations of this study could be addressed in future work by using more objective and external assessments of both students' and teachers' pronunciation, such as evaluations by trained phoneticians instead of self-reports.

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Appendix
Online Survey Questions

1. Create a short code name for yourself (for anonymity purposes), enter it in the space below, and tell it to your classmates. Now ask 3 of your classmates to rate your pronunciation as you read the following: "When the sunlight strikes raindrops in the air, they act as a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it."
2. Now rate the pronunciation of 3 of your classmates as they read the same passage. Write down each classmate's (i) CODE NAME and (ii) SCORE from 0 (poor) to 100 (native-like):
3. At what age did you start consuming English content (audio, video)?
4. What is your earliest childhood memory using English?
5. What/who has affected your pronunciation the most?
6. How many hours daily did you spend on English media (audio, video) before entering our school?
7. Do you mostly consume British or American content, or do you prefer other English varieties? (a) American; (b) British; (c) other (specify)
8. Are you striving for a British or American pronunciation, if at all? (a) American; (b) British; (c) other (specify)
9. Please rate your English pronunciation now, from 0 (poor) to 100 (native-like):
10. Does your pronunciation need improvement? – Select Choice
11. How important to you is sounding native-like? – Select Choice
12. Your high school English teacher was: (a) a native English speaker; (b) a non-native English speaker
13. If your high school English teacher was a NON-NATIVE speaker, please rate their pronunciation from 0 (poor) to 100 (native-like):
14. Was your high school English teacher a good model of English pronunciation? – Select Choice
15. Did your high school English teacher address pronunciation in class? – Select Choice
16. If "yes", what features did your teacher address, and how?
17. If "yes", was pronunciation a special component of your English class?
18. If you were given a chance to sound more native-like in English or more persuasive in English, which one would you pick? – Select Choice

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