The -ed suffix

Pronouncing *kissed* as [kizd], *pushed* as [puzsd], etc. is one of the most salient features of Hungarian-accented English. (The last two consonants of these two examples should be the same as those of the Hungarian words *liszt* 'flour' and *most* 'now', respectively). The *-ed* suffix (used to mark both the past tense and the past participle of regular verbs) may be pronounced in three different ways, and the choice between the forms is primarily based on whether the last sound of the root verb is voiced or voiceless. Out of its three forms, the [t] pronunciation of the suffix may be problematic even for advanced-level Hungarian learners due to the opposite direction of voicing assimilation in English and Hungarian.

The regular past tense and past participle suffix -ed has three pronunciation variants: it may be pronounced [d] (e.g., in killed), [t] (e.g., in kissed) or [Id] (e.g., in cheated). What determines which one of the three forms is pronounced in a given word is the last sound of the stem the suffix is attached to:

- The [Id] form is used if the stem ends in [t] or [d]. Note that the letter <e> in the suffix is only pronounced in this case and not in the other two a linking vowel [I] is needed as it would be too uncomfortable to pronounce *wanted* as [wpntd], and two [d]'s one after the other (*mended* [mendd]) is not an option, either.
- The choice between the other two forms depends on whether the stem ends in a voiced or a voiceless sound i.e., if the stem-final sound is voiced (apart from [d]), the suffix is pronounced [d], and if the stem ends in a voiceless sound (apart from [t]), the [t] form of the suffix is used.

Of the three pronunciations of the suffix, the one with which Hungarian learners will have particular difficulty is the [t] form: in a typical Hunglish accent, words like *ripped*, *laughed*, *kissed*, *pushed*, etc. (in all of which the suffix is pronounced [t] in English) will end in [-bd], [-vd], [-zd], [-zd], respectively.

The reason why Hungarians have problems with such examples is that in these cases the phenomenon called voicing assimilation ("zöngésségi hasonulás" as it is called in Hungarian) works in the opposite direction in the two languages. Let us revise how voicing assimilation operates in Hungarian in order to better understand why the English examples cause difficulties for Hungarian learners. Consider the following joke:



Whoever came up with the joke knows (either implicitly or explicitly) that the stem-final [g] sound of the auxiliary fog changes into a [k] if the second person singular -sz suffix (pronounced [s] in Hungarian) is attached to the word, therefore the word fogsz 'you will' is pronounced [foks], and apart from its vowel it sounds the same as the English word fox. A similar example is when the second person imperative marker -d suffix (used with definite objects) is attached to voiceless-final stems: the definite conjugation of the word rak 'put' in imperative mood in the second person (rakd) is pronounced [rogd]. Note that the former example is a case of devoicing (a voiced sound changes into a voiceless one), and the latter is a case of voicing (a voiceless sound changes into a voiced one) — what is fixed is the direction of the assimilation: it is always the second consonant that is "stronger" and influences the one before it, so the first consonant assimilates to the second one in voicing.

Of the two examples presented above, the latter explains the difficulty with the [t] form of the *-ed* suffix in English: according to the rules of voicing assimilation in Hungarian, whenever the Hungarian suffix *-d* is attached to voiceless-final stems, the suffix will be pronounced [d], and it is the stem-final voiceless sound that will become voiced, see Table 1:

[p]	kapd [kvbd]		
[f]	döfd [døvd]		
[s]	mászd [maːzd]		
	mosd [moʒd]		
[tʃ]	<i>öntsd</i> [øndʒ <mark>d</mark>]		
[k]	rakd [rog <mark>d</mark>]		

Table 1

Let us now see how English is different from Hungarian in this respect. Table 2 compares two examples from each language:

Hungarian	English
$kap+d \rightarrow ka[\mathbf{bd}]$	$rip(p)+ed \rightarrow ri[\mathbf{pt}]$
V	U
$m\acute{a}sz+d \rightarrow m\acute{a}[\mathbf{zd}]$	$kiss+ed \rightarrow ki[st]$
U	V

Table 2

As the table shows, the two languages apply different strategies when the -d / -ed suffix is attached to roots ending in a voiceless consonant (such as [p] or [s] in the table): in Hungarian, the suffix influences the root-final consonant, which will get voiced. In English, on the other hand, the pronunciation of the stem is kept unchanged, and the stem-final consonant influences the suffix, which will be pronounced [t].

Let us see this in more detail. In order to fully understand the whole phenomenon, one must be familiar with voiced and voiceless sounds, as well as the way in which they form pairs: members of a pair share the same place of articulation ("a képzés helye" in Hungarian) and manner of articulation ("a képzés módja"), and they only differ in that one of them is produced with vocal cord vibration, and the other one is not. Table 3 summarises the voiceless and voiced consonants of English in pairs. Hungarian learners are supposed to be familiar with which consonants are voiceless and which ones are voiced (this is taught in Hungarian grammar lessons in the fifth grade of primary school the latest), so it is only the three "un-Hungarian" consonants of English that need special attention: $[\theta]$ (as in \underline{think}), $[\delta]$ (as in \underline{this}) and [w] (as in \underline{win}) do not exist in Hungarian. The first two constitute a voiceless-voiced pair (just like [p]) and [b]), and the last one is voiced and has no voiceless counterpart (just like [p]).

voiceless	[p]	[f]	[θ]	[t]	[s]	$[\int]$	[tʃ]	[k]	-	-	-	-	-	-	-	[h]
voiced	[b]	[v]	[ð]	[d]	[z]	[3]	[dʒ]	[g]	[m]	[n]	[ŋ]	[1]	[r]	[w]	[j]	-

Table 3

Let us ignore the [Id] form of the suffix for the time being and let us have a closer look at the other two cases. In Table 4, we list all the voiced and voiceless sounds apart from [d] and [t]

that may occur at the end of words¹, and we provide an example of each to illustrate the pronunciation of the suffix:

	VOICED SOUNDS	VOICELESS SOUNDS				
[b]	robbed [rɒ bd]	[p]	ripped [rɪ pt]			
[v]	loved [lavd]	[f]	laughed [lɑː ft]			
[ð]	breathed [briːðd]	[θ]	2			
[z]	<i>closed</i> [kləʊ zd]	[s]	kissed [kɪ st]			
[3]	3	[ʃ]	pushed [pvst]			
[dʒ]	changed [t∫eɪn dʒd]	[tʃ]	stretched [stretst]			
[g]	begged [be gd]	[k]	clicked [klɪ kt]			
[m]	seemed [si:md]					
[n]	rained [reɪ nd]					
[ŋ]	hanged [hæŋd]					
[1]	filled [fɪ ld]					
[r] ⁴	barred (GA) [ba rd]					
vowels	glued [glu:d], cried [kraɪd], etc.					

Table 4

Due to the different directions of voicing assimilation in the two languages, Hungarian learners will have difficulty with all examples on the right side of the table: the typical Hunglish pronunciation of a case where the *-ed* suffix is attached to a voiceless-final stem will involve the suffix being pronounced as [d] (based on the spelt form of the suffix), and the stem-final consonant getting voiced. Table 5 summarises this:

¹ The sound /h/ does not occur at the end of words in English (words like *Pooh*, *Noah*, *Allah*, etc. end in a vowel), and as we will analyse words like *cow* and *boy* as ending in complex vowels called diphthongs (/ao/ in the former case and /ɔɪ/ in the latter), we will say that /w/ and /j/ do not occur word-finally, either. This is why these three sounds are missing from the table.

² As there are only a few, extremely rare verbs ending in θ , we ignore this case.

 $^{^3}$ As there are only a few, extremely rare verbs ending in $\frac{1}{3}$, we ignore this case.

⁴ /r/ only occurs at the end of words in certain pronunciation varieties of English, such as the standard American accent called General American (GA).

	English	Hunglish
ripped	[rɪ pt]	[ri <mark>bd</mark>]
laughed	[la: ft]	[laː vd]
kissed	[kɪ st]	[ki zd]
pushed	[pʊ ʃt]	[puʃ <mark>d</mark>]
stretched	[stre tʃt]	[stred3d]
clicked	[klɪ kt]	[kli <mark>gd</mark>]

Table 5

The pronunciation of those Hungarian learners who learnt English at school rather than picked it up in a naturalistic setting at a young age is highly likely to display this typical Hunglish feature of pronouncing the -ed suffix as [d] after voiceless-final stems and voicing the stem-final consonant. This pronunciation error occurs relatively frequently even in the accent of those Hungarian learners of English who have a good overall accent of English: for some reason, the misleading effect of spelling and the Hungarian direction of assimilation are so strong that learners often do not even notice that -ed is sometimes pronounced [t] until this is specifically pointed out to them. Without having explicit knowledge on this, a Hungarian learner might not understand jokes like the one below, the basis of which is that the words mist and missed are pronounced the same:

"I tried to catch some fog. I mist."

In order to get what the joke is, one needs to be aware of the pronunciation of the words involved in it – if a Hungarian learner associates the form [mɪst] with the word mist only, and not with missed because they think it is [mizd], they might have a hard time understanding what this joke is about.

At this point the question arises how serious a problem it is if a Hungarian learner makes this pronunciation error. It is not particularly serious in the sense that this pronunciation problem is highly unlikely to cause any intelligibility issues: there are word pairs that may become indistinguishable in a Hunglish accent due to this phenomenon (e.g., *ripped* and *ribbed*, *searched* and *surged*, *tacked* and *tagged*, etc.), but there are not too many examples like this, and even the examples we may find are not too frequent words.

The reason why it might still be worth learning the pronunciation of the -ed suffix for Hungarian learners is that this feature is not too difficult either to teach or to learn, especially in comparison to other features. Note that in order to properly pronounce the suffix in words

like ripped, laughed, kissed, pushed, stretched and clicked, a Hungarian learner does not need to learn to articulate any un-Hungarian sounds. With the exception of [tʃt], there are Hungarian words ending in these consonant sequences (e.g., kopt 'Coptic', lift 'lift', liszt 'flour', most 'now', akt 'nude', etc.), therefore no ear-training sessions are necessary before learners should attempt to produce the problematic words, unlike in cases when the learner is to acquire a sound contrast that does not exist in their native language, such as that between [æ] and [e] (cf. the "Read more..." section belonging to the topic of homophones). All that is needed is drawing the learners' attention to the phenomenon, because, as it has already been mentioned, they do not usually notice it until the feature is explicitly pointed out to them, but once the feature is highlighted, there cannot be a problem with learners' perception of the phenomenon. This relative easiness both to teach and to learn this feature justifies its inclusion in the EFL lesson, in addition to the fact that since -ed suffixed verbs are quite frequent, this Hunglish feature is a rather salient one, and not making the typical Hunglish error significantly improves the general impression a Hungarian learner's accent of English makes.

What is debatable though is *when* to teach the feature because there are two conflicting factors to consider. On the one hand, it can be understood if a teacher of elementary learners decides against dealing with this issue on the grounds that it is more important for their learners to be able to communicate, and developing this Hunglish feature is not among the problems that should be avoided if possible. However, what needs to be considered is that later, after the learner has memorised dozens (if not hundreds) of verbs in the Hunglish form, it is a lot more difficult to correct this error type than *avoiding* the problem by paying attention to the feature from the point where the learners first encounter past tense verbs.

It is not obvious if prevention is necessarily better than cure in this case, but it is certainly easier – un-learning incorrectly acquired forms requires weeks or even months of hard work, a significant portion of which must be done in writing in the form of awareness-raising exercises with which the learner can internalise the rule, because the "therapy" is not likely to be successful without the learners' being fully conscious of the regularity. The first step of "un-learning" Hunglish forms is for the student to acquire conscious knowledge with which they can confidently determine how the suffix will be pronounced in any word without having to think about it, and even after the learner has developed the consciousness necessary to "un-learn" the Hunglish pronunciations, it may still take them long to acquire the skill of noticing other Hungarian learners (let alone themselves) making this type of error and finding it irritating in others' speech – only after this has been achieved can the learner slowly and gradually change the incorrectly memorised forms. As this requires excessive exposure to both the target

language forms and the Hunglish ones, it may really take months or even up to a year to fully acquire the pronunciation of the suffix, even for highly motivated learners who make conscious effort to do so. This is what can be avoided if a teacher *prevents* the mispronunciations from developing – if attention is paid to the three pronunciations of the suffix from the very start (i.e., when the learners first encounter past tense verb forms), it might be enough to teach the rule indirectly through "listen and repeat" activities and correcting the learners if the Hunglish forms emerge. Whether prevention, cure or ignorance is the best option in the case of a particular group of learners, however, is a decision that is up to each individual teacher to make.

The *-ed* suffix in EFL coursebooks

It needs to be discussed how EFL coursebooks usually teach the pronunciation of the -ed suffix, because if a teacher decides to deal with this issue, they might find that the coursebook they use does not provide sufficient support (or worse, it might also happen that what the coursebook offers does more harm than good to their learners).

EFL coursebooks have a tendency to highlight the [Id] form of the suffix, e.g., by making the learners circle those examples from a list of -ed suffixed verbs in which a linking vowel is pronounced. There are two reasons behind this: one is that speakers of certain native languages have difficulty pronouncing two consonants at the end of words (for some speakers, e.g., Italians, pronouncing even one word-final consonant will be problematic because in their native language all words end in vowels). Such learners may insert vowels in all -ed suffixed words, and activities focusing on where a linking vowel is actually pronounced helps them stop pronouncing vowels where they are unnecessary.

The other reason for highlighting the [Id] form of the suffix is that irrespective of whether their first language allows multiple consonants at the end of words, elementary learners may find it confusing that a letter <e> is present in the suffix even when there is no vowel pronounced in it: if we look at the spelt forms of words like *opened*, *jumped* and *wanted*, we can understand that an elementary learner may be puzzled by the fact that a letter <e> is spelt in all three types of examples, but it is only pronounced in the last case.

As Hungarians have no problems with the pronunciation of two consonants next to each other, it is only this problem with the confusing spelling that may affect Hungarians: elementary learners' accents display mispronunciations like "ópenid/ópened" or "dzsampid/dzsamped"; however, such errors tend to disappear relatively early in the language learning process. Highlighting the [Id] form of the suffix even at higher levels might be needed for those speakers for whom the pronunciation of multiple consonants is the problem, but Hungarian learners

usually master by pre-intermediate or at most intermediate level when to pronounce a linking vowel and when not to. For them, therefore, circling the [ɪd] forms at higher levels in a written exercise may even do them more harm than good, because not only would that distract the learners' attention from something they might need to notice (namely, the [t] forms, which they are likely to pronounce wrong unless they acquired or were properly taught the pronunciation of the suffix earlier), but the fact that the task is too easy for non-beginners may make them believe that pronunciation activities are superfluous and useless in general.

It is the teacher's responsibility to know what kind of pronunciation support their learners need – if Hungarian learners no longer have difficulties with the linking vowel, the targeted issue with the suffix should not be the pronunciation of the [ɪd] form, but (if anything) the [t] form. Note that equal attention to the three pronunciations of the suffix is not ideal, either: there is absolutely no need to practice or even highlight the [d] form of the suffix because Hungarian learners will automatically pronounce it correctly – the -ed suffix in words like robbed will be pronounced similarly to how Hungarian verbs ending in voiced sounds are pronounced if the imperative marker -d is attached to the stem (e.g., dobd 'throw, 2nd pers. imperative, definite'), i.e., the suffix will be pronounced [d] and the stem-final consonant will not (need to) change. Therefore, if the three pronunciations of the -ed suffix are not dealt with at the early stages of language learning, it is crucial that the [t] form is called attention to in the case of higher-level learners.

An extension: The -s suffix

It might be worth highlighting that there is another suffix that behaves in the same way as -ed: the suffix -(')s used to signal the plural or possessive forms of regular nouns as well as the 3^{rd} person singular forms of verbs. As the rules determining the three pronunciations of this suffix are basically the same as in the case of -ed, and thus the difficulties Hungarian learners have with the suffix are also of the same nature, we will only mention those aspects of the rule here that are specific to -s.

The suffix -s may be pronounced [s] (e.g., in cats), [z] (e.g., in dogs) or [IZ] (e.g., in horses):

• The [IZ] form is pronounced not only after [s] and [Z] (remember why the linking vowel is needed after [t] and [d] in the case of the -ed suffix), but after four more sounds: [ʃ] (e.g., in pushes), [ʒ] (garages), [tʃ] (churches) and [dʒ] (bridges). What the sounds [s], [z], [ʃ], [ʒ], [tʃ] and [dʒ] have in common is that they are hissing and hushing sounds

- that do not like to be next to one another, this is why a linking vowel is pronounced if the -s suffix is attached to stems ending in these consonants.
- Just like in the case of -ed, the choice between the other two forms depends on whether the stem-final sound is voiced or voiceless. Table 6 summarises all possibilities and provides an example of each case.

	VOICED SOUNDS	VOICELESS SOUNDS				
[b]	jobs [ძვა ხ z]	[p]	groups [gruː ps]			
[v]	loves [lavz]	[f]	laughs [la: fs]			
[ð]	clothes [kləʊðz]	[θ]	months [$mAn\theta_s$]			
[d]	heads [hedz]	[t]	cats [kæts]			
[g]	eggs [egz]	[k]	books [bu ks]			
[m]	drums [dra mz]					
[n]	means [mi: nz]					
[ŋ]	kings [kɪŋz]					
[1]	feels [fi: lz]					
[r]	cars (GA) [karz]					
vowels	bees [biːz], skies [skaɪz], etc.					

Table 6

Two remarks are in order here.

• First, notice that in this case it is the voiced pronunciation of the suffix that will cause the typical Hunglish problem – based on the spelt form of the suffix, Hungarians will pronounce it as [s] in most cases, so it is in the case of stems ending in voiced sounds where the Hunglish mispronunciations will occur, though in this case the stem-final consonant will not change in all example types as not all voiced consonants take part in voicing assimilation – see Table 7 for examples.

	English	Hunglish
jobs	[dʒɒ bz]	[dʒo ps]
loves	[la vz]	[lafs]
clothes	[kləʊðz]	[klo: ts]
heads	[hedz]	[hets]
eggs	[egz]	[eks]
drums	[dra mz]	[dra ms]
means	[mi: nz]	[mi: ns]
kings	[kɪ ŋz]	[kiŋ ks] ⁵
feels	[fi: lz]	[fi: ls]
cars	(GA) [ka rz]	[ka rs]
bees, skies, etc.	[biːz], [skaɪz], etc.	[biːs], [skajs], etc.

Table 7

• Second, many non-native speakers of English, including Hungarians, have problems pronouncing the TH-sounds [θ] and [ð], and they may want to pronounce a linking vowel before the suffix in words like *clothes* and *months*. This might be because of the mere fact that the articulations of [θ] and [ð] are unfamiliar and therefore difficult for non-native speakers, and they feel it is "easier" to pronounce these sounds in *clothes* and *months* if they insert a vowel between the TH-sound and the suffix. Another reason why a non-native speaker would unnecessarily insert a linking vowel in words like *clothes* and *months* is that in non-native accents of English, [θ] and [ð] may be substituted by consonants that are among the six after which -*s* is pronounced [ɪz] (namely, some speakers pronounce [s] instead of [θ], and [z] instead of [ð] – though for Hungarians it is the former that is more likely to be relevant as the typical Hunglish substitution of [ð] is not with [z] but with [d]).

Similarly to how certain -ed suffixed forms that are pronounced differently in English may merge in a typical Hunglish accent (recall the examples ripped and ribbed, searched and surged, tacked and tagged, etc.), word pairs like pigs [pigz] and picks [piks], eggs [egz] and ex [eks], etc., may be pronounced the same by Hungarians. The following joke therefore only works in Hunglish:

⁵ The word *king*, which is pronounced [kiŋ] (i.e., without a [g] at the end), is pronounced [kiŋg] in Hunglish, because [η] does not occur at the end of words in Hungarian; words like *hang*, *kong*, etc., end in [ηg], i.e., the [g] is pronounced. Therefore, although [η] does not have a voiceless counterpart, in this case the [g] that Hungarian speakers insert will change into [k].



As for the representation of the -s suffix in EFL coursebooks, the case is less problematic than that of -ed, because -s does not contain a letter <e> that is silent most of the time, therefore the only case a beginner might be puzzled by is when the stem has a silent letter <e> at the end that the suffix is attached to: if we compare the spellings of homes, phones and times, etc. to those of buses, dresses and kisses, we may find a reason why it is justified if a pronunciation activity for beginners calls the learners' attention to where a linking vowel is pronounced (especially considering the fact that the regular plurals of nouns are taught earlier than the regular past tense of verbs, so the learners encountering this potential difficulty may have been learning English for a few weeks only). However, if this issue is dealt with at higher levels, it is the [z] form of the suffix that should be highlighted for Hungarians.