



## Reconciling Theory and Practice

The nature of second language pronunciation research often precludes its application to the classroom. And even when research findings do have direct applicability to classroom practice, open channels of communication between researchers and practitioners are often lacking. We have subtitled this issue of *The CATESOL Journal* “Pronunciation: Research Into Practice, and Practice Into Research”—indicating our belief that research and practice comprise a 2-way street, with research results definitely informing practice but with practice helping to confirm these results and providing an additional, real-world test of their validity. The contributing authors of this theme issue (both researchers and practitioners), through their research and insights into best classroom practices, provide teachers of pronunciation much to ponder. This article seeks to draw from the authors’ insights a set of core principles, firmly anchored in research results, on which to base pronunciation teaching decisions.

In the fall of 1976, I arrived in Los Angeles to begin an MA in Teaching English to Speakers of Other Languages (TESOL) at the University of California, Los Angeles (UCLA). I came to the field with an MA in a related field (German Language and Literature)—where I had been trained in audio-lingual methodology—and several years of teaching experience abroad at both the secondary and adult continuing education levels. The teaching environments in which I had worked consisted of both English for general purposes and English for specific purposes: English for general purposes in the German public schools and English for specific purposes in various adult continuing education programs in Germany (where I taught Cambridge Certificate test preparation, English for tourism, and English for business and management). In none of these environments had I been called on to teach pronunciation, as the courses for the most part were grammar and vocabulary driven.

UCLA in 1976 was an exciting environment. There were brown-bag lunches with faculty and students from the University of Southern California where issues in the relatively new field of second language (L2) acquisition were discussed. In addition to the faculty whose primary interest was L2 acquisition, we also had several faculty members who specialized in teaching pronunciation—most notably Clifford Prator and J. Donald Bowen—and others whose primary interest at the time was communicative language teaching (CLT), such as Marianne Celce-Murcia, who unbeknownst to me at the time was to play a major role in my life as a TESOL professional.

After a brief period of teaching multiskills English for academic purposes classes in UCLA's Extension Division, I was offered an opportunity to teach one of Extension's most popular courses, which bore the title Accent Improvement for the Foreign-Born Professional. The course met once a week for three hours over a 10-week term for a total of 30 hours. As indicated in its title, the course catalog description promised radical improvement in students' accent at the end of this 30-hour term. Since I had no background in pronunciation teaching, I asked to observe the teacher whose position I was taking over, but I got very little in the way of ideas for what to do as the teacher basically had students read lists of "difficult" words aloud and then corrected any mispronunciations.

For guidance, I resorted to what at the time were the most up-to-date resources on teaching pronunciation—the *Manual of American English Pronunciation* (Prator, 1972) and *Patterns of English Pronunciation* (Bowen, 1975). Other resources that I consulted were the English Language Services series of pronunciation texts (1966; 1967a; 1967b) and Nilsen and Nilsen's (1973) *Pronunciation Contrasts in English*. The challenge in using these materials to inform and design my course was to resolve the tension between the basically audio-lingual-driven methodology of "listen and repeat" drills with the underlying principles of CLT, which I sought to implement in my teaching.

I entered the field of pronunciation teaching armed with a behaviorist notion (instilled in me by my early audio-lingual training) that "bad habits" (in this case pronunciation errors) needed to be eradicated through drilling. As a corollary to audio-lingualism, I had also early on in my graduate training in German been exposed to the theory of contrastive analysis (Moulton, 1962; see also Munro, 2018 [this issue]); this training was further reinforced in my studies in TESOL through a graduate course in contrastive analysis (Eckman, 1977) and error analysis (Corder, 1974). And yet I found that all these beliefs, instilled in me by my graduate studies, could not be reconciled with my instincts about how I thought pronunciation *should* be taught

for optimal interaction in the classroom and for change in students' output to occur. What seemed to me to be missing were two things: (a) up-to-date information, grounded in research, as to how learners acquire phonological features; and (b) methodological guidance on appropriate classroom methodology for teaching pronunciation in a communicative fashion.

Fast-forward a few years to the mid-1980s: As luck would have it, the UCLA Extension accent-improvement course proved so popular that an additional instructor was hired. I now had a partner, Janet Goodwin, who could build on the materials I had already created (all packaged in a three-ring binder that we shared). This collaboration—later to be more firmly cemented as we embarked on the first edition of *Teaching Pronunciation* with our mentor Marianne Celce-Murcia (Celce-Murcia, Brinton, & Goodwin, 1996)—not only helped to encourage my creativity in materials development but also served to shape my thinking on methodological issues. We were also assisted, in great measure, by a general resurgence of interest in teaching pronunciation as well as a spate of new texts on the topic. These included Morley's (1987) edited volume providing new perspectives on pronunciation research and methodology, Kenworthy's (1987) text on teaching techniques and practices, Wong's (1987) volume on innovative ways to teach suprasegmental aspects of the language, and a special issue of *TESL Talk* put out by the Ontario Ministry of Citizenship and Culture (Avery & Ehrlich, 1987), to name just a few.

### **Goal of This Issue**

As guest editors, we have subtitled this theme issue of *The CATESOL Journal* "Pronunciation: Research Into Practice, and Practice Into Research." The subtitle indicates our belief that research and practice comprise a two-way street, with research results definitely informing practice but with practice helping to confirm these results and providing an additional, real-world test of their validity. While not all research in the field applies directly to practice, the contributing authors, in sharing their research results and insights into the variety of issues covered, have given us much to ponder as teachers of pronunciation. In the following, I seek to draw from their findings a set of core principles that we can use as a foundation on which to base our teaching. I propose these principles in no particular order, and I do not claim that they constitute a comprehensive set of principles.<sup>1</sup> However, given the current state of pronunciation research, they suggest themselves as principles that can more firmly anchor our classroom teaching practices to verifiable research results.

## Core Principles

### ***Principle #1: Pronunciation Teaching Involves Specialized Knowledge, Expertise, and Commitment***

Pronunciation teachers are a rare breed. They are teachers who willingly volunteer to teach a special section devoted to pronunciation skills, or teachers who find ways (and time) to skillfully integrate pronunciation practice into their multiskills classes. But lest we conclude from this statement that pronunciation teachers come by their ability on their own and that it is a skill that only certain teachers possess, this issue contains multiple reminders that this specialized skill is both learnable and teachable.

To the point, Echelberger, McCurdy, and Parrish (2018 [this issue]) discuss the results of a highly successful community of practice (CoP) designed to imbue its participants with the knowledge, expertise, and confidence to address pronunciation in their adult education classes. As they note, teachers' reluctance to address pronunciation typically stems from their belief that they lack the necessary background to teach this skill. Based on their participation in the CoP and the support community that it provided, the participating teachers grew in their knowledge of pronunciation theory and practice as they shared classroom successes and failures and learned to more effectively analyze and respond to students' pronunciation needs.

Darcy (2018 [this issue]) elaborates on the underlying reasons that pronunciation is often not addressed by classroom teachers, reporting on a small-scale study of teachers' reasons for avoiding pronunciation instruction. As she discovered, these reasons fall into three main categories:

1. Time constraints (i.e., the need to cover other skills areas);
2. Methodological considerations (i.e., uncertainty on the part of teachers as to how best to teach pronunciation skills); and
3. The appropriate curricular focus for pronunciation instruction (i.e., the components of a logical, step-by-step progression toward learner intelligibility).

Both articles suggest that the key to overcoming teacher reluctance to address pronunciation lies in providing teachers with a combination of theoretical knowledge and structured feedback on classroom practice. Step 1 is increasing teachers' awareness of the importance of pronunciation instruction. However, efforts must go beyond this act of awareness raising since teachers also require (a) a solid grounding in practical phonetics, (b) exposure to classroom-tested,

research-informed practices that assist students in making changes to their L2 production and perception, and (c) a commitment to (and the means of) integrating pronunciation instruction into their existing curriculum.

***Principle #2: The Goal of Pronunciation Instruction Is Comfortable Intelligibility***

At the outset of her article, Moyer (2018 [this issue]) disentangles the concepts of *accentedness*, *comprehensibility*, and *intelligibility*—defining the latter as the degree to which a speaker’s message can be understood. The distinction between these three partially related concepts is crucial, since it clarifies that just because a speaker has an accent (i.e., deviates from “standard speech” in the L2) does not necessarily mean that he or she is difficult to understand. By adding comprehensibility (the relative ease of difficulty of understanding the speaker) to the equation, we are able to complete the picture and can classify “accented” L2 speakers along the continuum of easy versus difficult to understand.

The above distinctions are highly pertinent to pronunciation teaching today. For while in the past the stated goal of most pronunciation classes was for students to emulate as closely as possible native speaker speech (generally either standard North American English or British English), today this goal has been redefined as that of comfortable intelligibility (Abercrombie, 1949; Levis, 2005)—that is, accented yet easily understood speech. As Darcy (2018 [this issue]) notes, enhanced intelligibility is important for our learners in their social and professional interactions, their success in higher education, and ultimately in the job market. At the same time, in today’s expanding world of global English, we need to understand that comfortable intelligibility in contexts where English is the first language (L1) may look quite different from comfortable intelligibility in English as a lingua franca (ELF) contexts, that is, where L2 speakers from a given region/language group are communicating in English with L2 English speakers from other regions/language groups. As Lewis and Deterding (2018 [this issue]) remind us, what constitutes intelligibility may differ in these contexts (and may well also differ from ELF context to ELF context, depending on the L1 of the speakers involved). Thus learner and setting variables will definitely color the decisions we make about what to teach and how to focus our instructional efforts.

As to how teachers can best assist their learners to attain comfortable intelligibility, the good news is that many pronunciation materials today include communicative practice tasks that help to enhance

the intelligibility of students' spontaneous speech. Darcy (2018 [this issue]) suggests a balanced approach that addresses segmental, suprasegmental, and fluency practice. This includes work on the following (see also Goodwin, 2014):

1. Segmentals: vowel duration; clear articulation of consonants in final position;
2. Suprasegmentals: work with incorrect word stress and syllable duration in stressed and unstressed syllables; linking and connected speech features; incorrect intonation or misplaced/missing prominence in thought groups; incorrect division of speech into thought groups; and
3. Fluency: speed of speech; inappropriate or overly long hesitations or pauses.

Finally, echoing the findings of Barriuso and Hayes-Harb (2018 [this issue]), Darcy also proposes an increased focus on perception in the classroom, which she argues can lead to enhanced intelligibility.

***Principle #3: Knowledge of Learners' L1 Is Useful but Not Sufficient in Teaching Pronunciation***

As we know from early work on contrastive analysis, one of the primary obstacles that learners face when learning the L2 is that the L1 and the L2 operate quite differently—be it grammatically, lexically, and otherwise. Nowhere is this more evident than in the phonological systems of the two languages. True, languages from the same language families (e.g., English and Spanish, both Indo-European languages) tend to share more characteristics than languages from very different families (e.g., English and Amharic, the latter being an Afroasiatic language). But even when we compare languages from the same families, we note distinct differences in both their segmental and suprasegmental features. To cite one frequently mentioned obstacle, L2 learners from virtually all language backgrounds face difficulties when acquiring the vowel system of English. This can be traced to the fact that English, compared to most other languages of the world, has a very complex vowel system, with anywhere from 14 to 20 distinct vowels (Ladefoged & Disner, 2012), depending on the dialect of English being spoken.<sup>2</sup> A comparison such as this would lead us to predict that a speaker of Japanese (a five-vowel language) would have difficulty distinguishing the 14 or 15 vowels of Standard American English. And in all likelihood, this prediction would be borne out. Similarly, when teaching the consonants of English, we might predict that the dental fricatives /θ/ and /ð/ will be difficult for learners to

acquire since few of the world's languages contain these consonant pairs. However, research results tend to indicate quite the opposite. As Munro (2018 [this issue]) notes, these fricative sounds are not all that difficult for learners (and as discussed later in this article, also not all that crucial to teach).

As pointed out by Munro, we need to exercise caution when making generalizations about the ease or relative difficulty of L2 pronunciation features based on a contrastive analysis of the L1 and L2 for several reasons. First, the fact that a phonemic feature (be it segmental or suprasegmental) is not part of a learner's L1 does not correlate with its ease or difficulty of acquisition. Second, this purely linguistic approach to predicting learners' pronunciation challenges ignores the very strong influence that social and affective forces exert on the learners' acquisition of L2 phonological features, not to mention a whole host of other factors such as age, prior L2 learning, exposure to native-speaker input, and so forth. Third, by allowing our analysis of differences between the L1 and the L2 to guide our teaching decisions, we are disregarding the fact that this analysis may cause us to place undue emphasis on a distinction that is not of great importance, thus working against our ultimate goal of helping our learners to become intelligible speakers of the target language. An example in point concerns the dental fricatives, which most adherents to the common core (see Lewis & Deterding, 2018 [this issue]) would argue are of little importance for global English speakers.

Where does this leave us as classroom teachers wishing to prioritize goals for our learners? Rather than putting our energy into analyzing L1-L2 differences, we are better off analyzing individual learner needs. This is especially true in linguistically heterogeneous classrooms, where such an analysis can assist us in finding common needs that help to focus our curricular goals. As Darcy (2018 [this issue]) cautions, there is no "one size fits all" plan to follow, and thus the work of determining what to focus on for a particular group falls mainly on the teacher. In this pursuit, Yoshida (2018 [this issue]) suggests that many of the computer tools available today can assist us in analyzing our learners' needs. They can further assist us in the task of providing individualized feedback and creating an individualized space where learners can practice those features that have been identified as being high-priority needs. Specific guidance is also available in McGregor and Reed (2018 [this issue]), who outline a five-stage curricular-design framework aimed at helping teachers identify the fundamental building blocks of effective pronunciation instruction based on the characteristics and needs of a given student population.

#### ***Principle #4: What Learners Bring to the Pronunciation Classroom Strongly Colors Their Learning Experience***

The concept of the learner as a tabula rasa is one that few, if any, ascribe to today. We are aware that learners' backgrounds and prior exposure to a given topic or subject exercise a great deal of influence on their motivation to learn as well as on the various ways in which they structure their learning experiences. And yet as teachers we often ignore this aspect of learning, perhaps out of a sense that there is little we can do to either counter these influences or take advantage of them.

As a corollary to Principle #3, we know that in addition to their L1, the myriad factors that learners bring with them to the pronunciation classroom strongly color their learning experience—and with it, their success in acquiring L2 pronunciation. Today, we recognize the long-standing belief that children are more apt to attain a nativelike accent in the L2 than adults is vastly oversimplified given the many other factors that figure into the equation—aptitude, L2 learning experience, motivation, amount and type of input, opportunity for practice—to name just a few. In this issue, Moyer (2018) puts the myth regarding age and success in L2 acquisition in perspective by examining the often symbiotic relationship between age and self-concept, that is, the learner's affinity to the target language and culture; in this connection, she argues that adults and adolescents, given their more strategic approaches to learning and their sense of agency as learners, are more analytical, goal-oriented learners—and thus, contrary to the popular myth, can be said to have an advantage over younger learners.

Moyer suggests that teachers adopt a two-pronged approach, instilling in their learners a strong L2 self-concept as well as encouraging their recognition of the importance of a targetlike accent in the L2. This is best achieved by focusing on learners' metacognitive efforts—for instance, by asking them to share their pronunciation-related goals and their individual strategies for achieving these goals. Macdonald (2018 [this issue]) echoes these suggestions, noting that in addition to focusing on sound production, teachers need to help learners become more aware of their L2 selves and encourage them to focus on pragmatic strategies that can result in their becoming clearer, more confident speakers of the target language.

#### ***Principle #5: Not All Aspects of Pronunciation Should Receive Equal Emphasis***

Several authors in this issue (e.g. Darcy, 2018; Levis & Muller Levis, 2018; Lewis & Deterding, 2018; McGregor & Reed, 2018; Munro, 2018) invoke *functional load* as a principle that can guide teachers in



deciding what to teach. This notion (see, e.g., Brown, 1991; Catford, 1987; King, 1967) refers to the relative importance of a vowel or consonant pair (e.g., /i/ vs. /ɪ/) for distinguishing meaning in minimal pair words such as *beat* versus *bit* or *team* versus *Tim*. According to this principle, the consonant contrast /p/ versus /b/, for example, is seen to carry a high functional load—as does the vowel contrast /i/ versus /ɪ/. The contrast /θ/ versus /ð/, on the other hand, carries a very low functional load.<sup>3</sup> If we apply functional load principles to course design, it is claimed, we can then make informed decisions on which segmental contrasts to include. However useful the concept of functional load is, it is unfortunately limited to segmental contrasts. Also, because of the large degree of variation in English vowel quality, the principle tends to be more useful for consonants than it is for vowels (Rogerson-Revell, 2018).

As an alternative to functional load, current pronunciation research is exploring the notion of *high-value* pronunciation features—that is, suprasegmental features that rank high in terms of how they affect listeners' ability to understand what their interlocutors are saying. Based on previous research and several studies that the researchers themselves conducted, Levis and Muller Levis (2018 [this issue]) propose that contrastive stress (word stress placed on a sentence element in order to signify its contrast with another sentence element, as in "I'm available on TUESday but not on FRIday") appears to be such a feature. Further, they note, this feature is eminently learnable at both the intermediate and advanced L2 levels of proficiency and therefore holds promise as a high-value feature that can affect learners' overall comprehensibility.

A third perspective on the relative importance of various linguistic aspects on L2 learners' intelligibility comes to us via the work being done on the *common core* of pronunciation features (Walker, 2010), that is, those features that are deemed important to include when designing a curriculum for ELF speakers. Research on a common core is ongoing, and it seeks to identify segmental and suprasegmental issues that result in communication breakdown between ELF (or global English) speakers. Lewis and Deterding (2018 [this issue]), for example, detail research undertaken in Brunei to determine the importance of word stress in communicative exchanges between ELF speakers in the region. As they note, much of the research in this area is preliminary, since results differ depending on the L1 of the ELF subjects involved. A broader spectrum of L1 speakers of ELF along with a focus on other (especially suprasegmental) aspects of their speech is obviously called for if we are to obtain reliable guidelines for ELF curriculum design.

For classroom teachers in the ESL and EFL contexts, it is impor-

tant to be aware of the work on functional load, high-value pronunciation features, and the common core. All three areas suggest findings that shatter some previously held (non-research-based) beliefs, especially with regard to the teaching of certain segmental contrasts. Nonetheless, as Darcy (2018 [this issue]) reminds us regarding the “what” of pronunciation, there is no alternative to careful diagnosis, which can help us to prioritize aspects of speech to cover in the curriculum.

### ***Principle #6: Learners Benefit From Multimodal Learning in the Pronunciation Classroom***

Even back in the heyday of Direct Method and audio-lingualism—both of which placed strong emphasis on pronunciation (Celce-Murcia, 2014)—there was a recognition that pronunciation instruction benefited from both aural and visual means of reinforcement. In fact, we can trace many of the visual “tools” that we still use to teach pronunciation today (such as the vowel quadrant, the consonant chart, the sagittal diagram) to the influence of Direct Method, and with the arrival of audio-lingualism on the language teaching scene came a corresponding emphasis on aural-oral reinforcement via audiotaped pattern practice drills conducted in the ever-present language labs of that era.

However, it was not until the beginnings of CLT that we see other forms of multimodal teaching such as the use of gesture and body movement being introduced into the pronunciation classroom. Today, best practice in pronunciation teaching mandates the use of auditory, visual, and kinesthetic practices (Brinton, 2018). Chan (2018 [this issue]) provides extensive suggestions as to how teachers can reinforce classroom presentations via kinesthetic means such as using the hands to indicate word and sentence stress patterns, or having learners do pronunciation workout exercises such as the “Stress Stretch.” And as Yoshida (2018 [this issue]) reminds us, many aural-oral practice opportunities that in the past were limited to the classroom are now available to learners via free or low-cost apps that can help to individualize learning and augment classroom practice opportunities. Given the rapid pace at which technology progresses, we can predict much more in the way of technological practice and feedback mechanisms on the horizon.

The message for classroom teachers is that an entire host of resources is available to us for both in- and out-of-classroom use. “Classic” tools such as the kazoo and rubber bands, suggested by Gilbert (1991) back at the outset of the CLT era, can now be used alongside popular teacher resources such as Hancock’s (2017) reenvisioned hex-

agonal vowel chart (see Rosenfield, 2018 [this issue]), the Color Vowel Chart (Taylor & Thompson, 2012), and the numerous kinesthetic techniques suggested via haptic pronunciation (Acton, Baker, Burri, & Teaman, 2013). Teachers should obviously feel free to select from available options, as not all suggested tools or techniques will appeal to an individual teacher's style or sense of plausibility. However, to ignore the research evidence concerning the positive effects of multimodal learning is to undoubtedly deprive learners of opportunities that will help to motivate and assist their pronunciation learning.

***Principle #7: Perception and Production Are Inextricably Linked***

One of the foundational premises of pronunciation teaching is that perception and production are inextricably linked. Loosely translated, this has typically resulted in the belief that learners need to be able to “hear” or discriminate target-language features before they can actually produce them. This belief played a leading role in the “listen and repeat” methodology of audio-lingualism, often today derided as the “drill and kill” era of language teaching, that is, when learners parroted native-speaker utterances in the language laboratory setting and then listened to the playback of their recorded version side by side with the native-speaker version.<sup>4</sup> More recently, Celce-Murcia, Brinton, & Goodwin (2010) recommended a five-stage pedagogical sequence beginning with description and analysis, followed by listening discrimination and the three stages of practice (controlled, guided, and communicative). And as noted by Deneroff (2018 [this issue]), Yoshida's (2016) text *Beyond Repeat After Me* pays homage to this foundational premise, suggesting that the technique of listen and repeat remains an important (albeit initial) piece of the puzzle in pronunciation teaching. Finally, according to Darcy (2018 [this issue]), we need to recognize that the reverse is also true: Pronunciation practice assists learners in developing better listening-comprehension skills.

In fact, there is mounting evidence that listening practice can not only help learners better perceive target-language sounds, but that it can, under certain conditions, even help improve their production. In this connection, Barriuso and Hayes-Harb (2018 [this issue]) share promising evidence that High Variability Phonetic Training (HVPT) increases listeners' ability to perceive nonnative sounds. In this technique, learners are exposed to intensified listening practice, with sounds produced by multiple speakers (hence the “variability” of the technique). According to HVPT researchers, it is the variability of the input that helps learners distinguish new sounds or sound features in a more targetlike fashion. The researchers conclude that the technique

holds promise for both the perception and production of L2 sounds.

Regarding the implications of this principle to classroom pronunciation teaching, Barriuso and Hayes-Harb share their belief that computer-assisted technologies hold much promise for classroom applications of HVPT—especially given that computerized exposure can complement classroom practice and provide valuable out-of-class exposure to target-language input—a point of view also supported by Yoshida (2018 [this issue]). A second important caveat, as emphasized by Darcy (2018 [this issue]), is that perception practice (like all stages of language practice) needs to be contextualized, and it should be accompanied by feedback for a dual focus on form and meaning. In short, research seems to be suggesting that our age-old perception of the value of perception as a stepping-stone to more targetlike production was not misplaced. However, it needs to be accompanied by careful feedback mechanisms along with contextualized and meaningful practice.

***Principle #8: The Traditional Textbook Format No Longer Suffices as a Comprehensive Source of Teacher Guidance***

Teachers of pronunciation have traditionally looked to the textbook market for guidance, both in terms of what to teach (content) and how to teach it (methods), with information on the latter often included in the teacher's manual accompanying the textbook. As we progress into the 21st century, however, we see increasingly more support for pronunciation teaching in online formats that supplement (and in some cases replace) these two traditional sources of guidance. These alternate sources span the range of digital resources such as online materials (see Rosenfield, 2018 [this issue]), websites, blogs (see Griner, 2018 [this issue]), streaming video, and automatic speech-recognition programs, to name only a few.

These sources respond to the need to appeal to a new generation of pronunciation teachers who want more direct, easy-to-navigate, comprehensive, and innovative guidance on classroom pronunciation teaching. Frustrated at the limited guidance provided by the traditional teacher's manual, these teachers voice their desire for enhanced guidance in course planning and goal setting (Zimmerman, 2018 [this issue]). This need is even more strongly felt by novice teachers, teachers new to the skill of pronunciation teaching, and nonnative English-speaking teachers (NNESTs). Sonsaat (2018 [this issue]), in her study of teachers' preferences for a print versus online teacher's manual, reports that the majority of native English-speaking teachers (NESTs) and NNESTs expressed a preference for the online teacher's manual because of its easy-to-process side-by-side layout, its overall design,

and the possibility of including nonprint enhancements such as clickable words and video tutorials on effective pronunciation teaching.

A high-priority demand of today's more diverse population of pronunciation teachers—a growing percentage of whom are NNESTs—is the desire for learning materials that provide a pronunciation model for students to emulate, thus making it possible for NNESTs who lack confidence in their own pronunciation to effectively model English pronunciation features. Yoshida (2018 [this issue]) provides an overview of technology tools (e.g., Sounds of Speech, The Phonetics, and YouGlish) that can assist teachers in this pursuit. Finally, Chan (2018 [this issue]) argues for a more multisensory approach to pronunciation learning that can supplement more traditional classroom materials or that can be delivered via online format for student self-study.

In short, in today's digital age, the traditional textbook format with its accompanying teacher's manual no longer suffices as a comprehensive source of teacher guidance and teachers are looking elsewhere in their quest to satisfy their pedagogical needs. Contributions such as those by Yoshida (2018 [this issue]), Sonsaat (2018 [this issue]), and Zimmerman (2018 [this issue]) provide promising first steps toward determining how both print and digital materials can better serve pronunciation teachers' needs.

### **Final Thoughts**

Looking back on my own career in teaching pronunciation, I realize that my beginnings as a teacher were based on numerous misperceptions, most of which were instilled in me during the time that I was trained as a teacher. These included the following:

- A student's L2 pronunciation is primarily influenced by the L1.
- The L1 exerts a negative influence on students' production and is the primary cause of learner error; any deviations from the L2 should be corrected on the spot in order to avoid the formation of bad L2 habits.
- Young learners have a distinct advantage over adult learners, who will not be able to achieve a targetlike "accent" in the L2.
- The target model for the pronunciation classroom is native-speaker speech.
- The most effective classroom methodology for pronunciation is imitation and repetition in the form of extensive drilling.
- Students must first be able to perceive sound contrasts before they can produce them; therefore listening should always precede speaking practice.

Armed with these misperceptions, I began teaching pronunciation, and it was only some time into this journey that the winds of change (i.e., the appearance of CLT and its impact on the teaching scene) and a renewed interest in the field in pronunciation research and practice began to alter my belief system. I now know the above statements to be false or at best misleading, and I recognize that achieving L2 fluency and accuracy is a very complex process that simply does not work according to black and white rules such as the above.

The authors in this issue are careful to state not only what research reveals about the acquisition of L2 pronunciation but also what we do *not* yet know. I therefore offer the above principles with the caveat that they reflect the current state of practice and can serve, at minimum, to replace some of the misperceptions still prevalent in our pursuit of best methods for teaching pronunciation.

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### **Notes**

<sup>1</sup>For additional research-driven pedagogical principles see Brinton (2014).

<sup>2</sup>In fact, the number of vowels is one of the main distinguishing features of North American and British English, with the latter having substantially more vowels (20 in the BBC variety of British English, for example, as opposed to 14 or 15 in General American English).

<sup>3</sup>This example is particularly interesting given the traditional emphasis that classroom teachers (and pronunciation materials designers) have placed on /θ/ and /ð/.

<sup>4</sup>The belief underlying this practice was that by hearing their non-targetlike utterance side by side with the native-speaker utterance, learners would hear the difference and be able to produce a more targetlike utterance in the future.

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