

Teaching the Standard Without Speaking the Standard: Variation Among Mandarin-Speaking Teachers in a Dual-Immersion School

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1 Introduction

Dual-language immersion programs, in which students from different language backgrounds spend the school day learning in two languages, aim to produce students who are bilingual, biliterate, and bicultural (Christian 1996). To achieve this goal, students must gain communicative competence in and sociolinguistic knowledge of both languages; they must be able to judge what sorts of language are appropriate in various contexts, and what types of people are likely to speak in particular ways. This goal of native-like communicative competence is a tall order, even given the advantages of the dual immersion model relative to other language learning contexts. In traditional language acquisition settings, children acquire knowledge of the social meaning of language through exposure to variation in the speech of those around them, and develop their own language use based upon the patterns to which they are exposed (Smith et al. 2005). For many students in immersion programs, school is the only setting in which they are exposed to one, or both, of the target languages. Thus, the question of how much linguistic variation students are hearing at school is key to understanding what sociolinguistic knowledge students might gain.

One criticism leveled at single-language immersion programs has been that students whose only exposure to a language is the classroom talk of a teacher will have necessarily limited communicative competence (Swain 1985, Swain and Lapkin 1990, Genesee 1991). This concern is also a valid one for dual-language programs, in spite of the fact that students may receive additional language input from their native-speaker classmates. Underlying this claim about the limits of immersion is the assumption that teachers uniformly use formal, standard language in the classroom, and that the classroom setting does not encompass significant variation in contexts or genres. This characterization of teachers as the promoters and speakers of standard language in the classroom is also common in sociolinguistic literature (Labov 1969, Kleifgen 1985, Wong Fillmore 1985, Wheeler and Swords 2004, Godley et al. 2006). These attitudes, however, appear to be based largely on anecdotes and common wisdom, rather than on quantitative evidence; while researchers have examined interactional and discourse features of teacher talk (Cazden 2001, Allwright 1984), the speech of teachers has largely been ignored in variationist work, in spite of the popularity of school settings in sociolinguistic studies (e.g., Eckert 1989, Bucholtz 1998, Mendoza-Denton 2008). But teachers, much like the rest of us, are human speakers of language, and teachers' interactions with students, even in the most orderly of classrooms, are more than a series of formal lectures. Common sense indicates that teachers must vary in their speech to some degree in the classroom, and that this variation may influence students' sociolinguistic understanding.

Because teachers represent such a significant source of language in immersion programs, the issue of how teachers speak in the classroom is particularly relevant in this context. The following analysis of teachers' speech in a Mandarin-English dual immersion program seeks to quantitatively address how teachers talk in dual-immersion classrooms, and what effect this might have on students' acquisition of sociolinguistic knowledge.

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2 Teacher Talk

This examination of teacher speech will proceed under the view that speakers use linguistic variants that index social meanings to construct and perform personae, e.g., “being a teacher” (Podesva 2007, Eckert 2002). The treatment of speech as a performance is particularly appropriate to the classroom speech of teachers, which has frequently been studied as performance both by performance theorists and education researchers (e.g., Prendergast 2008, Pineau 1994).

Also central to this analysis will be the notion that not all teachers are native users of standard language. While teachers are often assumed to speak standard language, in fact many teachers around the world are speakers of language varieties not promoted as standard by their community or school. These teachers face particular challenges in the classroom; firstly, they must construct an educator persona when their language variety is not necessarily associated with education. They must also deflect potential challenges to their language use from students who speak varieties considered to be more standard than their own, and avoid criticism and accusations of teaching children incorrect language from the school community.

Students in the classroom of a teacher who uses non-standard language face challenges of their own. In the case of students whose greatest exposure to a language comes from the teacher, we might wonder whether students would be able to acquire a standard language variety from a teacher who does not consistently use that variety, or if they would even realize that the variety spoken by their teacher was non-standard. More generally, students might find it difficult to piece together a coherent understanding of sociolinguistic meaning in a setting where they are exposed to limited amounts of widely varying dialects from teachers and native-speaking students. Understanding what students are hearing from their teachers is a first step in developing a complete picture of how students fare in such environments.

3 Fieldwork Site and Participants

3.1 The Meizhang School

The speakers analyzed in this study are employed as first and second grade primary teachers in the Mandarin-English dual immersion program of the Meizhang School, a private school on the West Coast of the United States. Students in the Meizhang program come from a range of language backgrounds, including those who speak only Mandarin at home, those who speak only English, and those who speak a third language. Most of the students have already been enrolled in Meizhang for several years, and have some degree of competence in both Mandarin and English.

This study includes two classes of first graders and one class of second graders, with approximately 15 students enrolled in each class. In both grades, the students have two primary teachers, one for English and one for Mandarin, in addition to Mandarin-speaking teachers for art and other special subjects. Classroom time is split approximately evenly between the two languages.

While a range of Mandarin varieties are spoken at Meizhang, Taiwanese Mandarin is dominant among both staff and native-speaking students, and standard Taiwanese is taught.

3.2 The Teachers

The first and second grades each have one Mandarin-speaking primary teacher. The first-grade teacher, TW Teacher, is female, in her 40s, and from Taiwan. She has been teaching at Meizhang for several years, and taught the current second graders when they were in the first grade.

The second grade teacher, NE Teacher, is female, in her 30's, and from Northeastern Mainland China. This is her first year as a primary teacher at Meizhang. In addition to being the second grade primary teacher, NE Teacher serves as the library subject teacher for the Mandarin element-ary program, and therefore also interacts with the first graders on a weekly basis.

4 Linguistic Variable

In Standard Mandarin, a phonemic distinction exists between retroflex and dental sibilant initials¹, as shown in Table 1.² These initials will be referred to using *pinyin* romanization.

Retroflex			Dental		
<i>pinyin</i>	IPA	freq.	<i>pinyin</i>	IPA	freq.
zh	/ʈʂ/	2.11	z	/ts/	1.38
ch	/ʈʂʰ/	1.04	c	/tsʰ/	0.45
sh	/ʃ/	3.13	s	/s/	0.86

Table 1: Retroflex vs. Non-Retroflex Sibilant Initials in Standard Mandarin, with relative percent proportion based on corpus data (Suen 1982:374).

4.1 Regional Variation

Non-standard varieties of Mandarin differ in both the phonetic realization and phonemic distribution of these initials. Phonetically, while these initials are referred to as retroflex, they are in fact often produced with a post-alveolar or even palatal place of articulation, particularly among native speakers of Southern Mandarin or speakers of Southern Chinese languages who have learned Mandarin as a second language. The following analysis, however, will focus on the phonemic rather than phonetic non-standard use of these initials.

There is a great deal of phonemic variation in retroflex and dental sibilant initials among various dialects of Mandarin. The assignment of initials to lexical items in Standard Mandarin was originally determined in the early 20th century according to their distribution in one particular region, Beijing (Chen 1988:131). Other dialects of Mandarin, primarily those in the north, also have a retroflex-dental distinction, but in these dialects the particular initials are distributed differently throughout the lexicon, as in these examples from the Changli dialect:

Character	Std PTH	Changli
租	zu	zhu
诗	shi	si
罩	zhao	zao

Table 2: Pronunciation of example lexical items in PTH vs. Changli dialect (Xiong 2001).

In other varieties of Mandarin, primarily those in the South, the retroflex set of initials does not exist. Lexical items which begin with retroflex initials in Standard Mandarin (zh), (ch), and (sh) begin with their dental counterpart (z), (c), and (s), resulting in a merger between dental and retroflex initials. Crucially for the present analysis, this merger of dental and retroflex initials is common in Taiwan (Li 2004, Tse 1998).

¹I follow the Chinese linguistics convention of using the term “initial” to refer to the onset of a syllable.

²While Standard Mandarin in Mainland China, *putonghua* (“common language”), is not absolutely identical to Standard Mandarin in Taiwan, *guoyu* (“national language”), this phonological distinction is the same in both varieties, and therefore variation between these standards will not be relevant in the present discussion.

4.2 Social Meaning

The non-standard use of dental and retroflex initials is consistently stigmatized as a sign of low education in Mandarin-speaking communities (Li 2004:120). The merger of these initials in Southern varieties of Mandarin is particularly salient due to the frequency of retroflex initials (Suen 1982:374), perceptual saliency of the sounds (Li 2004:121), and orthographic distinctions between the retroflex and dental initials in both the Mainland *pinyin* and Taiwanese *zhuyin fuhao* romanization systems. In contrast to other non-standard Southern features, such as full tone, the dental-retroflex merger is not adopted by Northern Mainlanders seeking to put on trendy Southern accents (Zhang, 2001:129). However, some Southerners are said to hold negative views of standard retroflex initials, claiming that they sound overly pompous or elitist (Li 2004:120).

The findings of an acoustic study of Taiwanese college students suggest that, for some speakers, the two sets of initials operate as a “near merger” rather than as a total phonemic merger, and that young women produce more of a distinction than young men (Tse 1998). Starr 2004, a study of Shanghai Mandarin, found that women, more educated speakers, and younger speakers were more likely to use standard initials. These patterns are all consistent with the claim that the non-standard use of these initials is socially marked. In particular, we can conclude that the acquisition of the standard distinction between retroflex and dental sibilant initials is the desired prescriptive outcome in a Mandarin language teaching program.

4.3 Researching the Variables

Because retroflex and dental sibilant initials are so frequent and salient in Mandarin, they are well-suited to the study of variation in teachers' speech. Due to the relative frequency of retroflex initials, this analysis will focus on use of the merger, meaning the use of dental initials where the standard calls for a retroflex initial, rather than on the use of retroflex initials where the standard calls for a dental. The bulk of the analysis will treat (sh), (zh), and (ch) as a single retroflex class, followed by a brief examination of differences among these initials.

5 Methodology

5.1 Data Collection

Data for the present study was gathered via digital audio recordings made at Meizhang during participant observation sessions over the course of an entire school year. A total of approximately 470 hours of audio was recorded; for the purposes of this analysis, 78 minutes of classroom interaction were transcribed and analyzed. Segments of classroom speech were selected for analysis according to criteria that will be discussed in the following section on classroom events.

5.2 Coding Methodology

This study seeks to understand how students might develop an understanding of the retroflex/dental distinction based upon teacher input; therefore, all initials of lexical items that in Standard Mandarin would be realized as either retroflex or dental sibilant initials were collected for analysis. Speech was segmented and tokens then coded by the author. 1,998 tokens were coded in total.

Because recordings were made amid classroom noise, acoustic analysis of these initials was impossible. The primary goal of this analysis, however, is to determine whether students receive perceptual cues that cause them to classify a particular lexical item as dental or retroflex, and therefore the precise acoustic value of the initials is not as relevant as their perceptual category. As discussed in the introduction of the variables, considerable variation exists in the phonetic realization of retroflex initials, whereas the dental category is relatively uniform; therefore, the tokens were perceptually coded into a binary distinction wherein tokens that were perceptually dental

were classified as phonologically dental, and tokens with a post-alveolar, retroflex, or generally back place of articulation were classified as phonologically retroflex.

6 Classroom Events

6.1 Introduction

In analyzing teacher speech, one of the major questions we are seeking to address is whether teachers use consistent patterns of stylistic variation that may provide sociolinguistic cues to students. An essential step in examining stylistic variation in classroom speech is identifying contexts in which different styles are used. In the following analyses, I take two approaches to classifying speech contexts: classifying speech by classroom event, and classifying speech by utterance. These classification strategies are based on my ethnographic fieldwork at Meizhang, and specifically on my observations of the salient differences in contexts that occur during class time.

I use “classroom event” here to mean an event of several minutes to half an hour in which the class members are largely focused on some single activity. In the first and second grade classrooms, classroom events which involve significant speech from the teacher may be broadly classified as either “teaching events” or “non-teaching events.” Teaching events are defined as events in which the teacher is pursuing some curriculum-related teaching goal, such as teaching a math lesson. Non-teaching events are non-curricular events managed by the teacher, such as discussion of an upcoming school activity, discussion of administrative issues, or dispute resolution.

For each teacher, two teaching and two non-teaching events were analyzed. The events selected were consecutive classroom events occurring on a single, randomly selected day.

6.2 TW Teacher

Two teaching events were analyzed for TW Teacher: reading a science book about trees, and teaching a jump rope rhyme. A selection from the tree story event is given in (1), with standard retroflex initials highlighted in bold.

- (1) ni **shuo** de hui jiang dao **shu** hui ti dao **shu**
 “You said it will talk about trees it will be about trees.”

The two non-teaching events for TW Teacher are reminding students about an upcoming jump rope event, and resolving a dispute about students spying on each other on the playground. A selection from the latter event is shown in (2), with non-standard initials italicized.

- (2) ze ge wenti nimen xia ke de *si*hou haisi meiyou jie jue
 “You still didn't resolve this problem during recess.”

As illustrated in Figure 1, TW Teacher uses significantly more standard retroflex initials in teaching events than in non-teaching events ($p < .0001$). Her speech in the spy game event is also significantly less standard than in the jump for heart event.

6.3 NE Teacher

NE Teacher's teaching events are reading a story about ethics, and teaching a grammar lesson. Her non-teaching events are reminding students about an upcoming trip, and reminding them how to properly complete book reports. As with TW Teacher, her teaching events are significantly more standard than her non-teaching events, as shown in Figure 2 ($p < .0001$).

6.4 Discussion of Classroom Event Results

Data from both teachers indicate that standard retroflex initials are consistently used more frequently in teaching events than in non-teaching events. This result is expected given the contrasts between these events. While not all teaching events are language arts lessons, they nonetheless highlight language, with new vocabulary often being introduced. Teaching events are also often more planned than non-teaching events, and they place the teacher in the explicit role of an instructor. Teachers may draw upon standard retroflex initials as a means of performing an instructor persona appropriate to a teaching context.

This analysis also reveals a great deal of variation in the level of standardness across different classroom events. In particular, different types of non-teaching events have vastly different levels of standard speech, suggesting that we must look more closely within these events to account for such variation.

7 Utterance Types

7.1 Introduction

Within a classroom event, teachers may engage in very different styles of speech. During a teaching event, for example, the teacher may scold students for talking, read a passage from a book, then discuss that passage, and so on. This second analysis separates teaching events by utterance type, allowing us to compare utterances of the same type across different events. The four utterance types here are read speech, topical instructional speech, topical non-instructional speech, and behavior management, including scolding, praising, and neutral comments on student behavior.

7.2 TW Teacher

As shown in Figure 4, TW teacher exhibits an extremely wide range of standardness levels across different utterance types: she uses 100% standard retroflex initials in read speech, and only 13.5% standard initials in behavior management utterances. All contrasts between her utterance types are extremely significant ($p=.0004$).

7.3 NE Teacher

Figure 4 shows a similar pattern for NE Teacher as for TW Teacher, with the most frequent use of standard initials in read speech and the least in behavior management. The differences across types are all significant with the exception of behavior vs. non-instructional speech.

7.4 Discussion of Utterance Type Results

For both teachers, we find that utterance types form a scale of standardness, with read speech being most standard. In the case of read speech, Starr (2004) also found speakers to use more standard retroflex initials in read speech than in spontaneous speech; although written Chinese does not provide explicit orthographic cues to the retroflex/dental distinction, read speech is nonetheless consistently more standard in this respect.

In the case of behavior management utterances, both teachers were quite non-standard. While I distinguished between praise, scolding, and neutral utterances in my initial coding, there weren't enough non-scolding utterances to justify separating them into distinct categories, and the frequency of standard initials did not seem to vary significantly between these three subtypes. An example of a scolding utterance is given in (3):

- (3) wo *si* laosi ei (TW Teacher)
 “Hey, I’m the teacher!”

As in the example, many of the scolding utterances involved reminding the students of the role of the teacher and the role of the student in the classroom. We might have expected, then, that the teachers would make use of standard initials as a means of highlighting their role as the authority figure in the classroom. Instead, the reverse has happened, with teachers using the most non-standard speech in scolding utterances. If we consider the purpose of scolding utterances, we can account for why this is the case; the primary goal of scolding is to achieve a desired behavioral change from particular students. Teachers may be using non-standard initials here because they are associated with higher emotive force. Attitude surveys about Standard Mandarin versus regional dialects in Mainland China have consistently shown that the standard is viewed as stiff and formal, while dialects are seen as more expressive (Bai 1994, Zhou 2001). In this sense, a teacher's use of non-standard initials conveys a meaning similar to that of raising the volume of her voice; she is performing the persona of a disciplinarian, signaling to students that she is not in the mood to take any more bad behavior.

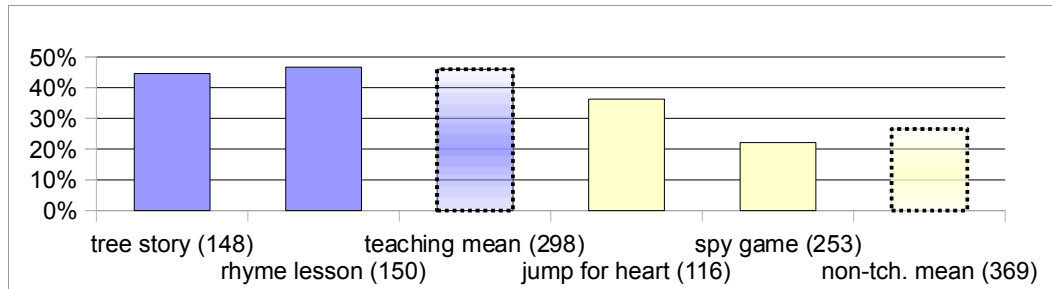


Figure 1: Percent standard retroflex initials by event (TW Teacher).

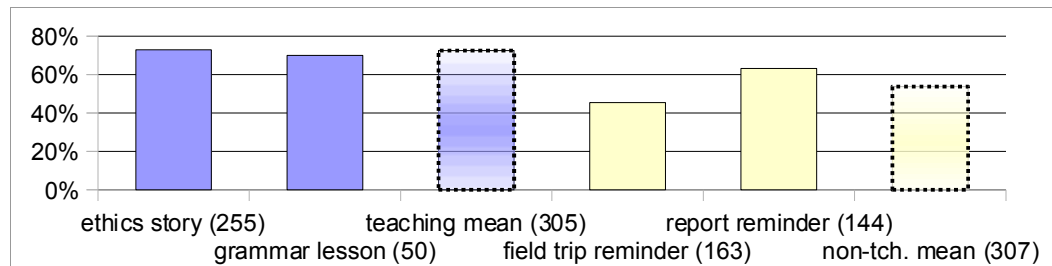


Figure 2: Percent standard retroflex initials by event (NE Teacher).

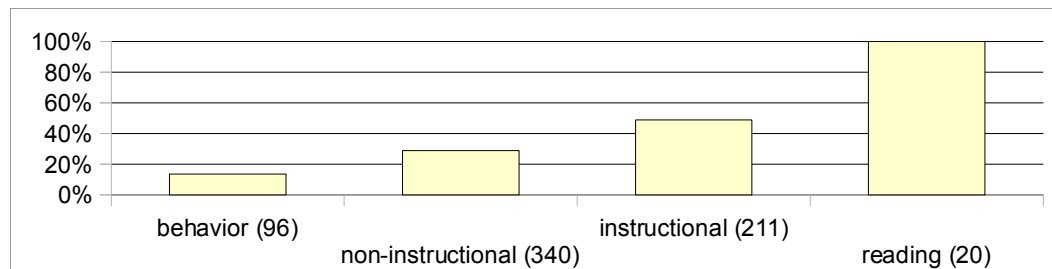


Figure 3: Percent standard retroflex initials by event (TW Teacher).

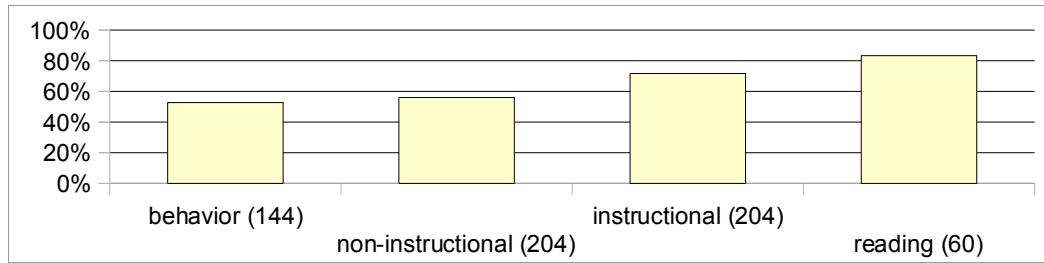


Figure 4: Percent standard retroflex initials by utterance type (TW Teacher).

For both teachers, we see a consistent significant difference between topical instructional and non-instructional speech. This is particularly significant given that read speech is not included in these categories, and that the contexts of these utterances are relatively similar; during both types of utterances, the teacher is standing in front of the class, lecturing on a set topic. The key distinction between these utterance types is whether the topic is curricular or non-curricular. During instructional speech, the teacher is acting as an instructor, and draws upon standard retroflex initials to perform this persona. During non-instructional speech, she acts as an administrator or mediator; but must still maintain authority over the classroom, standard language is not being highlighted.

This analysis of variation across utterance types illustrates the extraordinarily wide range of variation present in the speech of a single teacher in a single setting, the classroom, within the space of a few hours. Moreover, this variation patterns consistently according to the topic and context of utterance.

8 Cross-Speaker Differences

Although the two teachers examined here come from different Mandarin-speaking regions and have regional accents that would be considered quite different by native listeners, we have nonetheless found a similar pattern of variation between standard and non-standard features in their speech. As a speaker whose native regional variety contains some level of retroflex initials, NE Teacher has a higher base rate of standard initials, while TW Teacher is coming from a native variety without retroflex and therefore varies more widely.

We can also see some differences in how the individual initials (zh), (ch), and (sh) are treated (Figure 5). Both TW and NE Teacher have their lowest rate of standard retroflex on (zh), and these rates are not significantly different from one another. Their rates of standard (ch) are also not significantly different. Their rates of standard (sh), however, are extremely different, which accounts for the NE Teacher's overall higher base rate of standard retroflex: NE Teacher has almost 78% standard (sh), while TW Teacher has only 36% standard (sh) ($p < 0.0001$), making (ch) her overall most standard initial.

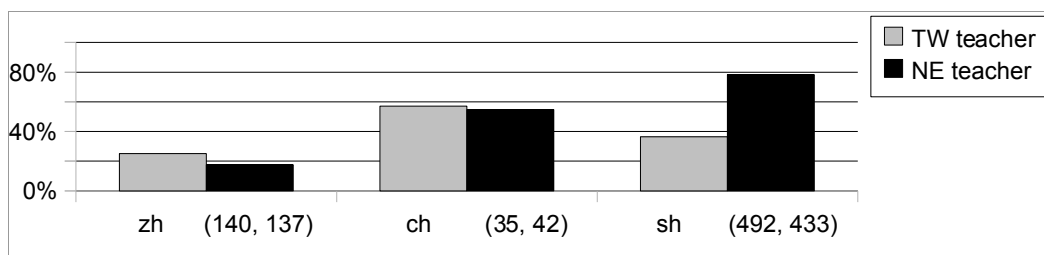


Figure 5: Percent standard by initial.

Starr (2004) found that, like NE Teacher, speakers in Shanghai were significantly more standard with initial (sh) than with the other initials, but it appears that this pattern is not entirely consistent across regional dialects. Tse (1998:3) also found that (zh) was the least standard among college students in Taiwan, suggesting that this pattern may be worthy of further study.

9 Discussion

Analyses comparing teacher speech through different classroom events and utterance types have revealed that TW Teacher and NE Teacher vary considerably, but predictably, within and between teaching contexts. In spite of their different native varieties, both teachers are giving consistent signals as to the social meaning of the retroflex/dental distinction. Standard retroflex initials are being used most in read and instructional speech, and least in behavior management and discussion not related to curricular topics. These data indicate that teachers are drawing upon the social meaning of standard retroflex initials to perform an “instructor” persona, and upon non-standard dental initials to perform a “disciplinarian” persona.

Given the variation observed here, the common characterization of teacher speech in the classroom as monolithically standard is evidently an oversimplification. With this knowledge in hand, we may return to the question of what students might learn from their teachers' speech. Students are consistently being exposed to the use of very standard retroflex sibilant initials in formal, curriculum-related contexts, such as read speech, and to very non-standard use of these initials in other contexts, such as behavior management utterances. We may therefore conclude that students have a good deal of sociolinguistic evidence upon which to base their developing knowledge about the significance of retroflex and dental sibilant initials. Additionally, if students wanted to acquire standard use of retroflex initials, they would have reasonable linguistic evidence with which to acquire a more standard variety of Mandarin than their teachers speak, assuming that they could identify those contexts in which teachers spoke most standardly. The question of whether students are in fact acquiring standard retroflex initials, however, lies beyond the scope of this analysis.

10 Conclusion

Aside from their role as educators, and as potential promoters of prescriptivism and standard language, teachers are themselves language users. They are often speakers of non-standard language varieties. As sociolinguists, when we examine language in school settings, we cannot forget that the classroom is more than a place where students happen to hang out, and that student-teacher interaction is more than just a medium of pedagogy. Teachers who speak a language variety not promoted by the school may draw upon standard language features in their construction of personae appropriate for various classroom contexts, but they may also draw upon non-standard features which index meanings relevant to their goals and stances in the classroom. This study of two Mandarin-speaking teachers has found that teachers make use of consistent patterns of variation, which may provide cues to students still developing their sociolinguistic understanding and communicative competence in one or more languages. These findings suggest that students whose exposure to a language is limited to classroom speech may be able to gain more knowledge of variation than has been previously believed.

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