Observed pronunciation features in Swedish L2 produced by two L1-speakers of Vietnamese

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Abstract

Immigrants with Vietnamese as their L1 have been living in Sweden for a couple of decades. Vietnamese L1-speakers are also currently present in the SFI-classroom. The aim of this contribution is to present observed pronunciation features in L2-Swedish and is based on material produced by two L1-speakers of Vietnamese. We will also discuss those features of L2-pronunciation which lead to serious communication.

Introduction

Since the late 70s the migration of Vietnamese L1-speakers has occurred all over the world. According to the Swedish Migration Board (www.migrationsverket.se), about 745 immigrants from Vietnam were granted residence in 2013, most of them being relatives to other residents in Sweden.

Speakers with Vietnamese as their L1 are found in the classrooms where Swedish as a second language is taught (Tronnier & Zetterholm, 2011). It has also been reported by teachers of Swedish as a second language, that learners of Swedish with an East Asian language as their L1 are those who have the greatest difficulties in acquiring the Swedish pronunciation and are most difficult to understand.

In this contribution, an investigation of observed pronunciation features in Swedish-L2 is presented and their importance for successful communication will be reflected on. The analysed material is produced by two speakers with Vietnamese as their L1. In addition, the sound inventory of the Vietnamese language is provided in a contrastive perspective, i.e. in comparison with Swedish.

The Vietnamese language and its sound system

The Vietnamese language is mainly spoken in (the Socialist Republic of) Vietnam and is a member of the Mon-Khmer branch within the Austroasiatic language family. There are three major dialects of Vietnamese: the Northern (Hanoi-) variety, the southern (Ho Chi Minh City/Saigon-) variety and a (Northern) Central variety.

An overview of the phonological system of the Northern variety is given in the following, however, dialectal variations occur.

Vowels

The vowel system of Vietnamese comprises twelve monophthongs, which are /i ɯ u e ɤ o ɛ ʌ ɔ ɐ a ɒ/ (Garlén, 1988). There is an overlap to a great extent with the monophtongs in Swedish, but the Swedish front rounded vowels /y ø/ do not occur in Vietnamese.

In addition, Vietnamese has diphthongs and triphthongs. All monophthongs can commence a dipthong which finishes with [ɪ] (e.g [əɪ]), all monophthongs which are not back vowels can commence a dipthong which finishes with [ʊ] (e.g. [ɛʊ]) and high monophthongs can commence a dipthong which finishes with [ə] (e.g. [iə]). Triphthongs commence with a high vowel, include a schwa [ə] in the central part and end with a high vowel (e.g. [iəʊ]). In summary, Vietnamese is very rich in vocalic sounds.

Consonants

Vietnamese has the following stop-consonants: /p t t^h c k ʔ ɓ ɗ/, of which /ɓ ɗ/ are pre-glottalised and voiced, but do not always result in an implosive. The nasal consonants are /m n ɲ ŋ/ and the fricatives are /f v s z x ɣ h/. The following approximants also occur: /ɹ j w l/. There is also some overlap between the Vietnamese and Swedish consonants, but some of the Swedish fricatives are missing (/ɕ ʑ/) and the voiced stops in Vietnamese have the further dimension of pre-glottalisation.

Syllable structure

Apart from the rare occurrence of reduplications and compounds, Vietnamese words are monosyllabic. The syllable must commence with a consonant or the approximant /w/. The vocalic nucleus is compulsory. The introductory consonant can be any of the Vietnamese consonantal phonemes except /p/ (exceptions are loanwords from French). In addition, the initial consonant – if not labial – may occur together with the approximant /w/, but no other initial combinations are acceptable. The nucleus may consist of either a long or a short vowel or a diphthong or triphthong. The syllable may end with the vocalic nucleus, which may also be followed by one or two approximants, a single consonant or the combination of an approximant and a consonant. The permissible consonants in final position are: /p t c k m n ɲ ŋ/. In summary, the formula of the syllable structure is:

$$(C_1)(w)V(G/C_2)$$

In comparison, in Swedish, complex consonant clusters may occur in initial and final position in the syllable – up to three consonants for root morphemes. More consonants in final position are permitted if the cluster embodies multiple morphemes.

Prosody

As most of the words in Vietnamese are monosyllabic and lexical stress is therefore not a prosodic feature unlike in Swedish. As has been shown in the section on vowels, Vietnamese has some vowels which are distinguished by length, e.g. /eː e/ and /a aː/. This feature is shared with Swedish although length distinction occurs on a greater number of vowels in Swedish.

A typical and salient prosodic feature of Vietnamese is the occurrence of the tones (Nguyễn & Edmondson, 1998). Depending on the dialect, there are five or six tones. Contrast in tone is, however, not only based on melodic variation, but also on phonation type, intensity and length. The six tones of Northern Vietnamese are: *ngang* mid-level, *huyen* low falling and breathy, *sac* mid rising and tense, *nang* midfalling, glottalised and short, *hoi* mid falling-rising and harsh, *nga* mid rising and glottalised. In southern dialects the *nga*-tone is integrated in the *hoi*-tone, which results in only five tones.

Lexical distinction based on tonal characteristics is common to both, Vietnamese and Swedish. Tonal lexical features in Vietnamese are assigned to every syllable. In Swedish, however, they occur only on stressed syllables, as Swedish is a language which accommodates multisyllabic words. Swedish is classified as a tone accent language whereas Vietnamese is classified as a tone language.

The present study

The present study is based on recordings made of two female speakers of Vietnamese living in the southern part of Sweden. Both speakers are fluent in conversational Swedish and both have an academic background. One of the speakers reported a good command of English. The speakers were recorded reading Swedish sentences, a short text and describing a picture story. The sentences were compiled so that words containing all Swedish vowels and consonants and most of the Swedish consonant clusters were present in the material. Furthermore minimal word pairs, that is to say words that are contrasted by quantity characteristics, stress placement or word accents were built

into the sentences. Many of these target words were also present in the short text and supplemented by further words, e.g. compound words.

The recorded material was then auditorily analysed and pronunciation peculiarities which did not match the expected pronunciations for Swedish were transcribed. With regard to the adequacy of the production of tonal word accents, a separate study was carried out and the procedure and results of this study are published elsewhere. (Tronnier & Zetterholm, forthcoming). In the following, the observed discrepancies in the pronunciation of L2-Swedish as produced by the two L1-speakers of Vietnamese is presented.

Observed variation: vowels

In many cases both speakers produced the rounded front vowel /y/ rather like the corresponding unrounded vowel /i/. In the case of the long vowel, some shade of an approximant is added. The first vowel in the word *mycket* "a lot" [mʏkə] thus results in [i] and the vowel in *ny* [ny:] in [iʲ]. Further variations occur for the vowel /ʉ/ in the words *huset* "the house" [hʉ̟:sət] and *ut*, "outside" [ʉ̟:t], which is realised as either [u:]: [hu:sət] or [y:]: [y:t].

No adequate difference is made in quality between the vowels /e:/ and /ɛ:/ and sometimes the more open vowel [ɛ:] is preferred so that *lekar* "play" [le:kaʁ] is pronounced *[lɛ:kaɹ] and v.v., so that äta "eat" [ɛ:ta] becomes *[e:ta].

The clear difference in quality for the phoneme /a/ between the long [ɑ:] and the short [a] that is required in Swedish is not made by the L2-speakers. An example is *gran* "fir tree" [gʁɑ:n], which result in *[gɹa:n]. More about the mismatch between the distinguishing differences in vowel length and quality will be discussed below.

Some divergence in pronunciation might have occurred due to the Swedish letters <ä å ö>.

Observed variation: consonants

Most of the consonantal divergence is based on the differences in the phonotactic structure of Vietnamese compared to Swedish. Some consonants, however, are pronounced differently regardless of the variation in phonotactic rules between the two languages. in many cases, phonemes that are not permissible in initial or final position in a syllable in Vietnamese are omitted in those positions. This is the case for both, when these consonants occur alone or in clusters. In other cases replacement takes place.

The consonant [ɡ] occurs as an allophone of /ɣ/ in Vietnamese only in syllable initial position and if the preceding syllable ended with [ŋ]. It has been observed that [ɡ] was inserted in words which have /ŋ/ in word medial position by the L2-speakers when speaking Swedish. Thus the word pengar "money" [pʰɛŋaʁ] was pronounced as *[pʰɛŋgaʁ]. The pronunciation of /ɡ/ in Swedish L2 was found to be deviant and took on a variety of different shapes. In initial position and if not in a cluster, /ɡ/ was pronounced as [j ɣ w ɹ k ŋ] and in a final position it was pronounced [ɯ j] or was omitted. Examples here are the words *gult* "yellow" [ɡʉ̟lt], which was pronounced *[wu:d], *ganska* "quite" [ɡanska] as *[janska], *flög* "flew" [fløg] pronounced as *[flœɯ] and *svag* "weak" [svɑ:g] as *[svɑ:].

The lateral phoneme /l/ is also subject to variation in the production of the L2-Swedish. However, it is sometimes produced correctly under all conditions: alone or in clusters in syllable initial and final position. Omission or replacement mainly occurs in syllable final position, both if /l/ occurs single or in a cluster, and also when a syllable final lateral contributes to a word medial cluster: *en del* "a part" [ɛn de:l] becomes *[ɛ̃ de:] *golf* "golf" [gɔlf] becomes *[gɔ:f], *Malmö* (Swed. City) [malmœ] becomes *[mamœ]. Replacement in a final position mainly took the

form of some kind of nasalization, in that either the lateral was replaced by a nasal consonant, so that *segelbåt* "sailing boat" [seːgəlboːt] became *[sɛgɛnboːt], or the preceding vowel became nasalized and the lateral is dropped: *stol* "chair" [stuːl] became *[stõː]. In the case of /l/ in word medial position, nasalization of the preceding vowel has been observed to co-occur with a maintained lateral consonant as in *innehålla* "contain" [ɪnːəhɔlːa] which is pronounced as *[ĩnːəhɔ̃ːl̃a].

Nasal consonants in final position also were subject to deletion in many cases. Also here the preceding vowel was strongly nasalized: *min man* "my husband" [miːn manː] was pronounced as *[mĩː mãː] and *lingon* "lingonberry" [lɪŋɔn] as *[lĩŋɔ̃]. The rules of contact assimilation as required in Swedish for the nasal consonant /n/ also across word boundaries, was violated in many cases, and instead a sound, which is produced further away from the adequate place of articulation was used. An example is *ibland måste man* "sometimes you have to…", which in very clear speech results in [ɪbland mɔstə manː] and in effortless but acceptable speech can become [ɪblam͡mɔstə manː]. The L2-speakers however used a non-permissible nasal consonant in the transition between the two words: [ɪblaŋ mastə].

The phoneme /r/ has many allophones in Swedish, and some of the various pronunciations of /r/ by the L2-speakers overlap with the acceptable allophones. In some cases, however, some of those allophones were inadequately placed and sounded therefore deviant. In syllable final position /r/ was often replaced by a vowel in L2-Swedish, which is possible in native Swedish as well, but the L2-speakers inserted an unusual vowel here, which also seemed to be too long or at least too prominent: *mörk* "dark" [mœʁk] was pronounced as *[mœ̝͡ɐ̯k]. Any trace of /r/ was also found to be completely omitted in syllable final position when both a single phoneme or in a cluster: *kyrkan* "the church" [ɕʏɣkan] is pronounced as *[ɕʏːkan] and *orm* "snake" [ʊʁm] is pronounced as *[ʊːm]. One further variety which is used for /r/ by both speakers is the approximant [ɻ], a sound which is part of the sound system of English.

The fricative /s/ only occurs initially in Vietnamese and is – if pronounced at all – also correctly pronounced in L2-Swedish. In syllable final position /s/ is sometimes omitted in both cases: when it occurs as a single consonant in that position and when it is part of a consonant cluster, e.g.: *hennes* "hers" [hɛnːɛs] is realized as *[hɛ̃nɛ] and *hans* "his" [hanːs] is realized as *[hãn] or also *[hãː].

Different strategies were pursued for consonant clusters in syllable initial position when the last consonant of such cluster was /l/ or /r/. Vowel insertion occurred occasionally, as in *gräset* "the grass" [gʁɛːsət], which results in *[gəɻɛːsət]. Deletion of one of the consonants in the initial cluster has also been observed, as in *bråkiga* "rowdy" [bʁoːkɪga] which was pronounced as *[poːkɪɥa], and *frukt* "fruits" [fʁʊkt] as [fʊː]. Contextual devoicing for /r/ in a cluster, which may partially occur in L1-Swedish, appeared to be more prominent in L2-Swedish, so that *trött* "tired" [tʁœtː] resulted in [t̥œ̝̊tː]. In many cases, the initial clusters – mainly those introduced by /s/ – were correctly pronounced.

Consonant clusters in syllable final position and word medial position were very much subject to deviation. Omission of one or more elements in the cluster occurred e.g. for the word *frukt* "fruits" [fʁʊkt] which was pronounced as *[fʊː], *ibland* "sometimes" [ɪbland] as *[ɪblaːn] and *konst* "arts" [kʰɔnst] as *[kɔ̃ŋs]. Problems in medial clusters occur mainly when the cluster consists of three or more consonants and then omission of one or more elements takes place, as in *riksdagen* "the Swedish parliament" [ʁiːksdɑː(gə)n] which became *[ɹ̝͡ɪjsdɑːgɛn], *arbetslivet* "working life" [auɥbetsliːvət] which became

*[aɹbesliːvet], *plötsligt* "suddenly" [plœtslit] which became *[plɔsɪt], *flygplatsen* "airport" [flyːgplatsən] which became *[flyːplaːsən] and *konstbok* "art book" [kʰɔnstbuːk] which became *[kʰɔ̃sbʊk]. The fricative /s/ seems to be strong and maintained in medial position and instead other consonants are omitted.

Observed variation: prosody

Placement of stress on the wrong syllable occurs occasionally, but is not very salient. What is more noticeable is that inaccurate vowel length is produced. Thus a longer vowel is preferred and the target word *löss* "lice" [lœsː] is not distinguishable from the word *lös* "loose" [løːs], *glass* "ice cream" [glasː] is not distinguishable from *glas* "glass" [glɑːs] and *villan* "the house" [ˈvɪlːan] is not distinguishable from *vilan* "the recreation" [ˈviːlan]. In some cases, correct length is produced, but the wrong vowel quality is chosen as has been mentioned in the section on vowels.

It has been shown in earlier studies (Tronnier & Zetterholm, 2013, Tronnier & Zetterholm, forthcoming), that the Swedish tone accent distinction produced by Vietnamese L1-speakers was inaccurate. The results from identification tests revealed that listeners with Swedish as their L1 judged most of the stimuli as belonging to words with one particular word accents of those two which are possible – which is called Accent 2 – in most cases. The interpretation is therefore, that the Vietnamese L2-speakers of Swedish do not have command over the Swedish accent distribution and that their preferred use of a tonal contour identified as a representative of Accent 2 might be related to tonal patterns relevant in Vietnamese.

Discussion

The description of pronunciation variation produced by the two L1-speakers of Vietnamese when speaking L2-Swedish presented above leads to the assumption that issues concerning consonants are of greater significance. The production of individual consonants is not a serious complication in most cases, but instead, it is the omission or replacement of these that leads to problems in communication.

More specifically, the occurrence of a distinct nasalization of vowels accompanied by the deletion of not only nasal consonants, but also /l/ hampers following and understanding the flow of speech. The replacement of the initial consonant [g] only leads to a communication dilemma, when the replacing sound comprises many articulatory features which are different from those of [g], such as [w]. The pronunciation of diverse varieties of sounds for /r/ is not a very intricate problem. Even mispronunciation of vowel quality is not so significant, unless combined with incorrect vowel length, and when there is a minimal pair in Swedish.

Clusters are problematic for the L2-speakers primarily in word medial and final position. In the initial position, clusters sometimes lead to difficulties in comprehension if an extra vowel gets inserted. This introduces an extra syllable and breaks up the cluster. No vowel insertion occurs in medial or final position, where one or more consonants are omitted instead. An interesting observation is that although /s/ can be omitted if it occurs as a single final consonant, it often is not one of the consonants omitted in a cluster.

With regard to prosodic features, it is vowel insertion into clusters and the deviation from expected vowel length leads to a disruption of the expected flow of speech and can therefore trigger miscommunication.

It can also be stated that if several types of variation occur in one word, it makes it more difficult for the listener to understand the intended word.

Summary

Problems of miscommunication in L2-Swedish produced by L1-speakers of Vietnamese is based on numerous and complex factors. The major complica-

tions are related to missing consonants in word medial and syllable final positions. This is the case, if there is supposed to be a single consonant or if the omitted consonant is part of a cluster. In addition, the alteration of the rhythm of speech due to either vowel insertion – which results in an extra syllable – or an unexpected variation of vowel length can lead to misunderstandings. The more unusual types of pronunciation variation are produced per word, the more incomprehensible is the word.

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