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Language Acquisition Studies?**

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Working Paper No. WP05-09

2009



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Funders

We are pleased to acknowledge the following organizations that provide funding in support of the Prairie Metropolis Centre: the Social Sciences and Humanities Research Council of Canada; Citizenship and Immigration Canada; Atlantic Canada Opportunities Agency, Canada Border Services Agency, Canada Economic Development for the Region of Quebec, Canadian Heritage; Statistics Canada; Human Resources and Social Development Canada; Rural Secretariat of Agriculture and Agri-Food Canada, Department of Justice Canada, Public Health Agency of Canada, Federal Economic Development of Initiative of Northern Ontario, Canada Mortgage and Housing Corporation; Public Works and Government Services Canada; the Royal Canadian Mounted Police; and Public Safety Canada. The University of Alberta provides PMC with a generous grant and the other participating universities offer supplementary support.

English Pronunciation Research: The Neglected Orphan of Second Language Acquisition Studies?

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In this article we determine the extent to which pronunciation is the focus of research in applied language settings. We have tallied the number of articles with an ESL/EFL pronunciation focus in 14 academic journals over the last ten years (1999-2008). Many researchers have called for increased attention to this aspect of second language speech, because of its importance not only to intelligibility, but to social integration. There have been many new texts aimed at practitioners, as well as many new student textbooks and other resources, but to what extent have researchers directed their interest to the acquisition of second language (L2) phonology? We also examine the nature of the pronunciation topics that most commonly appeared in the last decade.

In 1991a, Adam Brown suggested that second language (L2) pronunciation research did not receive the degree of attention it merited from researchers. He examined four well-established journals, *International Review of Applied Linguistics*, *Language Learning*, *TESOL Quarterly*, and the *ELT Journal*, from 1975-1988 to determine what percentage of their articles were devoted to pronunciation-related topics. He found that none of these journals featured many articles (ranging from 4.6% to 11.9%), and he lamented the degree of neglect. Brown also indicated that most English language instructors did not see the need to teach pronunciation, partly because many have little or no training in phonetics. Later studies of teacher engagement in L2 pronunciation provided evidence for Brown's claims. Breitkreutz, Derwing and Rossiter (2001), Burgess and Spencer (2000), and MacDonald (2002) showed that ESL instructors in Canada, Britain and Australia respectively were generally reluctant to teach pronunciation to their students.

Since Brown published his book of readings (1991) several new textbooks geared to ESL teachers have been published (e.g., Celce-Murcia, Brinton & Goodwin, 1996; Hewings, 2004; Laroy, 1995; Teschner & Whitley, 2004) and many new textbooks and software programs aimed at ESL/EFL students have appeared (e.g., Cauldwell, 2002; Dauer, 1993; Grant, 1993; Hancock, 2003; Hewings & Goldstein, 1998; Kalkstein Fragiadakis, 1997; Matthews, 1994; Reed & Michaud, 2005; Westwood & Kaufmann, 2001). Furthermore, there has been an explosion of websites and businesses dedicated to the dubious practice of accent reduction. There have also been special issues on pronunciation in *TESOL Quarterly*, *Prospect: A Journal of Australian TESOL*, as well as *System*. However, we questioned whether these publications reflect a genuine change in the interest in pronunciation-related matters at an academic level, or simply represented a brief flurry of interest. We decided to undertake a

review of 14 applied linguistics academic journals to see if things have really changed since Brown's investigation. To that end, we examined 14 journals from the 10-year period of 1999 – 2008. Like Brown, we calculated the percentage of articles devoted to an ESL/EFL pronunciation-related topic by counting the total number of articles in each journal and the number the number of pronunciation articles. As can be seen in Table 1, the figures for the last decade are not an improvement over Brown's numbers. (There were a handful of articles related to the pronunciation of other languages, which we have not included here, but there were too few to significantly change the percentages below.)

Table 1

Percentage of pronunciation articles over 10 years (1999-2008)

| Journal | Percentage |
|--|------------|
| Language Learning System | 2.63 |
| Modern Language Journal | 4.89 |
| Studies in Second Language Acquisition | 0.81 |
| Journal of Multilingual and Multicultural Dev. | 4.35 |
| Applied Linguistics Prospect | 1.17 |
| ELT Journal | 2.91 |
| TESL Canada | 7.38 |
| Language Testing | 2.95 |
| Language Awareness | 1.32 |
| TESOL Quarterly | 0.54 |
| Canadian Modern Language Review | 3.29 |
| Applied Language Learning | 7.14 |
| | 2.82 |
| | 5.08 |

Because we were somewhat disheartened by the findings, we decided to look at the most recent five years alone, to compare with the average over ten years, to see if there was a growing trend towards pronunciation research. The figures for the last five years appear in Table 2.

Table 2

Percentage of pronunciation articles over 5 years (2004-2008)

| Journal | Percentage |
|--|------------|
| Language Learning | 1.46 |
| System | 6.74 |
| Modern Language Journal | 0.75 |
| Studies in Second Language Acquisition | 8.05 |
| Journal of Multilingual and Multicultural Dev. | 1.48 |
| Applied Linguistics | 0.90 |
| Prospect | 9.21 |
| ELT Journal | 3.05 |
| TESL Canada | 0.00 |
| Language Testing | 0.00 |
| Language Awareness | 5.00 |
| TESOL Quarterly | 9.50 |
| Canadian Modern Language Review | 3.19 |
| Applied Language Learning | 4.55 |

Because some prominent journals, notably *TESOL Quarterly* and *Prospect*, had special issues dedicated to pronunciation during this period, the overall percentages show an increase in recent years in those journals. In total, 8 of the 14 journals surveyed showed an increase. However, it is fair to say that pronunciation is still underrepresented in the literature.

We were also interested in knowing what key topics arose on a regular basis. We categorized the articles as follows: teacher education; pedagogical implications; intelligibility, comprehensibility and accentedness; fluency; acquisition; identity and discrimination; and World Englishes.

The research articles we found do not fit neatly into one or another of these categories. The topics necessarily overlap, and discussions of segmentals and prosody, intonation, and suprasegmentals are found in most of these articles.

Teacher Education

Only five of the complete sample of 2,912 articles dealt with teacher preparation for teaching pronunciation. This category included articles that concerned program development, professional development, and instructors' attitudes towards teaching pronunciation. Program development included both separate classes as well as sections within larger, more general

TESL classes. Articles that focused on pedagogical issues within the ESL classroom are discussed in another section of this paper.

A theme common throughout the articles was lack of teacher training or confidence as a reason that pronunciation is not taught in classrooms (e.g. Lambacher, 2001; MacDonald, 2002). In his article on the views of reluctant teachers, MacDonald (2002) interviewed eight ESL teachers in Australia and examined the reasons they thought teaching pronunciation was difficult and why some avoided it altogether in their classes. Munro, Derwing, and Sato (2006) focused on raising teacher awareness of issues related to accents, such as discrimination and attitudes towards accented speech. The authors argued that “it is important that prospective teachers be exposed to information about the nature of foreign accents, their role in communication and the kinds of reactions they tend to elicit from the public in general” (p. 67). This information would provide deeper insights into *why* we should be teaching pronunciation.

Burgess and Spencer (2000) examined research to facilitate the design of an initial teacher training course and argued for an integrated approach. Gonzalez-Bueno (2001) provided a good overview and description of a stand-alone course in how to teach pronunciation. This author also pointed out that courses are usually either phonology-centered, in which 90% of the instruction is on phonology, or phonology-inclusive, in which phonology is only a small part of the class. Neither of these alone is really appropriate for educating teachers about pronunciation since they do not provide much practical information.

Lambacher’s (2001) guide to resources for teaching pronunciation would be particularly helpful for teachers. He outlined several activities and resources teachers can use to enhance their knowledge of pronunciation pedagogy without necessarily having to take a course (though he included this as a possible approach). In addition to formal education, Lambacher also included self-study (e.g., reading textbooks, journal articles, and linguistic books), membership in professional organizations (in the Canadian context, TESL Canada, provincial TESL organizations, and the Canadian Association of Applied Linguistics), attending and presenting at conferences, reflection upon classroom pedagogical and theoretical issues, and CALL (Computer Assisted Language Learning). For instructors who are not able to take a course on teaching pronunciation, resources such as these would be beneficial.

Pedagogy for Students

Pedagogy for students was the most popular theme of the articles surveyed. Some of these studies focused on the general need for pronunciation training (e.g. Derwing & Rossiter, 2002), while others emphasized teaching particular phonological phenomena (e.g. Couper, 2006).

In Derwing and Rossiter (2002), many adult ESL learners reported that they were not getting the pronunciation instruction that they needed and wanted. Fifty-five of the 100 learners interviewed perceived pronunciation to be a contributing factor to their communication problems, highlighting the need for greater emphasis in this area in L2 classrooms.

Suprasegmentals

Derwing, Munro and Wiebe (1998) provided empirical evidence for the importance of teaching suprasegmentals in a study that compared three groups of learners over 12 weeks. One group received general prosodic instruction; one group received segmental instruction; a control group had no specific pronunciation instruction. Extemporaneously produced utterances in the prosodic group at the end of the teaching period were judged to be significantly more comprehensible than the productions of the other groups. Hahn (2004) conducted a study which indicated that misplaced or missing primary stress in L2 speech had a negative impact on intelligibility; a finding which suggests that stress should be a central component in pronunciation classrooms (see also Zielinski, 2008).

Segmentals

Pronunciation activities are only useful to the learner if they help reduce the possibility of miscommunication. In this regard, the functional load principle (Brown, 1991b; Catford, 1987; Munro & Derwing, 2006) illustrates the importance of selecting and teaching segmentals that have high functional load (Levis & Cortes, 2008), i.e., those segments that have a high chance of resulting in miscommunication if mispronounced. Teachers should choose the segments they teach carefully to ensure that they will actually make a positive difference to communication.

Couper's (2006) research investigated the teaching of segmentals, particularly epenthesis (the addition of an extra sound) and absence (the dropping of a sound). He found that focused instruction in these areas resulted in fewer learner errors. Couper summarized the following general principles for teaching pronunciation:

- Make learners aware that there is a difference between what they say and what native speakers say
- Help learners to hear the difference and practice it
- Find the right metalanguage
- Help learners to discover useful patterns and rules
- Give feedback and providing opportunities for further practice (p. 59).

Couper drew special attention of the idea of metalanguage, explaining that teachers must use explicit descriptions of what students are doing incorrectly so they can understand. For example, in the case of absence, a student may think that he or she is producing the final consonant and it would be helpful if the teacher told the student to make the final consonant 'stronger' or 'longer' rather than telling the student to produce the consonant.

Fluency

Although not considered to be an aspect of pronunciation in traditional terms, fluency is closely related to the accuracy of speech production. Fluency, the automaticity of speech production, is a vital aspect of successful communication (Derwing, Rossiter, Munro, & Thomson, 2004). Speech rate, length and frequency of silent pauses and filled pauses, location of pauses and the run of speech between pauses are all strong indicators of oral fluency (Wood, 2001). The foundations of fluency, as Wood (2001) indicated, are fast automatic retrieval and the use of formulaic language units stored as wholes in memory, for they provide frames and strings to help build sentences and increase speed of speech. Wood (2006) pointed out that formulaic sequences, in particular, facilitate fluency in speech by making pauses shorter and less frequent, and allowing longer runs of speech between pauses.

As for classroom practice, Wood (2001) suggested that samples of real-life, naturalistic discourse with independent clause-chaining and pause patterns are suitable fluency training materials. He developed a model to facilitate automatic retrieval of a repertoire of formulaic language units in spontaneous speech for intermediate ESL students. The model consists of 4 stages: input, automatization, practice and production, and free-talk. It encompasses activities of listening, imitating, free speech, peer evaluation and self-reflection.

Derwing & Rossiter (2003) indicated that language classes should involve a variety of tasks drawing upon a range of skills to enhance fluency, even in low-proficiency level classrooms. The activities should promote formulaic sequences and encourage paraphrasing, appropriate pause placement, and rapid production (Guillot, 1999). Derwing, Thomson, and Munro (2006) found that ESL students' encounters with native speakers outside the classroom also aid fluency. Teachers, therefore, should encourage students to use their second language outside the classroom through contact assignments or service placements (Derwing & Rossiter, 2002; Dudley, 2007) and teach them strategies for small talk so that they are able to initiate conversations with local people (Derwing, Munro, & Thomson, 2008).

Munro and Derwing's (2001) study of speech rate demonstrated that listeners rated slow speech as more accented and less comprehensible than utterances produced at a normal rate, which suggests that the strategy of speaking slowly is unlikely to be effective for many second language speakers. The ideal speed, as is evident from their study, is slightly faster than ESL learners' current rate but slower than the normal rate of a native speaker. For that reason, teachers should encourage slow ESL speakers to increase their speaking rate to enhance comprehensibility.

Intelligibility, Comprehensibility, and Accentedness

Often students will indicate that their pronunciation is "not good" because they lack the metalinguistic awareness to identify specific deficiencies in their English pronunciation (Derwing, 2003). As previously noted, intelligibility, comprehensibility, and accentedness are

generally accepted measures used by researchers to determine whether an individual's pronunciation interferes with his/her ability to communicate in English.

Munro and Derwing (2006) defined intelligibility as "how much a listener actually understands" (p. 521). Intelligibility is thus dependant to some degree on the context of the utterance. While some ESL students identify pronunciation problems by salience (i.e., noticeability), Derwing (2003) and Derwing and Munro (2005) have suggested that pronunciation instruction should be guided by concerns of mutual intelligibility. They argued that the goal of ESL teachers should be to increase intelligibility rather than to reduce accentedness for its own sake.

Comprehensibility is a "subjective assessment of ease or difficulty of comprehension, as opposed to a measure of actual intelligibility" (Derwing, Munro, & Wiebe, 1998, p. 396). Comprehensibility is typically measured through the use of listener ratings or judgments. Derwing, Munro, and Thomson (2008) found that comprehensibility and fluency increased in a group of Slavic speakers, whereas a group of Mandarin speakers who were demographically similar did not improve in either comprehensibility or fluency over time. The primary reason posited for the difference in improvement was the speakers' degree of exposure to English outside of classroom instruction.

Accentedness is defined as "the extent to which a listener judges L2 speech to differ from NS norms" (Derwing, Munro & Wiebe, 1998, p. 396). Many studies have indicated that people are likely to have nonnative pronunciation patterns if they began to learn English as a second language after early childhood (Scovel, 1988, 2000). Degree of foreign accentedness seems to be influenced by factors such as learners' first language (L1) background, age when L2 acquisition began, and L2 learning experience and motivation (Piske, MacKay, & Flege, 2001).

Communication breakdowns between NSs and NNSs are often blamed on accent; yet research has shown that accent is often not the source of the miscommunication (Munro, Derwing & Morton, 2006), and that perception of accent is often highly individualistic (Scales, Wennerstrom, Richard & Wu, 2006). Derwing, Rossiter and Munro (2002) found that "cross-cultural awareness training and explicit linguistic instruction" (p. 245) was effective in increasing NS understanding of accented speech. Deterding (2005) suggested that exposure to non-standard English accents could be an important aspect of an English language curriculum; Goto Butler (2007) found that nonnative accented English instructors were not a barrier to students' ability to comprehend their teacher. Other researchers have also suggested that the onus is on the listener to be willing to communicate and make more of an effort to understand accented speech (Derwing, Rossiter, & Munro, 2002; Derwing, Munro, & Thomson, 2008; Kennedy & Trofimovich, 2008; Matsuura, 2007; Zielinski, 2006, 2008).

Research has indicated that listeners are extremely successful in identifying foreign accents (Derwing & Munro, 2005). For example, listeners were able to detect accentedness in 30-millisecond long segment portions (Flege, 1984) and even in a word presented backwards (Munro, Derwing & Burgess, 2003). Esling and Wong (1983) suggested that, in addition to the segmental and suprasegmental variations in nonnative production, voice quality may play a

role in helping listeners identify accentedness. They advocated for learners' awareness of their own voice quality settings and provide suggestions for pronunciation teaching.

The issue of accentedness is closely related to the identity and experience of ESL learners and teachers. Gatbonton, Trofimovich, & Magid's (2005) study revealed a relationship between learners' L2 accent and perceived affiliation to their home ethnic group, suggesting that learners treat their peers' L2 accent as an indicator of their degree of ethnic affiliation. The findings of this study suggest that teachers should create an atmosphere where ethnic group affiliation is positively acknowledged.

World Englishes

In the new millennium, the changing world of English has become a widely discussed and debated topic in the domain of English language teaching, particularly in the area of pronunciation instruction. The ratio of NSs of English to NNSs of English is widening at a tremendous rate, with significant implications for ESL teaching and learning. Harmer (2007) indicated that this ratio may now be as high as 1:2 or 1:3, with native speakers of English in a "proportionately ever-decreasing minority" (p.13) because population growth patterns in areas where English is a second language exceed those in regions where English is the first language.

Of the many implications indicated by these trends, two have become focal inquiries. The first is the idea that English is a genuine *lingua franca*: "a language used widely for communication between people who do not share the same first (or even second) language" (Harmer, 2007, p.13). The second is that English's previous one-language status is changing because of the many different 'World Englishes' being used around the world (Harmer, 2007). Both of these implications are stimulating a dramatic shift in thought in the L2 teaching community and concomitant changes in classroom pedagogy.

Jenkins (2002) argued that there is a "need for empirically established phonological norms and classroom pronunciation models for English as an International Language (EIL), in which intelligibility for NNS rather than for NS receivers is the primary motivation" (p.83). Jenkins (2002) also proposed that a Lingua Franca Core (LFC), rather than Received Pronunciation (RP) and General American (GA), should be used as the basis for a phonological syllabus for EIL learners. She suggested that classrooms follow this core syllabus by teaching the identified items that most affect intelligibility and by not worrying about non-core items. Jenkins also suggested that course materials be composed of recordings and videos with various NNS accents so that learners get practice in listening to speakers with different L1s. She proposed the LFC as a set of phonological features that "seem to be crucial as safeguards of mutual intelligibility in interlanguage talk" (p.96). Jenkins also argued that, in pronunciation teaching, teachers must help learners understand that they should not necessarily work towards the goal of having a native accent, but rather towards achieving intelligibility in communication; Levis (2005) supports this notion as well.

Sifakis and Sougari focused their 2005 study on the pronunciation teaching perceptions of Greek non-native English speaking teachers. The EFL teachers were interviewed about their views concerning accent, pronunciation teaching practices, and ownership of English. The findings indicated that teachers held a strongly norm-bound perspective in teaching standard native speaker pronunciation models in their current pronunciation practices, but also believed that the standards are not as important as the need to create a discourse that is comprehensible in normal communication between nonnative speakers. The authors point out that although there is an increasing de-emphasis of NS norms, these norms are still dominant in Greek teachers' beliefs about their own pronunciation and teaching. Sifakis and Sougari argued that pronunciation instruction should be tailored to local conditions.

Riney, Takagi, and Inutsuka's (2005) study showed that Japanese speakers placed more weight on suprasegmentals than on segmentals in judging how accented an individual's speech was, unlike Americans, who did the opposite. The Japanese listeners were looking for intonation patterns that they had been taught as models for English. The authors state that the findings of this study have negative implications for Jenkins' (2002) LFC model in pronunciation instruction. Riney, Takagi, and Inutsuka argued that there is a link between perception of accent in English and intelligibility in English and their findings suggested that the LFC may not offer obvious advantages to Japanese learners over the models of RP and GA. They proposed instead that the LFC should offer alternatives to English sounds that are difficult for learners to pronounce in order to make the model more teachable. For English as an international language (EIL) purposes, the nonnative speakers of English may negotiate together to decide on ethically neutral and teachable sounds from outside the GA and RP phonemic inventories. In this way, the LFC could be more teachable and more meaningful for the world ownership of English as an International Language (EIL).

Two other studies in our research review also examined the peculiarities that may arise with respect to pronunciation issues and world Englishes. In a study of the speech rhythm in speakers of Hong Kong English, Setter (2006) demonstrated that the duration of syllables in Hong Kong English does not differ from syllables in British English. The suggestion was made that there is good reason to advise learners of the stressing, weakening and destressing of vowels that is a part of native English as this could assist nonnative speakers in making themselves better understood. Finally, Low (2006) investigated the relationship between deaccenting and given information in Singapore English (SE) and suggested that a syllabus for pronunciation teaching should address stress placement and also illustrate how non-native varieties of English signal given and new information.

Identity and Discrimination

Second language learning and accentedness are tied to the concepts of identity and discrimination, from both psycholinguistic and sociolinguistic perspectives. These issues affect the lives of not only students, but also teachers and parents (Gatbonton et al., 2005; Golombek & Jordan, 2005; Moyer, 2007; Ladegaard & Sachdev, 2006).

Derwing (2003) conducted a study investigating adult immigrants' perceptions of their own pronunciation problems and the consequences of speaking with a foreign accent, and discovered that, when "asked whether they had been discriminated against because of accent, two thirds said no, but when asked if people would respect them more if they pronounced English well, the majority agreed" (p. 547). Derwing suggested that these findings could be applied to the pronunciation classroom. She suggested that teachers should focus on individual needs and employ pronunciation and communication strategies that go beyond segments. She pointed out that because many of the students in her study were not able to identify their pronunciation problems or identified ones that did not impact intelligibility, it could be assumed that they were not receiving pronunciation instruction. Derwing also suggested addressing the relationship between accent and societal issues. In-class topics for discussion could include issues with accent and students' personal experiences. This would be both interesting and enlightening for students; it would help them to realize that there are factors beyond their control (e.g., native speakers' attitudes) that affect communicative success. Finally, Derwing added that raising awareness of current pronunciation research and using that information to evaluate the claims of accent reduction programs would be beneficial for students.

Munro (2003) *examined "aspects of the Canadian human rights process as they pertain to language and accent, and identifie[d] three types of accent discrimination arising in human rights cases"* (p.38). Although not directly related to strategies for pronunciation instruction, this article indicated several critically important pedagogical implications with respect to the big picture of ESL instruction. First, it is critical that ESL programs (or individual instructors) take the time to inform their students about their rights as Canadians and the human rights process in Canada. Depending on the instructional level of the classroom, this may even involve a review of the Charter of Rights and Freedoms. As well, it is important to empower students by providing them with strategies for getting assistance if they feel that they have been discriminated against; this could mean providing information on advocacy through specific community services. Second, Munro suggested that ESL instructors should take on a leadership role in promoting equity, both in and out of the classroom, by conveying positive attitudes about accented speech, speaking out against misinformed attitudes in the community and media, working within the community to support human rights, and staying informed. Finally, the article reminds us that effective and efficient instruction in pronunciation for those with low comprehensibility and intelligibility will have implications for quality of life, whether it is at work or in the host community.

Goto Butler (2007) examined the effects of Korean elementary school teachers' accents on their students' listening comprehension, including students' attitudes toward "teachers with American-accented English (a native speaker model) versus Korean-accented English (a nonnative speaker model)" (p.731). Although the major focus of this study was the students' listening comprehension, it supported a major implication: the role that pronunciation plays in a teacher's communication with students is important as students and parents seem to prefer teachers who are native English speakers. It is important for authorities and parents in some countries to be helped to understand that local teachers can be just as qualified to offer English instruction as native English speakers.

In this review, we have considered only a small number of the articles on English pronunciation published in the last ten years, but we have tried to identify studies that are representative of the current reality in L2 pronunciation teaching. We are heartened to see the breadth and depth of many of the individual studies we located, but it is clear that pronunciation is still not a priority for most L2 researchers or teachers. We hope the next five years will see a greater increase in both research and pedagogy in this area.

References

- Breitkreutz, J., Derwing, T., & Rossiter, M. (2001). Pronunciation teaching practices in Canada. *TESL Canada*, 19 (1), 51-61.
- Brown, A. (1991a). Introduction. In A. Brown (Ed.) *Teaching English pronunciation: A book of readings*, pp. 1-10. London: Routledge, 1-10.
- Brown, A. (1991b). Functional load and the teaching of pronunciation. In A. Brown (Ed.) *Teaching English pronunciation: A book of readings*. London: Routledge, 211–224.
- Burgess, J. & Spencer, S. (2000). Phonology and pronunciation in integrated language teaching and teacher education. *System*, 28, 191-215.
- Catford, J.C. (1987). Phonetics and the teaching of pronunciation: a systemic description of English phonology. In J. Morley (Ed.) *Current Perspectives on Pronunciation: Practices Anchored in Theory*. Washington, DC: TESOL), 87–100.
- Cauldwell, R. (2002). *Streaming speech: Listening and pronunciation for advanced learners of English*. Birmingham England: Speech in action.
- Celce-Murcia, M., Brinton, D. & Goodwin, J. (1996). *Teaching pronunciation: A reference for teachers of English to speakers of other languages*. Cambridge: Cambridge University Press.
- Couper, G. (2006). The short and long-term effects of pronunciation instruction. *Prospect*, 21(1), 46-66.
- Dauer, R. (1993). *Accurate English: A complete course in pronunciation*. Englewood Cliffs NJ: Prentice Hall Regents.
- Derwing, T.M. (2003). What do ESL students say about their accents? *Canadian Modern Language Review*, 59, 547-566.
- Derwing, T. M. & Munro, M. J. (2005). Second language accent and pronunciation teaching: A research based approach. *TESOL Quarterly*, 39(3) 379-398.
- Derwing, T.M., Munro, M.J., & Thomson, R. (2008). A longitudinal study of ESL learners' fluency and comprehensibility development. *Applied Linguistics*, 29, 359-380.
- Derwing, T. M. & Munro, M. J. & Wiebe, G. (1998). Evidence in favour of a broad framework for pronunciation instruction. *Language Learning*, 48, 393-410.
- Derwing, T.M. & Rossiter, M. (2002). ESL learners' perceptions of their pronunciation needs and strategies. *System*, 30, 155-166.
- Derwing, T.M. & Rossiter, M. (2003). The effects of instruction on the accuracy, fluency, and complexity of L2 accented speech. *Applied Language Learning*, 13, 1-17.
- Derwing, T.M., Rossiter, M., & Munro, M.J. (2002). Teaching native speakers to listen to

- foreign-accented speech. *Journal of Multilingual and Multicultural Development*, 23, 245-259.
- Derwing, T.M., Rossiter, M., Munro, M.J., & Thomson, R. (2004). Second language fluency: Judgments on different tasks. *Language Learning*, 54, 655-679.
- Derwing, T., Thomson, R., & Munro, M. (2006). English pronunciation and fluency development in Mandarin and Slavic speakers. *System*, 34(2), 183-193.
- Deterding, D. (2005). Listening to Estuary English in Singapore. *TESOL Quarterly*, 39(3), 425-440.
- Dudley, L. (2007). Integrating Volunteering into the Adult Immigrant Second Language Experience. *Canadian Modern Language Review*, 63, 539-561.
- Esling, J., & Wong, R. F. (1983). Voice quality settings and the teaching of pronunciation. *TESOL Quarterly*, 17, 89-95.
- Flege, J. E. (1984). The detection of French accent by American listeners. *Journal of the Acoustical Society of America*, 76, 692-707.
- Gatbonton, E., Trofimovich, P., & Magid, M. (2005). Learners' ethnic group affiliation and L2 pronunciation accuracy: A sociolinguistic investigation. *TESOL Quarterly*, 39(3), 489-512.
- Golombek, P., & Jordan, S. (2005). Becoming "black lambs" not "parrots": A poststructuralist orientation to intelligibility and identity. *TESOL Quarterly*, 39(3), 513-534.
- Gonzalez-Bueno, M. (2001). Pronunciation teaching component in SL/FL education programs: Training teachers to teach pronunciation. *Applied Language Learning*, 12, 133-146.
- Goto Butler, Y. (2007). How are nonnative-English-speaking teachers perceived by young learners? *TESOL Quarterly*, 41(4), 731-755
- Grant, L. (1993). *Well said: Advanced English pronunciation*. Boston, MA: Heinle & Heinle.
- Guillot, M-N. (1999). *Fluency and its teaching*. Clevedon: Multilingual Matters.
- Hahn L. D. (2004). Primary stress and intelligibility: Research to motivate the teaching of suprasegmentals. *TESOL Quarterly*, 38(2), 201-223.
- Hancock, M. (2003). *English pronunciation in use*. Cambridge: Cambridge University Press.
- Harmer, J. (2007). *The practice of English language teaching*. Cambridge, UK: Longman ELT.
- Hewings, M. (2004). *Pronunciation practice activities*. Cambridge: Cambridge University Press.
- Hewings, M. & Goldstein, S. (1998). *Pronunciation plus: Practice through interaction*. Cambridge: Cambridge University Press.
- Jenkins, J. (2002). A sociolinguistically based, empirically researched pronunciation syllabus for English as an International Language. *Applied Linguistics*, 23, 83-103.
- Kalkstein Fragiadakis, H. (1997). *All Clear! Advanced idioms and pronunciation in context*. Boston MA: Heinle & Heinle.
- Kennedy, S. & Trofimovich, P. (2008). Intelligibility, comprehensibility, and accentedness of L2 speech: The role of listener experience and semantic context. *Canadian Modern Language Review*, 64, 459-489.
- Ladegaard, H. & Sachdev, I. (2006). 'I like Americans...But I certainly don't aim for an American accent': Language attitudes, vitality, and foreign language learning in Denmark. *Journal of Multilingual and Multicultural Development*, 27, 106-108.
- Lambacher, S. (2001). A brief guide to resources for developing expertise in the teaching of pronunciation. *Prospect*, 16(1), 63-70.
- Laroy, C. (1995). *Pronunciation*. Oxford: Oxford University Press.

- Levis, J. & Cortes, V. (2008). Minimal pairs in spoken corpora: Implications for pronunciation assessment and teaching. In C. A. Chapelle, U.-R. Chung & J. Xu (Eds.), *Towards adaptive CALL: Natural language processing for diagnostic language assessment* (pp. 197-208). Ames, IA: Iowa State University.
- Levis, J. M. (2005). Changing contexts and shifting paradigms in pronunciation teaching. *TESOL Quarterly*, 39(3), 369-378.
- Low, E. L. (2006). A cross-varietal comparison of deaccenting and given information: Implications for international intelligibility and pronunciation teaching. *TESOL Quarterly*, 40(4), 739-761.
- MacDonald, S. (2002). Pronunciation – views and practices of reluctant teachers. *Prospect*, 17(3), 3-18.
- Matsuura, H. (2007). Intelligibility and individual learner differences in the EIL context. *System*, 35, 293-304.
- Matthews, C. (1994). *Speaking solutions*. Englewood Cliffs NJ: Prentice Hall Regents.
- Moyer, A. (2007). Do language attitudes determine accent? A study of bilinguals in the USA. *Journal of Multilingual and Multicultural Development*, 28, 502-518.
- Munro, M.J. (2003). A primer on accent discrimination in the Canadian context. *TESL Canada*, 20(2), 38-51.
- Munro, M. J., & Derwing, T. M. (2001). Modeling perceptions of the accentedness and comprehensibility of L2 speech: The role of speaking rate. *Studies in Second Language Acquisition*, 23, 451-468.
- Munro, M.J., & Derwing, T.M. (2006). The functional load principle in ESL pronunciation instruction: An exploratory study. *System*, 34, 520-531.
- Munro, M. J., Derwing, T. M. & Burgess, C. S. (2003). The detection of foreign accent in backwards speech. In M-J. Sole, D. Recasens, & J. Romero (Eds.), *Proceedings of the 15th International Congress of Phonetic Sciences* (pp.535-538). Barcelona, Spain: University Autònoma de Barcelona.
- Munro, M. J., Derwing, T. M., & Morton, S. L. (2006). The mutual intelligibility of L2 speech. *Studies in Second Language Acquisition*, 28, 111-131.
- Munro, M.J., Derwing, T.M., & Sato, K. (2006). Salient accents, covert attitudes: Consciousness-raising for pre-service second language teachers. *Prospect*, 21(1), 67-79.
- Piske, T., MacKay, I. R. A. & Flege, J. E. (2001). Factors affecting degree of foreign accent in an L2: A review. *Journal of Phonetics*, 29, 191-215.
- Reed, M. & Michaud, C. (2005). *Sound concepts: An integrated pronunciation course*. New York: McGraw Hill.
- Riney, T. J.; Takagi, N., & Inutsuka, K. (2005). Phonetic parameters and perceptual judgments of accent in English by American and Japanese listeners. *TESOL Quarterly*, 39(3), 441-466.
- Scales, J., Wennerstrom, A., Richard, D., & Wu, S. H. (2006). Language learners' perceptions of accent. *TESOL Quarterly*, 40(4), 715-738.
- Scovel, T. (1988). *A time to speak: A psycholinguistic inquiry into the critical period for human speech*. Cambridge: Newbury House.
- Scovel, T. (2000). A critical review of the critical period hypothesis. *Annual Review of Applied Linguistics*, 20, 213-223.

- Setter, J. (2006), Speech rhythm in world Englishes: The case of Hong Kong. *TESOL Quarterly*, 40(4), 763-782.
- Sifakis, N. C., & Sougari, A. (2005). Pronunciation issues and EIL pedagogy in the periphery: A survey of Greek state school teachers' beliefs. *TESOL Quarterly*, 39(3), 467-488.
- Teschner, R. V. & Whitley, M. S. (2004). *Pronouncing English: A stress-based approach with CD-Rom*. Washington, DC: Georgetown University Press.
- Westwood, V. W. & Kaufmann, H. (2001). *Connected speech*. Hurstbridge, Victoria, Australia: Protea Software.
- Wood, D. (2001). In search of fluency: What is it and how can we teach it? *Canadian Modern Language Review*, 57, 573-589.
- Wood, D. (2006). Uses and functions of formulaic sequences in second language speech: an exploration of the foundations of fluency. *Canadian Modern Language Review*, 63, 13-33.
- Zielinski, B. (2006). The intelligibility cocktail: An interaction between speaker and listener ingredients. *Prospect*, 21(1), 22-45.
- Zielinski, B. (2008). The listener: No longer the silent partner in reduced intelligibility. *System*, 36, 69-84

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