PHONETICS TEACHING AND LEARNING: AN OVERVIEW OF RECENT TRENDS AND DIRECTIONS

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ABSTRACT

This paper reviews trends and directions suggested by recent research in phonetic pedagogy. In the first place, it looks at the issue of aims and content across the different academic contexts where phonetics is taught; secondly, it describes recent trends in teaching/assessment methods; and finally, it reviews web-based resources that can be used in teaching/assessment. The paper concludes with a modest evaluation of the trends described and directions for future research.

Keywords: phonetics pedagogy.

1. INTRODUCTION

Phonetic science has recently shown a growing interest in pedagogical issues, as revealed by the phonetics pedagogy sessions and presentations at recent ICPhS [24], and at the Phonetics Teaching and Learning Conferences (PTLC), a series of biennial international conferences on phonetics pedagogy held in London since 1999. Mention should also be made of IATEFL's Pronunciation Special Interest Group (PronSIG) in the UK and TESOL's Speech, Pronunciation, and Listening Interest Section (SPLIS) in the US.

One reason for the interest in phonetics pedagogical issues in the last decade is increased demand from, amongst others, second language pronunciation teachers [10, 11, 21], teacher and literacy educators [23] or general phonetics researchers interested in teaching [8, 20]. Following this interest, the current paper reviews trends and directions suggested by recent research in phonetic pedagogy. It looks at the issue of aims and content as well as teaching/assessment methods and resources. 'Recent' is a relative term; this paper, while taking a broader overview, focuses mainly on the last decade or so, when the universal use of the Internet has enabled entirely new forms of teaching interactions, activities, and organisation.

2. AIMS, CONTENT, CURRICULA

Phonetics, as a broad interdisciplinary field, is taught in different academic contexts and institutions. This implies that teaching aims, content and curricula may differ to some extent depending on the needs of different sub-fields.

There have been a few attempts to survey aims and content in the different contexts where phonetics is taught, and attempts to formulate guidelines regarding elements of phonetics knowledge relevant to students from different specialisations. The studies range from impressionistic accounts [20] to data-based research like the survey of phonetics education in Europe carried out in the late 1990s [8, 14, 15]. This latter study found that 'core' elements, or those taught in over 80% of the contexts studied, included: phonetic notation, basic acoustic phonetics, the anatomy and physiology of the vocal tract, etc. The study also revealed that not all teaching contexts placed the same importance on specific areas of content. For example, some institutions placed less importance on practical phonetic skills such as discrimination, production, or transcription, while others, though considering them an important part of the curriculum, gave no training in them.

As well as descriptive studies of phonetics education in Europe, there have also been some critiques. For example, Kohler [18] found fault with the idea of setting up curricula based on the diversity found in Europe. Instead, he stressed the importance of developing generally recognised and comprehensive curricula. These, according to Kohler, should transmit the theoretical, methodological and empirical foundations of phonetics, and include sound theoretical and methodological bases and practical skills, with instruction providing a broad and firm foundation of phonetic expertise for wide-spread application in any particular field.

More recently, Ashby and Ashby [2] have outlined the various aims of different phonetics-pedagogy intersections. The fact that different groups of students have different needs and pursue different goals obviously conditions issues like the choice of content, teaching methods and resources. For instance, students choosing phonetics as the main focus of study – e.g. masters courses in phonetics – have different needs from those studying phonetics as a required or imposed component of something else – e.g. speech and language pathology and therapy. In addition, phonetics may be embedded in the teaching of other disciplines or skills. For instance, phonetics can be a part of the teaching of a foreign language – e.g. pronunciation teaching – with explicit or implicit phonetic terminology.

3. TEACHING/ASSESSMENT METHODS

The past few years have witnessed distinct trends in phonetics teaching and assessment methods as a result of rapid advances in computer technology. Regarding the teaching of practical skills, for example, and under the assumption that good practice requires small-group interactive teaching sessions [3], new technology allowing for synchronous or asynchronous communication at a distance can be beneficial, as learning practical skills tends to require the most interaction. In this respect, and irrespective of what the key aspects of phonetics content are considered to be, recent teaching trends suggest a breakdown of the division between research and practice, and between the classroom and the world outside it. The following sections discuss some examples.

3.1 Fieldwork-like practice

Under the widely accepted assumption that students understand things better when they discover them by themselves as opposed to simply receiving them via lectures/prescribed readings, learning through fieldwork-like study in the classroom is a recent trend with apparently beneficial effects for students [3, 6]. This approach typically requires students to observe speech and demonstrate their growing knowledge/skills as they acquire them. For this, individual 'field notebooks' can be maintained on a regular basis for students to describe, revise, and correct their impressions/hypotheses just as researchers would do in fieldwork research.

3.2 Use of instant acoustic analysis

The growing availability of speech analysis software downloaded and stored in computers or accessible on-line, as well as inexpensive wireless technology like wireless microphones, facilitate the use of instant acoustic analysis in the classroom [1]. Provided that lecturers check that students are not using the web inappropriately, bringing Internet access and the tools of the phonetics laboratory into the practical class can have benefits, for example, in both ear-training and production training with pre-prepared and/or students' on-the-spot recordings [9, 14].

3.3 Use of real-language and real-life materials

Recent years have witnessed an increasing tendency to use materials not produced specifically for courses, as well as those more traditional and carefully designed and prepared by teachers, or available from academic resources [22]. These real-language or 'authentic' materials from outside the traditional phonetics classroom or laboratory include songs, websites, TV and radio programmes, students' self-recordings, etc. [14, 19]. These resources also include real-life tools useful to exemplify various concepts such as empty beer cans and a straw for the Bernoulli effect or slinkies for various properties of waves [14]. The tendency to use real-language, audiovisual materials may continue to grow with widespread usability of, and access to, free audio/video recordings and recording tools.

3.4. Search for enhanced interactivity/feedback

The advent of online teaching and learning has made it necessary to enhance feedback provision and interactivity [5]. Instant feedback is possible, but typically unaccompanied by explanatory suggestions for improvement. However, this problem could be solved by developing better programs with enhanced, context-dependent feedback [17]. An example of this is the online Web Transcription Tool, which provides learners with detailed and multi-faceted feedback on their transcriptions [12].

4. TEACHING/ASSESSMENT RESOURCES

Phonetics is no exception to the current interest in the use of modern technology across all academic disciplines. For example, interactive whiteboards are ideal in theory/practice sessions in order to deal

with students' questions. A cheaper and portable alternative can be the use of a tablet device for written input [3].

Apart from equipment innovations like interactive whiteboards or tablet devices, countless web-based resources have been available since the late 1990s that can be used in different teaching contexts. These resources include phonetic and phonological dictionaries or glossaries, Flash-animated web libraries, various audio illustrations, *gif*s and images, real clips/animations of various speech production, transmission and perception facts, online transcription typewriters/tools, web tutorials, etc. Listing and reviewing these resources exceeds the scope and space limits of this paper. In addition, many of these resources from a few years ago already look somewhat dated, although others are constantly updated – e.g. entries on collaborative encyclopedias like *Wikipedia*. In this paper, only a few recent Web 2.0 tools will be discussed in the rest of this section.

4.1. Blogs

Blogs are typically maintained by an individual, with regular entries of commentary, descriptions of events, or other material such as graphics, video, audio, links to other blogs/web pages, etc. One advantage of blogs is that visitors can leave comments and even 'message' (i.e. send messages to) each other, and it is this interactivity that distinguishes blogs from static websites. In addition, blogs popularise topics, and can attract interest and raise curiosity over specific points. A few popular blogs are John Wells's phonetic blog [25], *Das Phonetik-Blog* [26] or *Phonoloblog* [27] although course-specific blogs can be created in some phonetics teaching contexts that can surely benefit students and lecturers alike.

4.2. Social networking services

Social networking services are now firmly established as a primary means of communication for many students. These services offer opportunities for phonetics teaching and learning, which are now starting to be explored. *Facebook*, for instance, is used not only to create personal profiles but also to join common-interest user groups. This social network can also be used by students to organise group work and other tasks that require information sharing. Another popular social networking website is *Twitter*, which can allow lecturers and students to send and read short text-based posts. The latter can also be sent via compatible external devices such as smartphones, and SMS, making this social network an attractive way of disseminating information.

4.3. File hosting and sharing services

As an alternative to peer-to-peer (P2P) file sharing (where students directly share materials), with its possible misuses, file hosting and sharing services allow individuals to upload multimedia files to an Internet website where they will be stored on the server so that others can view them. A popular video-sharing website is *Youtube*, containing hundreds of videos related to phonetics that can be used for special projects, data analysis, etc. In addition, a slideshow sharing website like *SlideShare* also contains many phonetics-related presentations in different formants that users have uploaded and that can be downloaded.

4.4. E-learning courses and environments

As foreseen by many institutes as a trend in the 2000s [16], distance e-learning courses have been gaining ground in recent years. Similar, but more complete than web tutorials, distance e-learning courses take advantage of all the technological multimedia tools currently available such as streaming video, animated objects, etc. Some online courses are specially designed while others are the virtual equivalents or back-ups of on-campus courses [28].

E-learning courses may be embedded in virtual learning environments (VLEs) and aim to reproduce all the elements of an extended on-campus course, with tutorial material, exercises, practical training and assessment, and, above all, student-teacher interaction [4, 5]. One popular example of an e-learning environment that has been used to teach phonetics is *Moodle* [5], a platform developed to help educators create online courses.

4.5 Corpora and database hosting websites

Different linguistics disciplines at present use large sets of language data collected in samples – corpora – of 'real world' texts. This trend has extended to phonetics, with the creation of speech corpora specifically designed for phonetics research. Although some corpora are commercial products, others are free of charge on the web. Some attempts have already been made to use corpora in phonetics teaching [13]. Examples of

corpora potentially useful for teaching purposes are *PhonBank* [29] for child language analysis, the *UCLA Phonetics Lab Archive* [30] for phonetic and phonological facts from over 200 languages, or the *Speech Accent Archive* [31] for native/non-native adult English speech.

5. CONCLUSION

The trends and directions reviewed in this paper are by no means exhaustive and their benefits for teaching across different contexts will have to be assessed in further reviews in years to come. One apparently positive aspect of the tendencies pointed out in teaching methods described in section 3 is the breakdown of the divisions between research and practice, and between the classroom and the world outside it. In addition, the use of Web 2.0 tools as resources, like other now classic web-based resources, represents a step forward, with countless opportunities for disseminating and accessing information and data.

Having briefly reviewed the current state of research in phonetics pedagogy, it may now be useful to suggest some directions for further study regarding the issues of aims, content, methods or resources. For example, though phonetics education in Europe was been analysed, trends in other continents so far seem less well explored. In addition, aims and contents may change over time, even in one and the same sub-area of phonetics and its applications, so it could be interesting to carry out surveys for specific sub-areas. For instance, in pronunciation teaching, recent years have witnessed a shift from segmental to suprasegmental elements (e.g.[9]). Also, attempts to make feedback more context-dependent and informative could be made, and further studies on the effectiveness of some of the innovative teaching methods outlined in section 3 could be undertaken. Finally, some of the teaching and learning resources described in section 4 could be used to develop materials and assess their impact on teaching, paralleling the example set by the long-standing work in computer-assisted language learning and available in different CALICO publications [32]. Finally, social networking services are only now starting to be used for teaching but may end up revolutionising some teaching contexts.

To conclude, it can be pointed out that the trends described above offer a challenge to teachers of phonetics across contexts to be as up to date with teaching technology as their students.

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