Evidence-based pronunciation teaching

A pedagogy for the future

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I have given a number of presentations during 2016, including talks to intensive English program teachers, as part of psycholinguistics, pronunciation, and linguistics conferences, and finally in a corpus linguistics conference. A common theme for me was the connection of research and teaching in second language pronunciation, a topic I have discussed before in this journal (Levis, 2016). It remains a central question in the field of second language pronunciation, albeit one that has not always been addressed well. On the teaching side, L2 pronunciation teaching and materials development are full of talented craftsmen who bring divergent, yet under-researched approaches to teaching, and who may show little knowledge of research findings. On the research side, research articles are often written with pedagogical implications that no one applies. The result is that the puzzle pieces that connect research and practice remain too few to see a fuller picture of what works, why it works, and in what situations it works.

In some other fields, evidence-based practice has been touted as a way to move forward. Evidence-based practice (EBP), whose roots extend back to the 19th century, became well-known in medicine in the 1990s, and was defined as “the conscientious, explicit and judicious use of current best evidence about the care of individual patients” (Sackett, 1997, p. 3). Evidence-based practices spread beyond medicine to other fields such as audiology, speech/language pathology, and education, all of which are relevant to pronunciation teaching. EBP, rather than calling for a direct application of research to practice (and thus privileging research over practice), is based on three sources of evidence: External scientific evidence (i.e., research), clinical expertise and/or expert opinion, and the views of clients about what works (http://www.asha.org/Research/EBP/Introduction-to-Evidence-Based-Practice/). Such a framework is well-suited to second language pronunciation teaching, which is in need of robust evidence drawn from all three
areas: empirical evidence (from classrooms, laboratory settings, and natural settings), evidence based on clinical (or professional) expertise, and understanding of what clients (teachers and learners of all sorts) think works.

Not surprisingly, EBP is not easily implemented. Nonetheless, there is much that the growing field of second language pronunciation can learn from such a framework. EBP assumes that research and professional knowledge should be current (and therefore changeable), that “slavish, cookbook approaches” to problems (Sackett et al., 1996) are inappropriate (in other words, teaching should be individualized), and that the end goal is to improve performance in the field, both at the level of the individual and more generally.

1. Research into practice and practice into research

Despite encouraging developments in second language pronunciation research and teaching, research findings do not sufficiently inform pedagogy (Derwing, 2010; Derwing & Munro, 2015), and pedagogical insights often are not tested by research. Published materials continue to include a dominance of controlled activities with relatively few guided or communicative activities, and materials that are presented in integrated-skills books are often placed in such a way as to deemphasize their importance (Levis & Sonsaat, 2016).

Table 1 offers suggestions for how EBP might be used to conceptualize evidence-based practices applied to pronunciation research and teaching. The number in each cell correspond to the explanations in the numbered paragraphs following the table. For example, #2 asks how empirical findings might inform the expertise of those who regularly teach pronunciation and who create teaching/learning materials. On the other hand, #4 looks at how the assumptions of professional expertise can inform empirical approaches to pronunciation teaching and learning.

Table 1. Interactions of empirical findings, professional expertise and client evaluations in EB

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1. Empirical findings informing Empirical findings. Test the positive findings of empirical research in another context. For example, a study on the teachability
of contrastive stress showed that advanced English learners produced contrastive stress more successfully after a short period of instruction (Muller Levis & Levis, 2012). This study was later extended to learners of a lower English proficiency (Muller Levis, Levis & Benner, 2014). Similar extensions of positive findings can be imagined for SL vs. FL contexts, for teaching adults vs. adolescents vs. children, or for teaching university students vs. those in factories (e.g., Derwing et al., 2014).

2. Empirical findings informing Professional expertise. Use findings from research to design pedagogical approaches that can be used in conjunction with research on other language skills (e.g., speaking). For example, some articles have reported on the use of dramatic techniques (Goodwin, 2005) to improve comprehensibility (Crowther et al., 2016). This kind of interaction can help design techniques that integrate pronunciation within realistic discourse contexts.

3. Empirical findings informing Client evaluations. Redesign exercises that have been successful in laboratory settings (e.g., the use of perceptual discrimination exercises) so that they are appropriate to a classroom or self-study setting. Examine how teachers or learners interact with different exercise formats in different types of contexts to determine what will make laboratory exercises successful in other contexts.

4. Professional expertise informing Empirical findings. Develop an argument for curricular approaches to pronunciation teaching and learning that can be successfully employed in specific contexts. For example, there is a long-standing assumption that teaching suprasegmentals will lead to greater and faster improvement than teaching segmentals. Such assumptions of professional expertise should be tested empirically with control or comparison groups (e.g., as happened with the segmental and suprasegmental debate in Derwing, Munro & Wiebe, 1998).

5. Professional expertise informing Professional expertise. Examine how different kinds of professional expertise are similar or differ when addressing the same problems. For example, it would be possible to provide varied types of language learner input to different sets of “experts” (e.g., speech-language pathologists and L2 teachers). By asking both sets of experts to diagnose pronunciation difficulties and to determine a course of action for treatment, we can begin to understand different views of experts, who can also be interviewed to explore more deeply the reasons for their recommendations.

6. Professional expertise informing Client evaluations. Find out how non-expert teachers use materials. L2 pronunciation teaching is often carried out by teachers who are modestly or poorly trained as well as those whose training is excellent and those who create published materials. At many professional
conferences, presentations or workshops provide materials to teachers advocating particular approaches to teaching pronunciation. Less expert teachers who receive these materials can be studied to see how they make use of ideas.

7. **Client evaluations informing Empirical findings.** Study successful pronunciation learners to discover what types of things they have done to develop pronunciation skills in the L2. Use these techniques in empirical studies to discover if/why they work, and for what kinds of learner characteristics they are successful.

8. **Client evaluations informing Professional expertise.** Using an iterative design-based approach, professional experts can evaluate their own practice on the basis of feedback. This process is already used informally in successive editions of pronunciation teaching materials such as *Clear Speech* (Gilbert, 2012) and *Well Said* (Grant, 2017), but it could become more systematic using EBP.

9. **Client evaluations informing Client evaluations.** Examine how techniques that teachers favor are perceived by learners and vice versa. Teachers and learners often have very different criteria for the usefulness of practice exercises, and for what they expect as outcomes from practice.

### 2. Full-length articles

In this issue, all the full-length articles address questions related to EBP in one way or another. Two studies focus on techniques that show promise for pronunciation improvement through individual practice. Jane F. Hacking, Bruce L. Smith and Eric M. Johnson examined the use of electropalatography (EPG), typically used in treating speech disorders, to train a class of L2 learners of Russian to produce palatalized consonants, a pervasive feature of the Russian phonological system that is particularly challenging to L2 learners. Training with EPG demonstrates another successful approach to providing visual feedback for pronunciation features that are particularly difficult to learn. Acoustic analysis and listener identifications both showed increases in accuracy. This article seems to fit into cell #2 in Table 1.

In a second study, Jennifer Foote and Kim McDonough explore whether shadowing is successful at improving L2 learners’ pronunciation and whether such changes are noticeable in comprehensibility, fluency and accentedness ratings. (I see this article as fitting into cell #4 in Table 1.) Participants in the shadowing training practiced at least four times per week over eight weeks using scenes from TV comedies (accessed via YouTube). Practice was carried out using iPods loaded with the video and audio recordings and transcripts of the recordings. Participants significantly improved on all measures except accentedness and reported finding the activities useful for improving pronunciation.
These two studies include all three areas discussed in EBP, reporting empirical research about improvement, about whether such improvement is heard by native listeners, about professional approaches to pronunciation improvement both outside and inside language classrooms, and about the attitudes of learners to the training regimens. The results suggest that intractable difficulties can be successfully addressed with appropriate techniques, that learners can improve their pronunciation when provided with the right tools, and that improvement is often dependent on the learners themselves.

Implicit in the principles of EBP is the necessity of questioning findings of the past. Andrew Sewell revisits pronunciation in English as a Lingua Franca (ELF) contexts and functional load as an explanatory model, two issues that have dominated discussions of pronunciation teaching and research over the past two decades. The importance of pronunciation in ELF, in which communication in English takes place primarily between nonnative speakers, was demonstrated by Jenkins (2000), but a number of Jenkins’s recommendations for pronunciation teaching have generated controversy, including her contention that most supra-segmental features, including word stress, weak forms, and intonation, were not essential for international intelligibility. Also controversial has been whether ELF pronunciation teaching really should be so different from other types of pronunciation teaching contexts, and whether the limited data of Jenkins (2000) were supported by more recent research into intelligibility in ELF contexts. Sewell revisits the extensive theoretical history of functional load and applies it to the findings of ELF studies. (This indicates that this paper fits best into cell #1 in Table 1.)

The fourth full-length article also fits best into cell #1. L2 pronunciation development is dependent upon the contexts in which learning takes place. Pronunciation learning may occur in classrooms in second language contexts and foreign language contexts, during study abroad experiences, by studying or being taught individually, in immersion contexts, and a host of other possible contexts. Mandy Menke examines the development of Spanish vowel pronunciation for child learners in a two-way bilingual immersion context in the United States. Menke contrasts the two-way immersion context with research on one-way immersion, which does not typically lead to native-like acquisition of pronunciation. In the two-way context, English-speaking learners learn academic content with Spanish-speaking peers, and their acquisition of more native-like Spanish vowels demonstrates the value of the two-way bilingual immersion learning context.

EBP also calls for an understanding of, and sensitivity to, the clients in the process. In second language pronunciation, the primary clients are language learners and language teachers. EBP thus calls for an understanding of what learners find doable and feel positively about. It also calls for an understanding of what teachers find useful and why they may be reluctant to teach pronunciation. Michael Burri,
Amanda Baker and Honglin Chen look at the effect of a pronunciation pedagogy course on the cognition of pre-service and in-service teachers in Australia. The results showed the challenges of significant development of the teachers’ cognition during the course of a semester-long course. Their cognition development was affected by the kinds of knowledge they brought into the course and whether their background knowledge included the integration of pronunciation into lessons focused on other areas of language. Although this study is challenging to place in the cells of Table 1, given its empirical study of professional expertise and its transfer to relatively inexperienced pronunciation teachers in a teacher education course, this study may best fit into cell #6.

3. Reviews

This issue of JSLP includes five reviews. The first two address the professional expertise and client elements of EBP, and the books and software being reviewed fit best into cell #1 or #2.

Elizabeth Keenan (Carringbush Adult Education, Melbourne) reviews *Pronunciation in the classroom: The overlooked essential, edited by Tamara Jones*. This book presents a variety of chapters about how pronunciation can be integrated with other skills in a second language classroom. In EBP terms, it is written based on the expertise of practitioners for a particular client group, teachers who typically do not teach pronunciation. Keenan’s review includes some insights into the effectiveness of the ideas within her own teaching context.

Carole Mawson (Stanford University) reviews *NativeAccent: English Speech Training*, software developed by Carnegie Speech Company. The software is intended for adult L2 learners and is based not only on a review of the program but also the author’s experience with the program over eight years. This allows the reviewer to provide a particularly insightful review of the strengths and the limitations of the program for her context. In terms of Evidence-Based Practices, she is able to see the program both from her professional expertise and as a client.

The last three reviews primarily address books in the empirical findings/professional expertise interface are dominant, reporting varied research on English, Chinese and foreign accent. They all fit into either cell #1 or cell #2 of Table 1.

Hilal Ergül (Texas A & M, Commerce) reports on the edited volume by Jose A. Mompean and Jonás Fouz González, *Investigating English pronunciation: Trends and directions*. This collection of selected papers from the 2013 *English Pronunciation: Issues and Practice* conference in Murcia, Spain is divided into themes of laboratory phonology, second language phonology, accentedness, pronunciation teaching practices, and computer-assisted approaches to pronunciation.
teaching. The volume offers a window into second language pronunciation research in the European context.

Sharif Alghazo (University of Jordan) reviews Alene Moyer’s book, *Foreign accent: The phenomenon of non-native speech*. Moyer’s book addresses current research on the critical period hypothesis as applied to second language pronunciation acquisition, especially as regards foreign accent and how accent impacts, and is impacted by, social factors. Assumptions about accent permeate discussions of pronunciation, making Sharif’s review and the book itself valuable for any discussion of the interaction between research and teaching.

Finally, Mingxia Zhi and Becky Huang review Chunsheng Yang’s book, *The acquisition of L2 Mandarin prosody: From experimental studies to pedagogical practice*. It is well-known that most second-language pronunciation research involves English, but it is also clear that second language pronunciation research and teaching can only continue to develop by looking at other languages. This book on the prosody of Mandarin, a major world language, and the discussion of tones, tone sandhi, and utterance level prosody, is thus a welcome addition to our knowledge.

4. Conclusion

Fitting the full-length articles and the materials being reviewed into Table 1 points out that, as might be expected from a professional journal, most of the papers involve empirical findings in one way or another. In comparison, five of the cells, #3, #5, #7, #8 and #9, were not associated with any of the articles or reviews. Four of these cells involve Client evaluations, and one involves the comparison of professional expertise from different groups of experts. This suggests that, from an evidence-based perspective, these areas might be ripe for further examination.

References


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