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BAKALÁŘSKÁ PRÁCE

Production of Weak Forms of Prepositions by Non-native Speakers of English

Produkce slabých forem předložek nerodilými mluvčími angličtiny

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Declaration

I hereby declare that this thesis has been composed solely by myself and that it has not been submitted, in whole or in part, in any previous application for a degree. Except where states otherwise by reference or acknowledgment, the work presented is entirely my own.

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ABSTRACT

This bachelor thesis aims to reveal and describe to which extent non-native speakers of English from different L1 backgrounds employ weak forms when producing prepositions. The theoretical part focuses on vowel reduction and its importance for the natural rhythm of English. This concept is further explored from the Lingua Franca Core perspective and its approach to teaching vowel reduction. In the practical part, the analysis of a series of recordings is carried out. The recordings were taken from the L2-ARCTIC speech corpus of non-native English (Arabic, Hindi, Korean, Mandarin, Spanish, and Vietnamese). The purpose of the analysis is to explore whether and how speakers with different L1s reduce vowels in canonically weak forms of prepositions. The focus is placed on the quality and quantity of vowels in said prepositions and their duration with regard to their occurrence in either initial or medial positions. The average vowel duration is then compared to the referential vowel duration in General British.

KEY WORDS

ELF, prepositions, vowel duration, schwa, vowel reduction, weak forms

ABSTRAKT

Cílem této bakalářské práce je odhalit a popsat, do jaké míry nerodilí mluvčí angličtiny s různými mateřskými jazyky používají slabé formy gramatických slov, konkrétně předložek. Teoretická část popisuje samohláskovou redukci a její význam pro rytmus v anglické větě. Následně je na tento koncept nahlíženo perspektivou Lingua Franca Core a jejím přístupem k výuce samohláskové redukce. Praktická část obsahuje analýzu nahrávek z korpusu nerodilých mluvčích angličtiny L2-ARCTIC, která popisuje, jestli a do jaké míry vybraní mluvčí arabštiny, hindštiny, korejštiny, mandarínské čínštiny, španělštiny a vietnamštiny redukují předložky v kanonicky slabých pozicích. Pozornost je věnována kvalitě a kvantitě samohlásek v předložkách s ohledem na výskyt na začátku či uprostřed věty. Průměrné trvání samohlásek v daných předložkách jsou porovnány s poměrnou délkou travní u samohlásek pro standartní britskou angličtinu.

KLÍČOVÁ SLOVA

ELF, předložky, poměrná délka samohlásek, samohlásková redukce, schwa, slabé formy

Contents

Introduction

It was not until I began attending university that I became acquainted with the concept of vowel reduction. Until then, I had never paid any particular attention to weakening. In fact, I had never even heard of the existence of schwa, although I am positive that I myself had been unknowingly employing vowel reduction long before I learnt what the notion actually meant. When strong and weak forms were discussed in class, I remember being astonished by the fact that there existed words whose pronunciation may depend on the context. Since then, I began noticing the way short grammatical words were pronounced by people who I met abroad, in TV series, or in the lyrics of my favourite songs, and I realized just how much these seemingly little changes in pronunciation influenced the rhythm of English.

The following lines are taken from David Bowie's song called *Starman*. Although I am of the opinion that the song would be equally successful if he sang the structural words in their strong forms, one would perhaps be left with a different impression.

There's a starman waiting in the sky

He'd like to come and meet us

But he thinks he'd blow our minds

While there is no doubt that the lack of schwa in the articles *a* and *the* and no h-dropping in the third line would still make the song perfectly intelligible, to some, it could lose a part of its charm and be perceived as not enough native-like. Be that as it may, the message Bowie intends to convey is comprehensible, regardless of weak or strong forms, and to many L2 speakers, to be understood is the desired goal.

Despite my great admiration for this phonological phenomenon, it is by no means declared that it must be regarded as an indispensable part of L2 acquisition. As will be discussed further in this thesis, according to English as a Lingua Franca (ELF), for many non-native speakers of English, the aim is to achieve comfortable intelligibility and thus place emphasis on meaning rather than on form.

To my mind, second or third-language acquisition is an immensely difficult process, and all non-native speakers deserve my utmost respect for setting out on such a challenging linguistic journey. For this reason, I am elated to use this thesis as an opportunity to explore the approach of selected non-native speakers to vowel reduction. The main aim is to reveal to which extent non-native speakers featured in the L2-ARCTIC corpus employ vowel reduction in canonically

weak positions of preposition. The focus is placed on prepositions due to their frequent occurrence in the corpus. The theoretical part explores the phenomenon of connected speech, rhythm, and vowel reduction. Furthermore, the significance of weak forms is scrutinised from two perspectives: the perspective of native speakers and that of ELF. The theoretical part analyses a series of recordings taken from the L2-ARCTIC corpus. The purpose is to describe vowel quality and quantity in said prepositions with regard to the character of individual L1s, and to their occurrence in either initial or medial positions. Moreover, the average vowel duration is compared to the referential vowel duration in General British. Finally, I aim at introducing the L2-ARCTIC corpus and the subsequent analysis as interesting enough to inspire future students to take advantage of the immense data which the corpus is endowed with.

Theoretical part

In order to provide a general context for the description of weak forms, the focus is first placed on the phenomenon of connected speech and rhythm English. Subsequently, weak forms are described in relation to vowel reduction. The rules for the use of strong forms are briefly summarized. The theoretical part also discusses the importance of teaching weak forms to non-native speakers in contrast to the Lingua Franca Core approach.

1 Connected speech

As with any other term, the notion of connected speech can be defined in various ways. A definition which seems to be suitable for the purposes of this thesis was provided by Heike "the changes which conventional words undergo due to the temporal and articulatory constraints upon spontaneous, casual speech" (Heike 1987: 41). In other words, those are the processes which words undergo when their border sounds are merged with neighbouring sounds (Lass 1984). Thus, it is apparent that words sound different depending on whether they are spoken in context or in isolation (Reed & Levis 2015).

Connected speech processes are essential for helping to maintain the regularity of the English rhythm. The way it functions is that syllables are compressed between stressed elements in order to maintain regular speech timing (Clark & Yallop 1995). Therefore, certain closed-class words such as prepositions or pronouns appear in their weak forms in unstressed contexts.

Naturally, there exist other connected speech processes. Reed & Levis (2015) propose classification into six main categories: linking, elision, insertion, modification, reduction, and multiple processes. For the purposes of this thesis, solely elision (3.2) and reduction (3.1) in unstressed words or syllables will be discussed. Even though consonants may be reduced too, reduction predominantly influences vowels, especially in word classes such as one-syllable determiners, pronouns, prepositions, and auxiliaries (Reed & Levis 2015).

Connected speech processes may pose significant difficulties to both the intelligibility of native speech for non-native listeners and the intelligibility of non-native speech for native listeners. For this reason, it is believed that non-native speakers must learn to comprehend the speech of native words and speak in a way which is intelligible to their listeners (Reed & Levis 2015). The way words are, sometimes quite surprisingly, modified in connected speech was described under the term Jungle English. In the Greenhouse style of speech, which is represented by pronunciation in citation form, words are compared to isolated plants growing in their own

flowerpot. Such treatment prevents words from overlapping and preserves every segment. In Garden English, words slowly come into contact with each other according to the rules of connected speech in the same orderly way as plants positioned in the garden. On the other hand, Jungle English reflects pronunciation in unscripted, real-time communication, and thus comparable to how plants grow in the jungle. In Jungle English, it may be difficult or nearly impossible to know whether one word ends or another begins, or whether a word has occurred at all (Cauldwell 2013).

2 Rhythm

When analysing rhythm, one of the aspects to focus on is isochrony or, equality in timing. According to whether stresses or syllables occur at regular intervals, languages are classified as either stress or syllable-based. English is traditionally characterized as a language with a stress-timed rhythm. Maintaining the rhythm can help learners to sound more natural as well as achieve a higher degree of fluency.

2.1 Syllable-timed rhythm

In syllable-timed languages such as Czech, French, Korean, or Spanish, the equality in timing is enforced by approximately equal duration of syllables. Thus, the amount of time taken for the production of the utterance is proportionate to the number of syllables. Syllable-timed languages generally vary in syllable length as opposed to stress-timed languages, where syllables tend to be of equal length (Abercrombie 1967). In Czech, for instance, stress is stable and always falls on the first syllable of a word or a rhythmic group. As opposed to English, in Czech, it is not uncommon to have a full long vowel in an unstressed position.

2.2 Stress-timed rhythm

In languages such as Arabic, English, or Russian, it is the foot, the basic unit of rhythm, which contributes to isochrony. The time from one stressed syllable to the next one tends to be the same, irrespective of the number of intervening unstressed syllables. For this reason, vowel reduction in unstressed positions is crucial in order to increase the difference between stressed and unstressed syllables. Moreover, stressed syllables are pronounced with changes in pitch, loudness, length, and the quality of vowels (Nishihara & Van De Weijer 2011). For instance,

English spoken with only strong forms may result in unnatural rhythmical sequences, which may make it difficult for the listener to understand and process the meaning.

"If interstress intervals are to be isochronous in English, the syllables contained in an interval must be reduced in certain areas and stretched in other cases to achieve the desired result" (Nespor 1990: 159). In phrases, content words are stressed, while grammatical words typically receive no stress as they carry little or no lexical meaning. The reduction of grammatical words contributes to maintaining the rhythmical sound of English. The following two sentences illustrate that despite the number of words, the time to produce the sentence is approximately the same:

	KIDS		SING		CAROLS.
The	KIDS	have been	SINGing	the	CAROLS.

In spite of the syllable-timed and stress-timed categorization being a generally accepted terminology, further research revealed that the rhythmic categorization of languages cannot be based on measuring timing units like syllables and interstress intervals (Reed & Levis 2015). Dauer (1983) discovered that there was no greater equality of interstress intervals in stress-timed languages than in syllable-timed languages. Based on these findings, scholars began viewing isochrony as a perceptual rather than an acoustically measurable phenomenon, considering it a tendency. Lehiste (1973) believes that isochrony could reflect the way in which language is perceived by the listener and thus be based on a perceptual illusion.

Subsequently, new terminology was suggested, with terms stress-based and syllable-based languages. According to Dauer (1983), there exist three main factors influencing speech rhythm and being responsible for the fact that they are perceived as stress-timed or syllable-timed: syllable structure, the presence of reduced vowels, and stress patterning.

Firstly, as far as syllable structure is concerned, stress-timed languages are richer in syllable types and their length. Stress-timed languages also tend for heavy syllables to be stressed and for light syllables to receive little or no stress. Secondly, while vowels in stress-timed languages undergo reduction and retain syllabicity, in syllable-timed languages, the deletion of one of two adjacent vowels takes place. Reduced syllables are perceived as less prominent and aid to create the illusion that stressed syllables occur at regular intervals. Finally, in stress-time languages, stress has a lengthening effect, contributing to the difference between stressed and unstressed syllables (Dauer 1983) (Nespor 1990).

2.3 Rhythm in World Englishes

With the expansion of English into all continents, new varieties of English have emerged in many countries either classified as native, second, or foreign languages. In several of these varieties, a shift towards syllable-timed rhythm has been noted. While UK English, American English, Canadian English, and Australian English remain stress-timed, several varieties of English tend towards the syllable-timed rhythm. With the shift being detectable in Asian and African varieties, the tendency is in accordance with the classification of English speakers provided by Kachru (1988) (Nishihara & Van De Weijer 2011).

Kachru's model (1988) divides English speakers into three circles. The Inner Circle is composed of the traditional bases of English, where speakers are in charge of providing the norms. The Outer Circle consists of countries where English is spoken because of their colonial history. In addition, The Outer Circe uses English for administrative purposes, national commerce, and education. Speakers of English as a Second Language (ESL) are norm-developing, hence the shift towards syllable timing. The Expanding Circle includes speakers of English as a Foreign Language (EFL) who obey the rules created by the Inner Circle and developed by the Outer Circle.

According to Nishihara & Van De Weijer (2011), such is the case of Standard Nigerian English which has borrowed syllable-timing from other languages spoken in Nigeria. Crystal states that this tendency may lead to total incomprehension in interactions with any listener who is a native speaker of English. Similar changes in rhythm are to be observed in Hong Kong English, Indian English, or Malaysian English. On the other hand, while New Zealand English belongs to the Inner Circle, it is much less stress-timed than British English. The explanation behind this is that New Zealand English uses more full vowels in unstressed positions. Moreover, grammatical words are often pronounced with full vowels rather than reduced ones. The shift towards syllable-timing is also regarded as an extension of the rhythm of the Maori language, the native language of New Zealand (Hay et al. 2008) (Reed & Levis 2015).

3 Weak forms

As stated in the previous section, the reduction of vowels in weak forms contributes to maintaining the rhythmic patterns of English. Whilst grammatical (function, structural) words which express grammatical relationship (e.g. auxiliary verbs, pronouns, prepositions, conjunctions) are often unstressed, lexical words tend to receive more prominence as they carry the meaning of the utterance. As a result, approximately forty grammatical words may be

pronounced in two ways: in their weak or strong form. In certain contexts, only strong forms are acceptable, thus retaining the dictionary pronunciation, which contains a full vowel, and from which no sounds have been omitted. For this reason, strong forms may be pronounced separately. On the other hand, when grammatical words are unstressed, different forms of reduction can take place: loss of initial consonant, loss of final consonant sounds, and weakening of the unstressed vowel. Accordingly, the resulting phonetic shape is often quite different from the corresponding strong form. Weak forms represent a pronunciation variant which includes a weak vowel, or from which one or more sounds have been omitted. Some grammatical words have more than one weak form, and all weak forms occur solely in unstressed positions. The preposition *of*, for instance, can be pronounced as /əv/, /ə/, and /v/ in unstressed positions (Skandera & Burleigh 2005).

The production of weak forms is by many phoneticians considered to be necessary for several reasons. Roach (1991) claims that most native speakers of English find the usage of "all-strong-form" pronunciation unnatural and foreign-sounding. Furthermore, speakers who do not employ weak forms are likely to face difficulties in interaction with speakers who do use weak forms. Weak forms are essential for achieving the correct rhythm of connected speech in English. The lack of weak forms may make it difficult for the listener to distinguish the more meaningful words of the message (Celce-Murcia et al. 1996).

3.1 Vowel reduction

The phenomenon of vowel reduction is represented by obscuration of vowels towards /i/, /u/, or /ə/. Vowel reduction was first detected in Old English, but it became much more prominent in Middle English. Linguists describe vowel reduction as the substitution of a full vowel by a schwa. On the other hand, from the perspective of phonology, vowel reduction is viewed as a loss of vowel quality. Accordingly, vowels in unstressed positions undergo qualitative changes, with full vowels being reduced to schwas. Three factors influencing the quality of vowels were recognized: sentence accent, word stress, and word class. Unaccented words are not pronounced as carefully as accented words as they carry little informative value. Similarly, unstressed words are not pronounced as carefully due to having little significance in the word recognition process. Unlike content words, lexical words differ in prominence due to the lack of semantic weight (Van Bergem 1991).

Phonological vowel reduction is related to the neutralization of vowel contrasts in unstressed syllables. Accordingly, contrasts are neutralized in unstressed syllables, resulting in a larger number of vowel qualities being distinguished in stressed syllables than in unstressed syllables. Therefore, vowel reduction maximizes the number of contrasting vowels, which leads to increasing the information conveyed by each vowel. This property of vowel reduction is illustrated by Flemming as follows, “if there are five contrasting vowels, a single vowel could differentiate between five words, (Flemming 2005: 5).

In addition, Flemming (2005) states that vowel reduction neutralizes height contrast and only neutralizes backness and rounding contrasts under specific conditions. It is primarily mid vowels and the contrast between lower mid and higher mid vowels which are eliminated in vowel reduction.

3.1.1 The nature of schwa

One of the best-known qualities of schwa is that it is never stressed and occurs solely in unstressed syllables. Since most unstressed syllables contain a schwa, it makes it the most frequently occurring sound in English, accounting for almost 11% of the sounds uttered in English (Skandera & Burleigh 2005). It largely contributes to creating the natural rhythm of the English language. Schwa is generally described as a neutral mid-central lax vowel. At the same time, the vowel is believed to be contextually variable and is prone to assimilate to surrounding elements, thus exhibiting variation in the vowel quality of schwa (Flemming 2007). The shift in vowel quality is to be observed in vowel harmony, where stressed vowels regressively influence schwa in unstressed structural words. Unlike longer, louder, and higher vowels in stressed positions, schwa is described as shorter, quieter and lower (Poesová 2015). In rhotic dialects such as General American, schwa is pronounced as r-coloured /ɚ/.

There is a wide range of graphemes corresponding to schwa, among which the most frequent are *a* (*woman*), *o* (*police*), *e* (*gentlemen*), *er* (*sister*), *u* (*suppose*), *or* (*razor*), *ure* (*figure*), *ou* (*famous*) and others (Gimson 2008).

3.2 Elision

Elision is the omission of a sound which typically occurs due to the change in speed and casualness of the speech. In certain circumstances, a phoneme might be elided or, in other words, disappears. Roach (1991) states that it is not necessary for non-native speakers to learn

elision, although they should be familiar with this phenomenon since they might expect to hear certain phonemes which are, in fact, not pronounced by native speakers.

To provide a specific example, the loss of /h/ in the weak forms of grammatical words can be mentioned. Grammatical words beginning with a h-sound are pronounced with the initial 'h' if the word occurs at the beginning of the sentence, when emphasised or contrasted. In other cases, the initial 'h' is often omitted (Roach 1991). Such is the case for pronouns (*he, him, his, her*) and auxiliary verbs (*has, have, had*). Note the difference in the following sentences:

***He** has never left the country.* /hi:/

*What does **he** like about the book?* /i/

*This is everything I **have**.* /hæv/

*Where **have** you been?* /əv/

As far as connected speech is concerned, the omission of 'h' in the second sentence leads to consonant-to-vowel linking between the words *does* and *he*. The same can be said of the fourth sentence, where the words *where* and *have* would also be linked by means of consonant-to-vowel linking.

Similarly to consonants, weak vowels can also be subject to elision. Dalby's research (1986) investigates schwa deletion in fast and slow English speech. His findings show that schwa was deleted in 2% of the tokens of slow speech and 44% of fast speech. Some linguists suggest that even in cases where schwa appears to be elided, there is phonetic evidence indicating the existence of a vowel at some level of analysis. Therefore, the term 'gestural overlap' is often used rather than deletion (Davidson 2006).

Schwa deletion depends on numerous factors such as lexical stress position, sonority, word length, or speech style. For instance, schwa is less likely to be elided in a pre-stressed environment. It is argued whether word frequency influenced schwa deletion. While some research indicates that higher-frequency words are more likely to undergo schwa deletion, others suggest that there exists no direct relationship between word frequency and the susceptibility to schwa deletion (Ryu & Hong 2013).

The elision of schwa tends to occur in the pronunciation of syllabic consonants. While the presence of schwa or the lack thereof are both correct, the process of schwa deletion in such circumstances is considered more natural. Thus, the word *middle* may be pronounced with schwa or without. The pronunciation with schwa, in this case /mɪdəl/, is more common among

children, while adults generally opt for a syllabic consonant /mɪdl̩/ (Oda 2007). Schwa deletion also occurs in weak forms, namely in the weak form of *can* where schwa may be replaced by the syllabic consonant /n̩/.

3.3 The factors influencing the use of strong and weak forms

As mentioned in the previous section, short grammatical words are more commonly pronounced in their weak forms. In fact, weak forms of grammatical words occur in the 200 most frequent words in connected speech. However, in certain contexts, strong forms are required. The rules for the use of strong forms can be encapsulated as follows:

a) a grammatical word at the end of a rhythmic group

Depending on the position within a sentence, either weak or strong form is employed. As opposed to the weak forms in medial positions, at the end of a rhythmic group, grammatical words are typically pronounced in their strong forms.

*She **could** hear the birds*. /kəd/ x *I know that I never **could**.* /kʊd/

*He voted **for** his friend.* /fə/ x *The person he voted **for** is his friend*. /fɔ:/

Gimson (2008) states that pronouns are the only weak forms which can occur at the end of a rhythmic group. Other grammatical words, such as auxiliaries, although unstressed and occurring at the end of a rhythmic group, retain full pronunciation.

*He has always liked **them**.* /ðəm/

Unstressed prepositions in final positions also receive qualitative prominence. A preposition before an unstressed pronoun (a) may be pronounced in either the strong or the weak form. Roach (1991) claims that rather than the strong form of *to* /tu:/, it is more common to use /tu/ in final positions (b).

a) *They were laughing **at** her*. /æt/, /ət/

b) *Who are you talking **to**?* /tu/

If a grammatical word is stranded, e.g. the element on which it depends is missing, the strong form is used.

*He is afraid **of** snakes*. /əv/ x *Snakes are what he is afraid **of***. /ɒv/

b) special emphasis

Grammatical words may receive stress for the purposes of emphasis. In other words, the usually unstressed word becomes stressed in order to highlight that a piece of information is contrary to what is understood by the listener.

*Is it true that you can't swim? – No, it isn't. I **can** swim*. /kæn/

In this specific example, the strong form is used to signal to the listener that the addressee of the question can, in fact, swim.

c) contrast

The strong form may be used for the purpose of drawing a contrast between two possible situations. In the following sentence, the two pronouns retain their full pronunciation because the speaker wants to contrast the addressee.

*I am asking **you**, not **him***. /juː/, /hɪm/

Roach (1991) also stresses that strong forms are used in the case of co-ordinate use of prepositions, e.g. in contexts where prepositions are being contrasted.

*He bought the car **for** her, not **from** her.* /fɔː/, /frɒm/

d) quotation

In cases where grammatical words are quoted or cited, full dictionary pronunciation is always required.

*Link these two clauses with the conjunction '**and**'.* /ænd/

In the sentence above, rather than a conjunction, *and* functions as an element which is being quoted and thus retains its full pronunciation /ænd/.

e) words whose pronunciation depends on their grammatical function

Certain grammatical words such as *some, that, there, who, must* are pronounced in their weak or strong form based on their function within the sentence.

Roach (1991) distinguishes two uses of the word *some*. *Some* before countable nouns (a) refers to an unknown being, and retains its strong form. Conversely, *some* before uncountable nouns and other nouns in the plural (b) describes an unspecified amount and is used in its weak form.

a) *She says that **some** vandal broke the window.* /sʌm/

b) *I have **some** news to tell you*. /səm/

The strong form of *that* is used when it functions as a demonstrative pronoun (a). On the other hand, the use of that as a conjunction (b) or a relative pronoun (c) requires the weak form.

a) *I want **that** apple.* /ðæt/

b) *They think **that** we should apologise.* /ðət/

c) *This is the tea **that** he loves.* /ðət/

There which has a demonstrative function (a) occurs in its strong form. There in existential sentences (b) tends to be pronounced in its weak form.

a) *They keys are over **there**.* /ðeə/

b) ***There** is some bread in the cupboard*. /ðə(r)/

When who has the function of an interrogative pronoun (a), the strong form is used. In contrast, the weak form is typical in cases when who serves as a relative pronoun (b).

a) ***Who** is the letter for?* /hu:/

b) *The girl **who** bought the house is coming today*. /hu/

In the case of *must*, Roach (1991) notes that when the word denotes a deduction or a conclusion (a), it is far more likely to occur in its strong form. The sense of obligation, on the other hand, is expressed by the weak form (b).

a) *Do you hear the noise? It **must** be the mouse*. /mʌst/

b) *You **must** ask before you leave the house*. /məst/

From the perspective of prepositions, *at, of, for, form,* and *to* are all reduced to schwa in their weak forms. The preposition to, however, possesses two possible weak forms; /tu/ before a vowel, and /tə/ before a consonant. Unlike personal pronouns or auxiliaries, prepositions do not undergo elision in unstressed positions. The strong form is used in accordance with the general rules summarised above, e.g. when two prepositions are contrasted in *not for her, but from her*.

4 Current research in weak form usage

It has already been stated that schwa is the most frequently occurring sound in English, but such is not the case in other languages which, in fact, often lack schwa in their vocalic systems altogether. Non-native speakers who are not familiar with vowel reduction are said to be

unlikely to reduce to schwa even at a high level of proficiency, although they tend to distinguish between stressed and unstressed syllables in terms of length. Another factor worth pointing out is that in classroom, grammatical words are typically introduced in their citation form, and learners are likely to remember and use this pronunciation the most (Lane 2010).

Speaking of Czech speakers of English, who also lack schwa in their vocalic system, the previous research into vowel reduction in weak forms of grammatical words revealed a partial tendency towards vowel reduction. The ability of Czech speakers to reduce the word *that* to its weak form was examined with regard to its function as either a conjunction or a relative pronoun. According to the results, Czech speakers used the weak form in approximately two-thirds of the required cases (Dostál 2013). In another research, speakers were asked to read a list of 112 sentences from the NonCol corpus, a speech corpus built at the Institute of Phonetics in Prague, which revealed the following findings. Czech speakers pronounced schwa in 45,5% of the analysed terms, particularly in the articles *the* and *a*, and words ending with *-er* or *-re.* Schwa produced by Czech speakers was also longer and louder than when produced by native speakers (Červinková Poesová & Weingartová 2018). Furthermore, as stated in the thesis exploring the ability of Czech learners to pronounce weak forms of prepositions *from*, *of*, *to*, was detected in 44% of the analysed items. Despite having attended phonology classes, the speakers were unable to produce weak forms of prepositions in connected speech (Kukačka 2018). In the research carried out by Skarnitzl & Rumlová (2019) targeting ten female speakers of Czech, vowel reduction in long words the vowels was detected in 37% of the analysed items. Schwa was most frequently substituted by /e/ or /ɛ/. Volín & Johaníková (2018) explored the duration of selected grammatical words in their weak forms pronounced by L1 speakers of British English and Czech. The production of weak forms by Czech speakers proved to be significantly longer than by native speakers of English.

The question arises to which extent native speakers reduce vowels. In the previously mentioned research (Poesová & Weingartová 2017), British speakers pronounced schwa in 90% of the analysed terms, approximately twice as much as the Czech learners. A research analysing the conversational speech of forty speakers from Columbus, Ohio, focused on vowel reduction in short grammatical words. A large number of pronunciation variants was revealed for every grammatical word featured in the analyses. The preposition *and*, for instance, was pronounced in one of its weak forms only in 4, 200 cases of the total of 10, 998 tokens (Makino 2010).

4.1 Teaching implications

Amongst the arguments in favour of teaching weak forms to non-native learners, several tend to be mentioned more frequently. First, the use of strong forms in canonically weak positions is claimed to make a learner's English sound overly foreign. Roach believes that "foreign-sounding is something that most learners would wish to avoid" (Roach 1991: 102). The second argument emphasizes that an "all-strong-form" pronunciation sounds unnatural to the native speaker's ear and can obstruct fluency. Finally, the use of strong forms where weak forms are required can result in a misunderstanding on the part of the listener as the lack of weak forms does not make it possible to distinguish which parts of the utterance are being highlighted (Finch & Ortiz Lira 1982). Listeners may think that a word is being emphasized, although the speaker has no intention of doing so (Wells 2000). Kenworthy supports these arguments, stating that:

> "Not only should learners be able to cope with the weak forms they hear, they must use them when speaking English. If they do not, their speech will present listeners with a surfeit of full vowels (which will make word recognition difficult) and with a surplus of stressed forms (which may make it very difficult for the listener to find his or her way through the message and identify points of focus)" (Kennworthy 1987: 79).

Accentuating the importance of schwa is one of the principles of a schwa-centred approach, which aims at emphasizing the role of this sound in creating contrasts between stressed and unstressed syllables (Poesová 2015). Numerous activities may be introduced in class in order to encourage students to pay attention to the occurrence of schwa and subsequently to the contrast between strong and weak forms.

Volín (2002) implements partial transcription, which only transcribes the vowel schwa in order to demonstrate the frequency with which schwa occurs in English. For the purposes of its reduced character, schwa is graphically smaller (Poesová 2015). Similarly, Gimson (2008) suggests that non-native speakers may become more familiar with the occurrence of schwa by reading text transcribed phonetically and by making phonetic transcriptions of English texts.

Kelly (2000) proposes another activity aimed at drawing attention to the high occurrence of schwa. Each student is given a card with a vowel sound and a list of words. When reading the words out loud, if the sound on their card appears, they stand up. The student with the sound

/ə/ on their card should, by the end of the activity, should have been required to stand up more often than others.

Additionally, there exist exercises which place focus on the distinction between strong and weak forms of grammatical words. Based on a listening activity, students may be asked to decide whether they heard a weak or a strong form (Poesová 2015).

Lane (2010) also notes that at lower levels of proficiency, reductions should be taught for recognition rather than production. Fast-speech reductions can be picked up through exposure to spoken English. In such cases, if learners start employing reduction and sound natural, there is no need to discourage them from doing so. However, reduction should be taught even at the beginning level should the full pronunciation lead to confusion. For instance, it is often unclear whether *can* or *can't* has been produced as the reduced vowel /ə/ plays a key role in distinguishing the positive from the negative.

4.2 English as a Lingua Franca

English as a Lingua Franca, ELF in short, belongs to the Global Englishes paradigm, which does not exclude native speakers of English, but it stems from the fact that most speakers of English are non-native speakers. The Vienna-Oxford International Corpus of English, the first ELF speech corpus, describes ELF as "an additionally acquired language system which serves as a common means of communication for speakers of different first languages". Non-native English varieties are viewed as different rather than being evaluated against a native English counterpart, or regarded as signs of language incompetence (Jenkins, Cogo & Dewey 2011).

Cogo (2012) emphasizes that ELF encounters are not obstructed by geographical location. On the contrary, they often take place on the internet. As a result, ELF is spoken by speakers from different linguacultural backgrounds. The ability of speakers to accommodate their speech patterns in order to ensure understating on the part of the listener is of particular interest to ELF researchers. The aim is to observe the strategies which ELF speakers use to make themselves understood.

Most ELF research has so far focused on speech and pronunciation-based intelligibility problems. From the perspective of phonology, it was revealed that the most important goal for speakers engaged in conversations was to be understood rather than to be correct. Based on the features contributing to the intelligibility in the ELF interaction, the Lingua Franca Core was

established by Jennifer Jenkins (2000), summarizing the crucial features which were likely to reinforce mutual intelligibility (Jenkins, Cogo & Dewey 2011).

The Lingua Franca Core stresses the positive influence of all consonants with the exception of /θ/ and /ð/, which are not responsible for the loss of intelligibility. Similarly, Jenkins believes that reduced vowels do not increase intelligibility. In fact, vowel reduction can obstruct understanding, and it is thus advisable to avoid it. As for vowels, the distinction between long and short vowels is far more significant than individual vowel quality. Except for the vowel /ɜ:/, the actual vowel quality does not seem to be important, providing that it is consistent. ELF speakers are required to learn to shorten vowels when they are followed by a voiceless consonant. Moreover, achieving correct prominence on stressed syllables is prioritized to the acquisition of schwa and weak forms. Teaching features such as word stress, stress-timing, reductions, or assimilations may hamper intelligibility, and it is thus not recommended (Jenkins 2000), (Walker 2001), (Deterding 2011).

Vowel reduction is by Jenkins (2000) viewed as unteachable, unlearnable, and unnecessary. Conversely, Dauer (2005) argues that it is difficult to speak at a natural speed while having to pronounce all the consonants, consonant clusters, and long stressed syllables without reduced syllables. Although these features may not contribute to intelligibility, they may help non-native speakers in terms of fluency.

Munro (2008) believes that foreign-accentedness does not result in loss of intelligibility, seeing that millions of second language users communicate successfully while retaining a foreign accent. Yet, it is important to point out that heavily accented speech generally tends to be less comprehensible and intelligible. However, Munro notes that even many native speakers do not necessarily meet these criteria. Cogo (2012) regards foreignness as an advantage which permits speakers to be more creative in creating strategies for achieving their communicative purposes.

Cogo (2012) emphasizes that ELF aims at raising awareness of there existing different ways of speaking English from which learners may choose the most suitable one based on their personal preferences. In certain contexts, native-like pronunciation is not advisable, and switching to ELF may be more appropriate. ELF values the ability of non-native speakers to accommodate to their listeners and to create new strategies of making themselves understood (Jenkins, Cogo & Dewey 2011).

From the ELF perspective, vowel quality is not considered as significant, providing that speakers are consistent in the vowel quality which they produce when speaking English. The

distinction between long and short vowels appears as a far more significant feature of the pronunciation of vowels for international intelligibility. Moreover, it is believed that teaching ought to put emphasis on achieving correct prominence of stressed syllables, rather than focusing on weak forms of schwa (Walker 2001). The lack of vowel reduction in weak forms does not result in loss of intelligibility. “Indeed, many well-known, excellent orators, such as Nelson Mandela and Kofi Annan, tend to use full vowels where other might have reduced vowels. But does anyone suggest that they need to speak more clearly?” (Deterding 2011). Mimicking native speakers from the UK or USA is regarded as unnecessary by representants of the Lingua Franca Core.

Practical part

The practical part of the thesis focuses on analysing a set of recordings of twelve non-native speakers of English taken from the L2-ARCTIC corpus, the aim of which is to discover to which extent L2 speakers employ weak forms of prepositions, specifically *at, for, from, of,* and *to* in initial and medial positions. The focus is placed on two parameters signalling the scale of vowel reduction; firstly, the duration of vowels, and secondly, the vowel quality. The temporal aspect will be measured and compared to the average value of vowels in General British.

Taking into consideration different L1s of selected speakers as well as previous research in vowel reduction of non-native speakers of English (see chapter 4) , three hypotheses were formulated:

1) Vowel reduction in the form of schwa will not be sufficient in the weak forms of selected prepositions regardless of L1 backgrounds
2) Temporal reduction will be more employed to a larger degree by L2 speakers than the obscuration of vowel quality
3) Weak forms of selected prepositions are likely to be produced shorter in medial than in initial positions

5 Method

The following material was selected in order to analyse the nature of vowel reduction in the weak forms of selected prepositions in the production of non-native speakers coming from various L2 backgrounds. The content of the L2-ARCTIC corpus was first scanned to ensure it contained an adequate number of the elements required for the phonetic analysis. The final sentences were chosen to provide a range of prepositions in different positions and contexts. The collected data was analysed, averaged, and compared using Microsoft Excel.

5.1 Material

The analysed sentences were taken from the L2-ARCTIC, a publicly accessible speech corpus of non-native English launched in 2018 as a collaboration between researchers from Texas A&M University and Iowa State University. The prime objective of the joint effort is to carry out research in accent conversion, voice conversion, and mispronunciation detection. According to the researchers, already established corpora such as CMU ARCTIC or the Speech Accent Archive had paid little to no attention to voice conversion of non-native speakers, only

offering a limited amount of accented English speakers. On this account, L2-ARCTIC was built in other to provide an adequate basis for training and evaluating voice and conversion systems and creating mispronunciation detection algorithms.

Apart from detecting mispronunciation, the researchers also focus on accent conversion, a set of speech-modification techniques which make it possible to transform non-native speech to sound more native-like. It is believed that a suitably selected native speaker who can be imitated by L2 speakers can positively influence their pronunciation techniques. For this reason, researchers aim at creating a so-called "golden speaker", a synthesis of the L2 learner's own voice with a native accent. These techniques are intended to be employed in order to achieve higher intelligibility and to avoid discriminatory attitudes.

The corpus includes recordings from twenty-four speakers whose first languages are Arabic, Hindi, Korean, Mandarin, Spanish and Vietnamese. Each speaker recorded approximately one hour of read speech of phonetically balanced short sentences, an average of nine words per utterance. Subsequently, each recording was equipped with orthographic transcription, force-aligned word boundaries, and force-aligned phoneme transcription. A team of assistants trained in phonetic transcription then analysed and manually annotated all 26 867 utterances in terms of three mispronunciation errors: additions, deletions, and substitutions.

The initial release consisted of ten speakers, one male and one female, for each of the L1s within the age range of 22 to 43 years. The proficiency level of their English was measured using TOEFL iBT scores, with an average of 93,9/120 points. TOEFL notes that 95 points correspond to CERF level C1. All participants were recorded using a Samson C03U microphone and Earamble studio microphone pop filter. Recordings which did not meet the required quality were removed from the corpus (Zhao, Sonsaat, Silpachai, Lucic, Chukharev-Hudilainen, Levis & Gutierrez-Osuna 2018).

From the total amount of twenty-four L2 speakers of English available in the L2-ARCTIC speech corpus, for each of the six L1 backgrounds (Arabic, Hindi, Korean, Mandarin, Spanish and Vietnamese), one male and one female were randomly selected prior to listening to the recordings. Thirty-three separate sentences were chosen to proportionately represent five prepositions (*at, for, from, of, to*) in both initial and medial positions. With the exception of *of* and *from*, each preposition was analysed four times in the initial position and four times in the medial position in terms of vowel reduction. *From* was analysed three times in the initial and five times in the medial positions. The preposition *of* occurred only once initially, and was therefore analysed seven times when occurring medially. Unfortunately, the final position is

not sufficiently represented in the dataset provided by the corpus. If it had been, it could have been interesting to observe the contrast between the weak and strong form usage. All selected sentences display the target prepositions in canonically weak positions where vowel reduction can thus be expected. While selecting the sentences, special attention was paid to the immediate context of each preposition in order to the examined prepositions before vowels (e.g. *For a full minute he crouched and listened*.), and before voiced (e.g. *But he no longer cared quite so much for that form of diversion*.) and devoiced consonants (e.g. *She had died from cold and starvation.).*

The final list of selected sentences is to be found in the Appendix. In total, 480 occurrences of prepositions were examined, each speaker being featured eight times for every single preposition. Prepositions in initial positions represent 40%, those in medial positions account for 60% of the analyses. As far as the initial position is concerned, 50% of the analysed prepositions occurred before a voiced consonant, 31% before a voiceless consonant, and 19% before a vowel. As for the medial position, 50% of the target prepositions occurred before a voiced consonant, 17% before a voiceless consonant, and 33% before a vowel.

5.2 Respondents

For each L1 background, one male and one female speaker were randomly chosen. It should be noted that, in most cases of the speakers featured in the L2-ARCTIC, the individual L1 background differs from English significantly.

As opposed to English, Arabic only has a 6-vowel system comprising short and long counterparts /i, i:, a, a:, u, u:/, where the length of the vowel can change the meaning of the word (Saadah 2011). Arabic speakers tend to confuse short vowels and avoid shortened forms. Similarly, Spanish also has a significantly smaller vowel inventory than English as it only uses a 5-vowel system, with the exception of Catalan, which recognizes a wider range of vowels. In Spanish, vowel duration neither distinguishes vowels nor changes the meaning of the utterance (Salcedo 2010). Standard Korean exhibits ten vowels divided into front and back, with again no central vowel schwa. Moreover, vowels do not occur initially in Korean and are always pronounced with a preceding consonant sound. Speakers of Northern Chinese, also known as Mandarin, are required to make more effort in order to distinguish English vowels as there are more vowel contrasts in English than in Mandarin (Smith, B., & Swan, M. (2001). In Vietnamese, seven out of eleven vowels are identical to English vowels. Generally, they are

described as pronounced with noticeably greater tension of the muscles in the articulating organs (Hoang 1965). Out of the six L1s included in the corpus, Hindi is the only one with possesses schwa in its vowel system. Each consonant in Hindi has inherent schwa which is dropped in some cases in pronunciation. Schwa deletion plays a crucial role in intelligibility speech (Magdum, Patil, Suman 2019).

In summary, with the exception of Hindi, none of the L1s featured in the analysis possess schwa in their vocalic system. Owing to the vowel inventory of each L1, speakers might find the pronunciation of English vowels difficult, and they might also vary in terms of vowel duration in the analysed positions.

5.3 Procedure

Once the L2 English speakers and the sentences were selected from the corpus, the initial part of the analysis took place. Firstly, each recording was listened to, and the vowel quality of the examined prepositions was evaluated perceptually by the author of the thesis. The perceptual evaluation took place twice; prior to the observation of the phoneme level transcription, and along with the phoneme level transcription provided by the L2-ARCTIC to verify the results, or to supply information if the vowel quality was not straightforward, and thus could not have been determined perceptually. The results were recorded into two separate Microsoft Excel charts, one displaying prepositions occurring initially, one medially. The phoneme level transcription available for each sentence featured in L2-ARCTIC was further used to transcribe all 480 prepositions in order to reveal the quality of prepositions in question.

In the next step, the duration in milliseconds of each preposition was calculated from the corpus. The proportion of vowel in each preposition was also calculated and expressed in percentage. Subsequently, the results were compared to the referential vowel duration in General British provided in the comparative analysis of vowel length in standard Slovak and in British English based on materials derived from recordings of broadcast news (Gregová 2008).

Finally, the differences in vowel duration were considered from the perspective of the position of prepositions in each sentence.

6 Results

Once all data was examined, the results were observed from two perspectives. Firstly, the quality of all prepositions was described as uttered by the speakers, and evaluated based on their immediate context. Secondly, respective prepositions were analysed in terms of their quantity. Moreover, the influence of initial and medial positions on vowel duration was also considered.

The results of the analysis revealed that no L1 speaker had pronounced the vowel /ə/ in weak positions of prepositions, although they did not maintain a respective full vowel quality either. All prepositions were thus analysed according to how individual L1 speakers had uttered them. *For, from, to* displayed wider variety of realization forms than *at* and *of*. The resulting realization forms were considered from the perspective of their immediate context.

It was found out that non-native speakers tended to pronounce prepositions in initial position longer than those occurring medially. Aspects such as the character of the following consonant, which can influence vowel duration, were also considered when presenting the results.

6.1 Weak forms – quantitative view

The analysis revealed that not a single /ə/ had been uttered by the respondents. Although vowel reduction resulting in schwa was not discovered in canonically weak positions of prepositions, even perceptually, the perceptual analysis revealed that the speakers did not maintain full vowel quality. The immediate context of each preposition was taken into consideration while describing individual realization forms.

The prepositions *for*, *from* and *to* displayed a greater variety of realization forms than *at* and *of*, which were pronounced the same by all respondents in 100% of the analysed items.

6.1.1 At

In its weak form, the preposition *at* changes in quality from the short vowel /æ/ to /ə/. *At* was examined 96 times, 48 times initially and 48 times medially. All 96 occurrences of *at* were pronounced as the front open vowel /æt/ and thus maintaining full vowel quality, regardless of the position of the preposition and different L1 backgrounds.

6.1.2 For

In the case of the preposition *for*, three different phonetic realization forms were discovered. *For* was analysed 48 times in the initial and 48 times in the medial position. It is also necessary to mention that all productions of *for* rhotic regardless of L1 backgrounds and the immediate context. 80% was realized producing [ɔ], or [ɔ:]. Speakers of Arabic, Mandarin, and Vietnamese and the female speaker of Korean employed no other realization form than [fɔr], which occurred equally in both initial and medial positions.

On the contrary, speakers of Spanish, the male speaker of Hindi, and the male speaker of Korean alternated between the use of [fɔr] and [frɝ], another realization form accounting for 18% of the number of prepositions in question. [frɝ] was used six times in the medial position and ten times in the initial position. 70% of all occurrences of [frɝ] in initial positions were used if followed by the English fricatives /s/ and /ð/.

The form [fɝ] was detected only twice, both in the initial position followed by /s/ and /ð/ and thus showing the same tendency as [frɝ]. It was uttered by the male speaker of Spanish and the male speaker of Hindi.

6.1.3 From

In total, the preposition *from* was analysed 96 times, out of which 60 items were inspected in medial and 36 items in initial positions. *From* was pronounced in two ways by the respondents, both of which feature central vowels. [frʌm] represents 85% of all occurrences of *from*. [frʌm] occurred in both the initial and the medial position, and it was a common realization form to all L1 speakers with the exception of both speakers of Spanish.

The form [fɝm] was detected in 15% of all cases, identical to the pronunciation of the word *firm* in the American accent. It was particularly used by both speakers of Spanish, who employed this realization form mainly in cases where *from* occurred in medial position.

6.1.4 Of

The preposition *of* in the initial position was featured in only one sentence in the corpus. 88% of the total number of 96 utterances of *of* were thus examined in the medial position. Nonetheless, the position proved to have had no impact on the realization form as all 96 occurrences were pronounced using [ʌv], featuring a central, however more open vowel quality.

6.1.5 To

Altogether, the preposition *to* was investigated 96 times, 48 times in initial and 48 times in medial positions. Similarly to *for*, *to* also displayed a greater variety of realization forms. Whilst

no weak form /tə/ was detected, the weak form [tu] used before a vowel was employed in 63% of cases. However, no L1 speaker showed consistency while pronouncing the preposition *to*.

65% of all utterances of [tu] occurred in initial positions, where it was employed at least twice by each non-native speaker. However, [tu] was also pronounced when preceding both the voiced (/ð/) and voiceless (/h/, /s/) consonants where the canonical pronunciation of *to* would include the vowel schwa. The remaining 35% occurring in the medial position was almost exclusively followed by a vowel. In such cases, no vowel-to-vowel linking with linking /w/ was detected.

The realization form [tʌ] accounts for 22% of the total amount of all occurrences of *to*. With the exception of two unrelated uses in the initial position, nineteen occurrences were found medially, especially if *to* preceded the voiced /d/ and the voiceless /s/. [tʌ] was pronounced at least once by each speaker, namely in the sentence *It is not an attempt to smash the market.*

The remaining 16% are represented by [ti], which was detected equally in both initial and medial positions. No relation between the realization form [ti] and the immediate context was found. It occurred before vowels as well as before consonants in the speech production of all L1 speakers except for both speakers of Hindi.

6.2 Weak forms – quantitative view

The analysed vowels varied not only in quality but also in quantity. Vowel duration is determined by the nature of the vowel and the nature of the following consonant. In English, vowels are more than 1.5 times longer before voiced than voiceless consonants (House 1961).

L2-ARCTIC provides force-aligned phoneme boundaries, which were used to calculate the duration of each vowel and then compared to the duration of the preposition including it in order to determine the proportion of the vowel in the preposition. The preposition *of* was not

taken into account when analysing vowel duration in the initial position as it only occurred once in the corpus. The average duration was calculated based on the occurrence in either the initial or medial position. It was expressed in milliseconds and rounded to one decimal place. Moreover, the average duration for individual nationalities was explored.

	AT	FOR		FROM		TO		
	[æ]	[ɔ]	[ɜ˞]	[ʌ]	[ɜ˞]	[ʌ]	[ɪ]	[u]
initial	129	59,8	49	62	87,5	65	72,9	74,3
medial	118,9	59	72,3	61	77	89,5	67,5	97,6

Table 1. The average vowel duration of all vowels revealed in the realization forms of analysed prepositions.

The following values in General British were taken from a comparative analysis of vowel length in standard Slovak and in British English based on phonetic analysis of materials derived from recordings of broadcast news. The vowels used for the analysis were investigated in stressed, closed syllables (Gregová 2008).

	/æ/	/ʌ/	/ɪ/	/ɔ:/	/u:/	/ɜ:/	/ə/
GB	94	79	60	130	107	136	52

Table 2. The referential vowel duration in RP analysed on recordings of broadcast news.

As far as the average duration of the investigated prepositions is concerned, regardless of the position within the sentence, the longest vowel was detected in *at*, equalling 124,4 ms. As it was discovered in section 8.1.1., *at* was the only preposition which was produced with full vowel quality, and no vowel reduction was detected. On the other hand, the shortest average vowel duration was represented by *for*, with 61,3 ms. The preposition *from* was only 4 ms longer than *for,* amounting to 65,3 ms on average. *To* equalled 82,8 ms.

Speaking of the general influence of initial and medial positions on vowel duration, the preposition *at* was pronounced shorter in the initial position. *At* in the middle position equalled 118,9 ms, while the average duration in the initial position amounted to 129 ms. The preposition *from* was generally pronounced shorter in the medial position. On the other hand, *to* in the medial position tended to be longer by 24 ms on average.

There proved to be a contrast in vowel duration of individual L1s. Speakers of Vietnamese tended to pronounce vowels much longer in the initial position than other non-native speakers, by 25,4 ms on average. Similarly, vowels produced by Hindi speakers of English were longer by 18,8 ms in the initial position. Conversely, vowels produced by Mandarin speakers of English were pronounced shorter in the medial position than in the initial position, by 24,4 ms on average. Speakers of Spanish and Arabic did not stand out in terms of vowel duration, they generally produced longer vowels in the medial position, by 10 ms on average.

From the perspective of gender, the results seemed to be rather balanced. Although previous research into gender differences in vowel duration of American English vowels has reported that native female speakers exhibit longer vowel duration (Hillenbrand, Getty, Clark &Wheeler 1995), this tendency was not reflected in this specific analysis of L2 speakers. While in initial positions, male and female speakers produced vowels of equal duration, in medial positions, male speakers tended to pronounce longer vowels by 9 ms on average.

Speaking of the proportion of vowels in the target prepositions, as revealed above, *at* was found to include the longest while *for* the shortest vowel. On average, [æ] accounted for 56% of the duration of the preposition *at* in the initial position and for 60% in the medial position. Conversely, [ɔ] in *for* represented 24% of the duration of the preposition in the initial position and 21% in the medial position. The realization form with [ɝ] equaled 32% of the duration in the initial position and 46% in the medial position. Unlike [ɔ], [ɝ] was pronounced longer in medial positions.

Furthermore, different phonetic realizations of the vowel in the preposition *for* displayed different vowel duration. On average, [ɝ] in the initial position was 49 ms, for [ɔ] 59,8 ms. On the other hand, [ɔ] in the medial position proved to be shorter than [ɝ]. If compared to the referential vowel duration of the vowel /ɔ:/ in GB, which occurs in the strong form of *for*, both [ɔ] and [ɝ] were significantly shorter as the average duration of /ɔ:/ amounted to 130 ms. For reference, the average vowel duration of /ə/ equals 52 ms, and while schwa itself was not detected, the reduction of the temporal character can be observed.

Equivalently, different phonetic realizations of *to* also demonstrated a range of vowel durations. Unlike the vowel in [ti], vowels in both [tu] and [tʌ] were pronounced longer if they occurred in medial positions. The average length of /u:/ occurring in the strong form of *to* in RP equaled 107 ms. All three phonetic realizations thus exhibited shorter vowel duration in both initial and medial positions. The average length despite the position within the sentence amounted to 70 ms for [i], 77 ms for [ʌ], and 86 ms for [u].

In the case of *from*, the phonetic realization with [ʌ] was shorter than [ɜ˞] in both initial and medial positions. Whilst the vowel /ɒ/ in strong form equalled 70 ms according to the referential vowel duration in RP, [ʌ] was pronounced slightly shorter, with an average duration of 62 ms regardless of the position. On the contrary, the average duration of [ɜ˞] amounted to 82 ms.

Compared to the referential vowel duration in RP, it can be perceived that, with the exception of [ɪ] and [æ], the duration of said vowels produced by L1 speakers was considerably shorter. Thus, there was a general tendency to shorten vowels in short grammatical words, namely prepositions, despite never producing schwa. In fact, several vowels approximated the referential vowel duration of schwa.

Discussion

Three hypotheses were formulated prior to the analysis, all of which were proved to be partially valid. It was revealed that selected non-native speakers of English lack vowel reduction to schwa regardless of their L1 background. Based on this finding, the phonetic realization forms of the prepositions were analysed with emphasis on vowel duration in order to explore the degree of vowel reduction by non-native speakers. The results were then assessed from the perspective of individual L1s, gender, and the influence of initial and medial positions of the preposition. Finally, the referential vowel duration in General British was compared to the findings.

Despite the absence of schwa, speakers displayed a wide variety of realization forms when producing selected English prepositions. Two prepositions were pronounced in the same way by all speakers. The preposition *at* was produced solely in its strong form regardless of its position within the sentence. Similarly, the only realization form of *of* proved to be [ʌv]. On the contrary, the preposition *for* was most frequently pronounced as [fɔr], less frequently as [fɚ] or even [fɚr]. The most common realization form of the preposition *to* was [tu], although speakers did not show consistency when producing this preposition. *From* was typically pronounced as [frʌm].

As for the partial vowel reduction, it was revealed that there was a general tendency towards shortening vowels, although the assumption that vowels occurring in prepositions in initial positions would be pronounced longer did not prove to be completely valid. While the preposition *at* was frequently pronounced with a longer vowel in initial positions than in medial positions, different realization forms of *for*, *from* and *to* showed an opposing tendency as they were often pronounced with longer vowels if occurring in medial positions. When compared to the referential vowel duration of vowels in RP, amongst all the vowel which were detected in different realization forms, only /ɪ/ and /æ/ were pronounced longer. The duration of other vowels was often considerably shorter than that of vowels in RP.

The character of individual L1 backgrounds was reflected in the final results. Speakers of Vietnamese and Hindi produced longer vowels than other speakers in both initial and medial positions. On the other hand, speakers of Mandarin produced shorter vowels in medial positions than in initial positions. Other speakers did not differ from each other in terms of vowel duration. The question of gender differences was also briefly summarized. In initial positions, male and female speakers produced vowels of comparable duration, while in medial positions, male speakers tended to produce slightly longer vowels.

The results of the analysis are in accordance with the previous research in vowel reduction by non-native speakers of English. Similarly to Czech speakers of English (see chapter 4), the respondents had difficulties producing the vowel schwa in unstressed grammatical words. Unlike Czech speakers, who in the research carried out by Dostál (2013) produced schwa in 45,5% of the analysed terms, the respondents featured in this thesis did not produce schwa in any of the 480 analysed items. From the ELF perspective, vowel quality is not considered significant, which indicates that the revealed realization forms produced by L2 speakers are acceptable. Moreover, the lack of weak forms in the selected prepositions produced by the respondents is believed not to result in the loss of intelligibility.

Conclusion

The aim of this thesis was to explore the phenomenon of weak forms of grammatical words and their significance for the English language.

The theoretical part first situated weak forms into the context of connected speech, rhythm, and the concept of vowel reduction and vowel elision. Subsequently, an overview of the factors for the use of weak forms was introduced. Finally, both phenomena were looked at from the perspective of ELF and their importance, or the lack thereof, for the Lingua Franca Core.

The practical part of the thesis focused on the ability of non-native speakers of English to reduce vowels in weak forms of prepositions. The analysis of recordings taken from the L2-ARCTIC corpus explored the degree of vowel reduction in the speech production of speakers of Arabic, Hindi, Korean, Mandarin, Spanish and Vietnamese. For each L1 background, one male and one female were randomly chosen. The examined samples all represented short sentences where prepositions appeared in either initial or medial positions.

Prior to the analysis, it was assumed that non-native speakers would lack vowel reduction in grammatical words regardless of different L1 backgrounds, but it was not known to what extent. It was discovered that selected non-native speakers tended to temporally reduce vowels rather than producing the vowel schwa in canonically weak forms of prepositions. A number of realization form was revealed and described based on the frequency of their occurrence, or factors which might have influenced their production in the respective context. Furthermore, the hypothesis regarding the temporal reduction of vowels was partially verified. The respondent tended to produce shorter vowels, several of which approximated the referential duration of schwa. The tendency towards vowel shortening was supported by the comparison to the referential vowel duration in Standard British. Finally, the assumption that the selected prepositions would be produced longer in initial positions was not verified. While with some prepositions such as at, there was a general tendency for producing longer vowels in initial positions, various realization forms of *for*, *form*, and *to* exhibited opposing findings and were, in fact, often longer in medial positions. Subsequently, the findings were compared to various research focused on the ability of Czech speakers to reduce vowels. Finally, the perspective of the Lingua Franca Core was considered when evaluating the significance of weak forms and vowel reduction as a whole.

In the light of the various approaches to teaching or not teaching vowel reduction in class, it appears that the most important question is what the personal aims of individual ESL speakers

are when it comes to pronunciation. Should one wish to achieve so-called comfortable intelligibility, there seems to be no need for producing weak forms of function words. According to the LFC, the lack of vowel reduction, in general, can increase international intelligibility. Conversely, if the pronunciation goal concerns approximating a native-like accent, e.g. General British accent, weak forms certainly contribute to reaching such goal while also enhancing comprehensibility for native interlocutors.

Hopefully, this thesis will serve as a reminder of the fact that different non-native speakers of English have different aims when it comes to language acquisition. Regardless of whether one wishes to approximate native accent or to become comfortably intelligible, it is essential to keep in mind that there might exist certain contexts where it might be advisable to be adaptable in order to ensure comprehensibility both on the part of the listener and the speaker. Thus, even though vowel reduction and weak forms are perceived by ELF as obstructions to understanding, non-native speakers ought to be familiarized with the existence of such phenomena in order to successfully comprehend and communicate with native speakers or non-native speakers who produce weak forms and shorten vowels.

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Appendix

1. The final list of sentences from the L2-ARCTIC corpus

All coloured prepositions were analysed based on their position within the sentence, red ones in initial positions, green ones in medial positions. Prepositions which are not colour coded were not included in the analysis.

At this moment, I felt a stir **at** my shoulder.
At once would be instituted a dozen cooperative commonwealth states.
At Lake Linderman I had one canoe, very good Peterborough canoe.
At sea, Monday, March 16th, 1908.
You don't catch me **at** any such foolishness.
They obeyed him and went here and there **at** his command.
But I am **at** the end **of** my resources.
Of course, that is uninteresting.
A dead man is **of** no use on a plantation.
It seems like a strange pointing **of** the hand **of** God.
He was a head shorter than his companion **of** almost delicate physique.
From my earliest recollection my sleep was a period **of** terror.
But he no longer cared quite so much **for** that form **of** diversion.
For a full minute he crouched and listened.
For the first time in his life, he was yearning **for** a scrap.
For an instant he saw Pierre drawn like a silhouette against the sky.
For such countries nothing remained but reorganization.
This is no place **for** you.
He saw Jeanne falter **for** a moment.
From now on we're pals.
From that moment, his friendship for Belize turns to hatred and jealousy.
You, you would not keep the truth **from** me.
Already he had begun borrowing **from** the banks.
When he returns **from** a trip to Honolulu.
She had died **from** cold and starvation.
Men like Joe Goose dated existence **from** drunk **to** drunk.
To his surprise her answer was flat and uncompromising.

To her the bridge was tambo which is the native for taboo.

To say the least Captain Cook was a rather thorough going empiricist.

To my dearest and always appreciated friend I submit myself.

I never allow what can't be changed **to** annoy me.

He had been foiled in his attempt **to** escape.

It is not an attempt **to** smash the market.