PERGAMON

System 28 (2000) 191–215

SYSTEM

www.elsevier.com/locate/system

Phonology and pronunciation in integrated language teaching and teacher education

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Received 15 March 1999; received in revised form 12 September 1999; accepted 30 September 1999

Abstract

This paper addresses the relationship between two fields: (1) teaching and learning pronunciation in a second or foreign language; and (2) the study of pronunciation-teaching and of phonology in the training and education of language teachers. It reports research conducted to inform the design of an initial teacher-training course. It argues for a strongly integrated approach to the relationship between the two fields, but for different priorities in those fields.

Keywords: Foreign language learning; Initial teacher training; Integrated teaching; Phonology; Pronunciation; Post-experience teacher education; Second language learning

1. Introduction

The terms *phonology* and *pronunciation* are sometimes seen as synonymous. In pedagogy, however, it is useful to distinguish them. The pedagogic fields to which our discussion makes reference are that of second- or foreign-language teaching and learning (SFLT), and that of the training and education of language teachers (TELT).

The phonology of a target language (TL) consists of theory and knowledge about how the sound system of the target language works, including both segmental and suprasegmental features. Pronunciation in language learning, on the other hand, is the practice and meaningful use of TL phonological features in speaking, supported by practice in interpreting those phonological features in TL discourse that one

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0346-251X/00/$ - see front matter
PII: S0346-251X(00)00007-5

hears. Thus, in phonological terms one might say a particular stretch of sound in the TL consists of a series of phonemes (which we could identify and define with appropriate labels), making up an utterance which has certain suprasegmental patterns — of intonation, rhythm, stress — and is expressed with a particular type of voice quality (all of which we could also identify and define with appropriate labels). In pronunciation one would not necessarily define or label at all, but only practise listening and speaking, i.e. (respectively) interpreting and producing phonological features appropriately.

Most language-learners need to learn *how to pronounce* the sounds of the TL, rather than to learn to any great extent *about* those sounds. It must be admitted, of course, that there are language learners who do need to learn about the phonology of the TL too; e.g. non-native speakers intending to teach the TL, or those otherwise needing to theorise about the TL. But for the vast generality of learners of language for general purposes, knowledge of phonology as such will usually need to extend only to an ability to benefit from whatever phonemic script and word-stress marking are used in their dictionary.

We take the distinction between the two terms as crucial, as do Celce-Murcia et al. (1996), Dalton and Seidlhofer (1994), and Underhill (1994); the latter two books are clearly divided into two separate sections along these lines. Our discussion is divided into three parts. Section 2 sets out a framework for the relationship between TELT and SFLT, recognising the distinction. Section 3 reports our research related to this theoretical framework, and derives implications from the research. Section 4 elaborates pedagogic practice, and suggests differences of priority for:

1. SFLT methodology involving pronunciation learning and practice; and
2. TELT courses involving the study and practice of pronunciation-teaching methodology, underpinned by the study of phonology.

2. Relationship between TELT and SFLT

2.1. The teaching of pronunciation

The teaching and learning of pronunciation in a wide range of contexts has never ceased to be a pedagogic issue, even though views have changed about the place of this form-focused aspect of language-learning in the bigger picture of SFLT [and about other major precepts, e.g. the appropriacy of accent-models for learners to work by, discussed, for instance, in Jenkins (1998) and Gimson and Cruttenden (1994, p. 271)]. What has apparently been seen as staid old pronunciation has been sidelined in the heady days of the strong model of communicative language teaching and learning (CLT), but in the last decade or so it seems to have been reincarnated in a ''broadly-constructed communicative approach'' (Morley, 1991, p. 490). Here it is ideally integrated in a pedagogic framework which also integrates other aspects of form — grammar and lexis — with skills (Burgess, 1994). Indeed, many useful books have been published in recent years highlighting the integrated teaching and

learning of pronunciation, e.g. Celce-Murcia et al. (1996), Dalton and Seidlhofer (1994), Pennington (1996) and Underhill (1994). Nevertheless, teachers face difficulties in integrating pronunciation with other language components and skills; aside from difficulties with integration per se, it is teaching pronunciation itself that many teachers find difficult (Ross, 1992, p. 18), and in this respect the following are also problematic:

1. the selection of features of pronunciation;
2. the ordering of the features selected;
3. the type(s) of discourse in which to practise pronunciation;
4. the choice of methods which will provide the most effective results; and
5. the amount of detail to go into at different stages.

2.2. The phonology and pronunciation components of the training and education of language teachers

In TELT courses, one of the competency outcomes must be facility in teaching pronunciation, so that it is crucial that participants study and practise methodology in this field. The relevant course component, however, is often entitled Phonology; Foster and Mercieca (1998, p. 13), for instance, explain that in their case this component is part of a Language Awareness strand of a pre-service TEFL course. Here, pronunciation teaching and learning is in some sense subsumed in phonology. Knowledge of the phonology of the TL (and even, perhaps, of the broader field of phonetics, covering the sound systems of human languages in general) is necessary for teachers, as agreed by Brown (1992, p. 7), Dalton and Seidlhofer (1994), Ross (1992), Underhill (1994), Murphy (1997), and Jenkins (1998, p. 125). It is the theoretical underpinning of good practice in pronunciation teaching, enabling the teacher to compare the phonologies of the mother tongue (MT) and the TL and thereby anticipate the problems learners are likely to have with pronunciation. It is interesting to note that, in a small survey of the attitudes of adult Italian speakers towards their learning of English pronunciation, Tizzano (1997) discovered that, although the learners recognized the importance of taking responsibility for monitoring their own progress, they expected the teacher to take responsibility for anticipating their problems and devising strategies to help them. The *facility* outcome of the teacher-training or -education should be one of *informed facility*.

But, given the professional purpose of the training or education, the pronunciation teaching-methodology aspect should arguably be the dominant concept. Indeed, we go so far as to say that in TELT courses, whether pre-service/initial or in-service/post-experience, the emphasis should arguably be on pronunciation teaching and learning, and the theoretical underpinning phonology should be addressed through this. Thus, if anything, the conventional dependency might be reversed, so that the course component might be called *Teaching Pronunciation*, rather than *Phonology*. (This is the case, for instance, in the post-experience MEd TESOL and MEd ELT programmes at the University of Manchester, UK.)

Given this pedagogic orientation, in TELT the pronunciation-teaching difficulties listed in Section 2.1 above need to be addressed. Fig. 1 (which amplifies the *Framework for teaching pronunciation communicatively* in Celce-Murcia et al., 1996, p. 36) is based on the notion of three closely linked fields of pedagogic activity:

1. pronunciation learning and practice in the broad context of second or foreign language (SFL) learning;
2. the study of pronunciation teaching-methodology in the training and education of language teachers (TELT); and
3. the study of phonology in the training and education of language teachers (TELT).

In Fig. 1 and the subsequent discussion, we postulate pedagogic links between the three fields, suggesting that the study of phonology might be addressed through examples of good practice in pronunciation teaching and learning.

Fig. 1 represents the interdependence of all the components of both sectors of the SFLT/TELT field. It contains a distinction between 'practice' and 'study', based on the differences between language-learners and language-specialists discussed above. Central in the schema of the figure is the notion of integration. In SFLT methodology theories, the notion of integration is widely accepted (see the works already cited). In many writers' minds, this means practising pronunciation in the course of language-learning activities which have a variety of purposes (including skills-development and form-learning), where the learner's attention may be more clearly

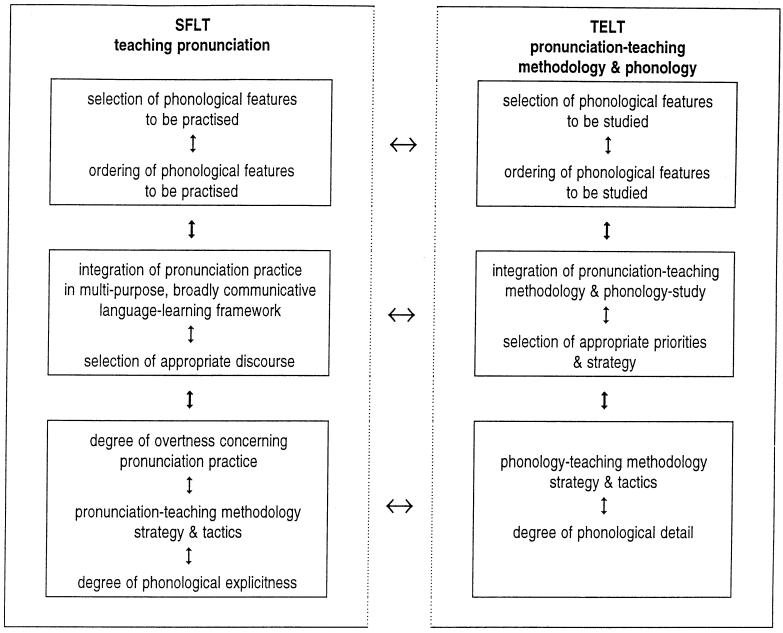

Fig. 1. The relationships between pronunciation-teaching and phonology in second- or foreign-language teaching and learning (SFLT) and training and education of language teachers (TELT).

on some other aspect of language than on pronunciation in itself (Burgess, 1994, p. 309). This can be done within the broadly communicative framework cited earlier: not necessarily all the activities in an integrated lesson will be communicative in themselves, but those that are not fully communicative will involve the meaningful practice of language, allowing time for a focus on form including pronunciation. Entailed in this broadly communicative framework, and in recognition of the focus on form, there will be the necessity to select appropriate types of discourse.

In the field of TELT we argue for the integration of the study of pronunciation-teaching methodology with that of phonology, recognising the dependency relationship we have already postulated. Thus, the starting-point for the study may well be pedagogic — an example of integrated pronunciation-teaching. Phonology hierarchies, systems and principles can then inductively be established in the discussion of the example. This in turn will lead to choices concerning priorities and strategy: e.g. would one deal with suprasegmental features in early stages of SFL learning, and how or why would one build pronunciation activities into the broadly communicative pedagogic model?

These arguments and the other aspects of the schematic *relationship* represented in Fig. 1 will be more fully elaborated in Section 4. The findings of a small research project we conducted will help us to elaborate various of these aspects.

3. Present research

3.1. Introduction

This part describes the content, findings and implications of two pieces of small-scale research which investigated the teaching of English phonological features through pronunciation practice in ESOL (English for Speakers of Other Languages) courses in the UK (Spencer, 1996).

3.2. The research design

The research was designed to inform the planning of the phonology component of an initial teacher-training course leading to the Trinity College London Certificate in TESOL (Teaching English to Speakers of Other Languages). The research involved two strands: a questionnaire, and an analysis of some current English as a foreign language (EFL) textbooks (see Appendices A and B). The textbook analysis was to some extent intended as a means of triangulation. The research was intended to provide a picture of current teacher attitudes towards, and pedagogic practice in, the teaching of pronunciation.

3.3. The questionnaire

Fifty copies of the questionnaire (see Appendix A) were distributed to a variety of educational establishments offering courses in ESOL: Further Education colleges,

Higher Education institutions, and private language schools. The questionnaire sought information on:

1. what phonological features were taught/practised;
2. how pronunciation was practised; and
3. difficulties experienced by learners.

Thirty-two questionnaires were returned by respondents distributed across the range of types of institutional or professional context (Table 1).

The qualifications of the teachers who responded covered a range from Certificate level upwards. Table 2 shows those of the 23 about whom this information was given.

Tables 1 and 2 show that, although the sample represented in the responses is small, it may be said to reflect opinions of teachers working in a broad range of professional contexts, and having a wide range of academic and professional education and training backgrounds.

3.3.1. The responses to the questionnaire

(i) *Difficulties experienced by learners*

a. *Stress/rhythm/intonation:* These were all mentioned as major areas of difficulty. Tone patterns, vowel reduction, use of 'marked' utterance-stress to foreground significant information, word-stress, unstressed syllables, weak forms (i.e. unstressed whole words), and thus the overall rhythm of

Table 1
Professional contexts of respondents

Professional contexts	Responses
Private language schools	4
Universities	12
Colleges	12
State schools overseas	1
Freelance working in different types of institution	3
Total	32

Table 2
Qualifications of some of the questionnaire respondents

Qualifications	Responses
BA + general teaching qualification, but no TEFL qualifications	5
MA + general teaching qualification	1
Certificate only	1
Bachelor degree + Diploma	3
MA (not Linguistics or TESOL) + Certificate in TEFL	2
Bachelor degree + Certificate in TEFL	7
Bachelor degree + Master's in TEFL	3
Master's in TESOL + Diploma in TEFL	1
Total	23

connected speech, were highlighted as problem areas. This is particularly interesting, as many pronunciation materials have tended to focus primarily on segmental features, whereas all of the above are either in themselves suprasegmental features, or are directly related to suprasegmental phenomena. It raises the question of whether these features cause difficulty because they are inherently difficult to teach or learn, or whether they are areas of difficulty because relatively few published materials offer activities to practise these aspects.

b. *Perceiving and producing problematic sounds:* Listening was mentioned by several respondents as a difficulty: the learners' difficulty in perceiving sounds which do not exist in their MT, and their confusion of similar sounds. Linked to this was learners' difficulty in producing unfamiliar sounds.

c. *Correspondence between pronunciation and written forms:* One respondent commented that getting learners to rationalise the differences between a stream of speech and the printed word was a major difficulty.

(ii) *What phonological features were taught/practised*

d. Whilst most of the teachers surveyed used a phonemic alphabet in their teaching to some degree, fewer than half taught it in full to their classes.

e. Schwa, word stress and weak forms were taught by every teacher.

f. Most of the teachers taught the distinction between voiced and voiceless phonemes.

g. Intonation was given a high priority.

h. Utterance stress was also given a high priority.

i. Consonant clusters were also heavily emphasised.

j. Accent: unsurprisingly, most of the teachers used, or referred to, RP (Received Pronunciation), there being only seven responses (22%) not referring to this accent at all.

k. Rhythm and stress-timing: while most respondents taught features of rhythm, nine (i.e. 28%) of the respondents claimed not to teach stress-timing. This is probably simply a question of terminology: in view of the facts (1) that *utterance stress* was highly prioritised [see (h) above], and (2) that *stress* and *rhythm* were cited by several teachers as being areas of difficulty [see (a) above], it is probable that these labels were preferred as descriptors, and that the label *stress-timing* was not strongly acknowledged as a descriptor of rhythm.

l. Linkage effects in connected speech: elision was given slightly more emphasis than assimilation, though nine responses (28%) did not claim to teach assimilation at all (it is again possible that some teachers were not familiar with the terminology).

m. Allophonic variation was given much less emphasis again, which suggests that this is such a sophisticated concept that, on the one hand, it is the kind of principle only advanced learners of the language would need to grapple with in their own pronunciation, and on the other hand, it should probably be dealt with only in post-experience courses of teacher-education.

n. Other features which teachers volunteered as being important, but which were not listed separately in the questionnaire, were:
minimal pairs
long and short vowels; and
aspects of intonation: key, pitch levels, and low termination at discourse boundaries

(iii) *How pronunciation was taught/practised*
o. *The integration of pronunciation with other skills:* Almost every respondent said they integrated pronunciation teaching. On the other hand, although most teachers did not give separate pronunciation lessons, several pointed out that they might spend sections of class time exclusively on pronunciation.
p. *A systematic approach to pronunciation:* Most respondents dealt with learners' pronunciation problems as they arose. Eight (25%) reported a systematic approach to some degree, while several said that their approach depended on the learners' needs and abilities. However, several teachers commented on the difficulties of dealing with multilingual groups in which learners have very different needs. Several teachers referred to the difficulties of making pronunciation transferable to learners' linguistic behaviour out of the classroom.
q. *Specific methods of teaching:* Chanting was used by 15 (47%) of the respondents. Both drama and roleplay were used to quite a degree. Drills were widely used, particularly at beginner and intermediate levels.

3.4. The findings of the analysis of EFL textbooks

An additional strand of the research analysed some current EFL books, both generalist coursebooks and those directed specifically at conversation or pronunciation. The following books were reviewed:

Digby and Myers (1993)	*Making Sense of Spelling and Pronunciation*. Prentice Hall
Garton-Sprenger and Greenall (1991)	*Flying Colours 2*. Heinemann
Geddes and Sturtridge (1993)	*Elementary Conversation*. Macmillan
Soars and Soars (1993)	*Headway Elementary Pronunciation*. OUP
Swan (1992)	*New Cambridge English Course Book 1*. CUP

(See Appendix B for a tabulated summary of the findings.)

Many important phonological features were referred to in the generalist coursebooks. A phonemic alphabet was used in all five books. *New Cambridge English* dealt with the widest range of features: consonant voicing, consonant clusters, dark/l/, spelling/pronunciation difficulties, decoding rapid speech, linking, utterance stress, contrastive stress, rhythm, and pitch and intonation. Although *Flying Colours 2* was aimed at a higher level, it dealt with fewer features of phonology, these being word-stress, utterance-stress, contrastive stress, and intonation.

Of the more specific books, *Headway Elementary Pronunciation* concerned itself with a wide range of features. *Making Sense of Spelling and Pronunciation* focused on segmental and word-level features covering the voicing of consonants, word-stress and shifting stress, spelling/pronunciation difficulties, rhyme, homophones and homographs. *Elementary Conversation* did not address segmental features, but seemed to be more fluency-oriented in that it did cover linking and intonation.

Overall, the ordering of phonological items was fitted into an overall structural or functional syllabus. This ordering may lead trainees and practising teachers to infer that there is no cogent underpinning to the teaching and practice of pronunciation. In turn, this may discourage them from attempting to teach pronunciation, or it may lead them to teach it in a haphazard fashion. In such an absence of guidance from textbooks, the links we are postulating — between (1) pronunciation-teaching, (2) a broadly communicative and integrated strategic framework, and (3) phonology — might be at least useful, at most absolutely essential.

3.5. Implications of the research for pronunciation-teaching principles

The findings indicate that:

1. suprasegmental features are seen by teachers as paramount, but also as difficult to teach and learn;
2. certain aspects of segmental features, e.g. clustering, linkage phenomena, schwa and its relationship to word-stress and rhythm, are considered important;
3. pronunciation should not be taught to learners as an isolated phenomenon, and the practice of pronunciation should be integrated in some way, particularly to create strong relationships between listening and speaking, i.e. perception and production, between spoken and written forms, and to facilitate transfer to learners' linguistic behaviour beyond the classroom;
4. pronunciation is best dealt with as the need arises, rather than in an extremely pre-determined way;
5. the controlled practice of speaking (where attention may be focused on pronunciation, among other aspects of form), is obviously still regarded as important by teachers generally;
6. learners' facility with phonemic script is important for access to books on pronunciation and dictionaries; and
7. RP may be held as a target for learners or as a reference point for teachers.

We will elaborate these implications in Section 4.

4. Pedagogic practice

4.1. Introduction

In this section, we will elaborate the model of the relationships between pronunciation-teaching and phonology in SFLT and TELT (illustrated in Fig. 1).

Sections and sub-sections are headed with the phrases used in the figure. Since the notion of the teaching of pronunciation should ideally lead decisions about the content and organisation of teacher-education programmes on pronunciation and phonology, we will look at SFLT in Section 4.2. We will then discuss TELT programme content and organisation in Section 4.3. Within each sector, because of the dependency relationships shown by the arrows in Fig. 1, we will begin in the centre of the model and move outwards.

4.2. SFLT: teaching pronunciation

4.2.1. Integration of pronunciation practice

Two levels of integration are worth considering here. At the lower level, there is the notion of integrating pronunciation practice into a broadly communicative framework of language learning. Here pronunciation fits most readily into skills work: speaking activities (to practise the production of appropriate pronunciation), and related listening activities (to practise perception of appropriate pronunciation); the relationships between pronunciation and reading and writing are also worth considering.

Second, there is the higher, broader level of the integration of the practice of these skills with each other, and indeed with other aspects of language to be acquired and exercised, e.g. genre-appropriacy, discourse-grammar features, vocabulary.

It seems sensible to conceive of integration in terms of language practice using a body of ideational information, which may be a story's sequence of events, or a descriptive set of points of information, or a sequence of steps in a procedure or a process (Burgess, 1994, pp. 309–310; Burgess and Carter, 1996, pp. 217–218). Such a concept of integration will allow us to address both of the levels posited above.

Fig. 2 is a strategic pedagogic model which attempts to show schematically how the two levels might operate. This model (developed from that of McEldowney, 1982, p. 11) takes into account the focus-on-form (or 'FonF') approach increasingly being adopted nowadays, e.g. in Doughty and Williams (1998) (though it has to be said that their emphasis is almost exclusively on grammar, rather than other aspects of form). It may be categorised as a task-based model in that it is based on a series of tasks involving varying degrees of ideational and interpersonal activity. It differs from a conventional PPP (Presentation–Practice–Production) model in that it involves 'practice' in all stages, but 'presentation' of forms only through the noticing tasks and ordering tasks linking 'input 1' and 'output 1'. It should be pointed out that the model is intended as a generic basis for integration, not as a rigid pattern to be adhered to in all situations or at all levels of learning.

This strategic model is a 'broadly communicative framework' in that various activities in it are truly communicative: they involve types of language use (e.g. reading a text for meaning, or participating in a roleplay) that simulate those which occur in real-world situations. It is important to note, however, that the model is only 'broadly' communicative, not exclusively so, since not every activity in it is truly communicative. Those activities that are not truly communicative do, nonetheless, involve the meaningful use of language. This allows a type of drilling of language

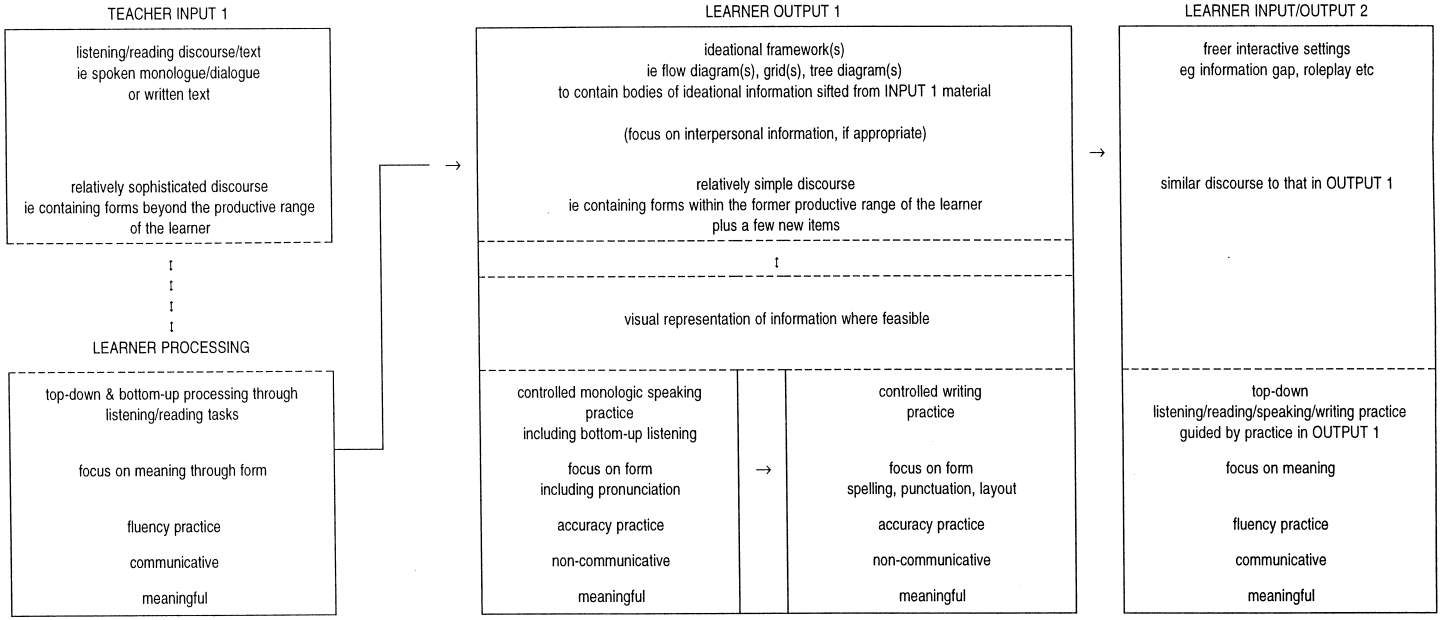

Fig. 2. A strategic pedagogic model incorporating pronunciation into integrated skills.

which is anchored in meaningful reference and context. To explain this, let us examine the pedagogic model in Fig. 2 a little more closely.

4.2.1.1. Input 1. The strategic model assumes that task-oriented SFLT lessons where new language items (grammar or vocabulary) are to be introduced will begin with listening or reading discourse or text. Let us say, for instance, that the learners listen to a recorded dialogue which, on an ideational level, tells a story, and, on an interpersonal level, is a chat between two friends. This dialogue would be relatively sophisticated discourse: it would be rich in authentic features in order to develop good listening skills. The features would include fluent phonological phenomena, such as assimilation, elision, etc., as well as other features normally associated with authentic-style listening material. The processing of information from this source will be some sort of mixture of top-down and bottom-up processing, preferably involving a preponderance of top-down, since this is more meaning-focused and therefore highly communicative, in the sense that most real-world listening and reading is meaning-focused.

4.2.1.2. Output 1. The strategic model in Fig. 2 also assumes that the learners will benefit from a focus on form. Once the processing of the ideational content has been done, through the use of ideational frameworks (Graney, 1992; Burgess, 1994; Burgess and Carter, 1996), the product of the learners' work contained in the grid(s), flow diagram(s) or tree diagram(s) provides the basis for the production of sentences in controlled speaking work. This retains the holistic structure of the body or bodies of ideational information contained in the original input material. For instance, at least one body of ideational information derived from the dialogue will be the events of the story contained in a flow diagram. A flow diagram like the one illustrated in Fig. 3 is a representation of the discourse structure, and also provides a focus on grammar, if this is appropriate to the level of the learners. It contains information organised in two dimensions. Each horizontal line of text is a sentence 'centred' on a box; each box is vertically connected to at least one other box by an arrow, showing the sequential relationship between the events. Each horizontal line of text is divided vertically in grammatical categories of sentence-component: the sentence-subjects are consistently on lines to the left of the boxes, each box contains the sentence's main finite verb, and the objects and adverbial adjuncts are consistently on lines to the right of the boxes.

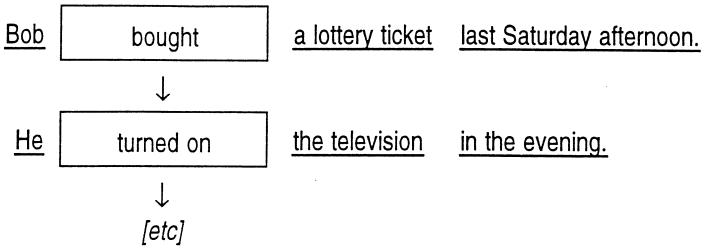

Fig. 3. An example of an ideational framework: a flow diagram for the events in a story.

This flow diagram now also provides a good opportunity, through the learners' retelling of the story, for controlled speaking practice. This allows for the productive practice of pronunciation (among other formal features, e.g. grammatical ones), since *what* is to be said has been clearly established through the use of the ideational framework to structure the listening/reading tasks. The learners are enabled to practise *how* to say it, imitating the teacher's model of speaking the simpler version of the input material. In order to imitate the teacher's model, the learners have to listen to it with their attention at least partly working from the bottom up, or with what we might call hard focus on the articulatory detail. It is worth mentioning that, in the relatively simple discourse used in this controlled speaking activity, the range of articulatory detail will normally be less extensive than in the listening input material discussed earlier. For instance, to facilitate grammar-learning the teacher may decide that any elisions that occurred in the listening material should not occur in this controlled speaking practice. The teacher may focus attention on suprasegmental features or on segmental ones in the context of this type of activity. Bottom-up listening and controlled speaking, then, allow for the perception and practice of the important suprasegmental features and segmental features discussed in the research findings in Section 3 of this paper.

Effectively this controlled speaking is meaningful drilling; the practice of pronunciation in association with the use of meaningful discourse should mean that 'drills' are not simply mechanical, but allow the learner to associate the language being drilled with real meanings. This should encourage the greater transferability of practised pronunciation to learners' linguistic behaviour in the real world beyond the classroom. It should also allow the learner and teacher a greater sense of the role of pronunciation as part of the holistic network of language, which is preferable to the concept that pronunciation is an add-on.

It is worth pointing out that the use of an ideational framework (a flow diagram in our example) — because it contains words displayed in an array that supports an understanding of their sentence functions — provides support for the learners' noticing of relationships between spoken and written forms. In the controlled speaking work, the learners are effectively reading aloud (in a bottom-up orientation) the product of their reading and listening work in the processing tasks of 'input 1'. This is arguably more valid than reading aloud text that is not such a product, since the learners will relate more directly to what they are reading.

For the writing tasks that follow, the controlled speaking with its bottom-up listening and reading work will have been good preparation. In this way, the outcome should be a fairly thorough understanding through practice of the relationships between the spoken and written forms.

In Fig. 1, we suggested that the selection of appropriate discourse is a factor in the treatment of pronunciation within the integrated strategic pedagogic model. Given that the purpose in the controlled speaking phase of the pedagogic model is to focus on form, it makes sense to ensure that the discourse to be spoken at this 'output 1' phase is monologic and highly ideational in its orientation. When in the real world we participate in dialogue, our attention tends to be on meaning, including interpersonal meaning, most of the time; so that in the language-learning

classroom highly communicative dialogue is perhaps a poor vehicle for a focus on pronunciation form. And in any case, all aspects of pronunciation are to be found at work in highly ideational discourse, fulfilling ideational or textual functions. Even intonation, which clearly has very significant interpersonal functions (functions which are, however, notoriously difficult to describe concisely or satisfactorily, given the number of variables in personal behaviours, etc.), can be practised very well in its highly ideational or textual functions. If, for instance, one trains learners to perceive and produce appropriate message-oriented intonation patterns (marking, say, message-finality or non-finality) in highly ideational monologic contexts, it is then relatively straightforward to tune their listening to the many and various interpersonal uses of intonation in dialogic contexts, and to get them to experiment with these uses in roleplay activities. So, following our example above of the lesson beginning with the dialogue, the controlled speaking would effect a monologic retelling of the ideational content — the story. This does not mean that the learners would not participate in a dialogue at any stage of the lesson, however. They would very likely do so in the final freer 'input/output 2' activity, perhaps using new information so that their dialogue would be closer to the communicative use of language that we experience in the real world. The importance of the link between the controlled speaking phase and this freer one is that the former provides guidance for the latter, in pronunciation as well as other formal aspects of the discourse.

4.2.1.3. Input/output 2. Let us elaborate this last point a little. In the final less-controlled or uncontrolled phase of the model, the learners' attention will mostly be on *what* they are communicating, not so much on *how* they are communicating it; that is to say, psychologically they will be processing with a top-down orientation. But the work done in the earlier phases of the model will have prepared the learners in appropriate ways: among other things, to pronounce appropriately at least some of the language they need. In other words, the accuracy practice of output 1 provides support for the fluency practice of input/output 2. Returning to our lesson based on the dialogue between two friends, in order to create a similar dialogue using their own information in the input/output 2 stage, the learners may need to have listened to the original dialogue in input 1 with a focus on the interpersonal information expressed in it, through intonation, etc., in addition to the ideation-focused tasks. For example, in the dialogue they listened to let us assume the friend who is being told the story expresses surprise with the utterance *Did he?* (with a rising tone). Assuming that one of the purposes of the input/output 2 activity is to tell the interlocutor a story that is surprising in some way, a listening task focusing on this use of intonation may occur immediately after the ideational one(s), or may be postponed till just before input/output 2, to allow maximum transferability to this task, and to any use the learner might make of the TL beyond the classroom.

4.2.2. Selection and ordering of phonological features to be practised

It is widely agreed that the able language teacher deals with all aspects of pronunciation "from the very first lesson" (Gimson and Cruttenden, 1994, p. 270), and that therefore there is little point in considering *ordering* the phonological features to

be practised in SFLT. (Those arguments which do propose ordering will be discussed in Section 4.3.1 later in this paper.) As far as *selection* is concerned, however, as the respondents to our questionnaire agreed, suprasegmental features are inevitably dealt with continually by any teacher who understands their great significance in communication (Morley, 1991; Dalton and Seidlhofer, 1994, pp. 69–70); and certain segmental features implicated in suprasegmental effects, such as schwa, will be dealt with in the process. Some aspects of suprasegmental features, and certain segmental features, on the other hand, will be selected partly in response to comparative analysis of the MT's and the TL's phonologies (as provided in Swan and Smith, 1987; Avery and Ehrlich, 1992). For instance, English rhythm, utterance-stress or word-stress may be particularly problematic for speakers of certain languages; or the occurrence, frequency and/or functions of fall-rise tone may be very different in the learners' MT from NS (native-speaker) accents of English; or a particular phoneme may be problematic. Partly too, of course, selection will be in response to the teacher's judgement about the intelligibility and acceptability of the learners' existing pronunciation. This judgement can be overly subjective; it can be given a degree of objectivity, however, by using for research any tape-recorded learners' performance in tasks such as those recommended by Dalton and Seidlhofer (1994) in their chapter *Exploring pronunciation in your classroom* (pp. 153–171).

4.2.3. Pronunciation-teaching methodology: degree of overtness or explicitness

In line with our strategic pedagogic model in Fig. 2, pronunciation will be dealt with covertly or overtly as part of controlled speaking practice. Practice of pronunciation will probably remain covert as long as the teacher judges that the learners are approximating sufficiently closely to the target.

On the other hand, if the teacher judges that the learners' performance does not match up to expectations, various tactics for overt pronunciation work will come into play. Overt demonstration of the pronunciation of a phonological feature in a meaningful context will perhaps be the usual tactic for attracting the learners' attention to the articulatory detail of any feature, be it suprasegmental or segmental. Tactics for segmental features may include the use of exaggeration (e.g. sustention of a continuant consonant or of a vowel, or the use of external devices (such as a piece of paper for /p/, and so on). A typical tactical model for dealing with consonants and vowels in contexts of use is shown in Fig. 4. This is based on the well-established principle of demonstration or modelling by the teacher, followed by imitation by the learner.

Tactics for suprasegmental features may also include, for instance, rhythm-clapping. It seems useful to have in mind a scale of priority for tactics, from level 1 (high priority) to level 3 (low priority):

1. 'ear-training', using a target stretch of language, perhaps decontextualising and exaggerating the phonological feature in focus;
2. non-linguistic aural devices, e.g. clapping a rhythm, or humming a tone; and
3. graphics, e.g. circles of different sizes to represent stress-placement, or lines of words showing pitch movement in a tone.

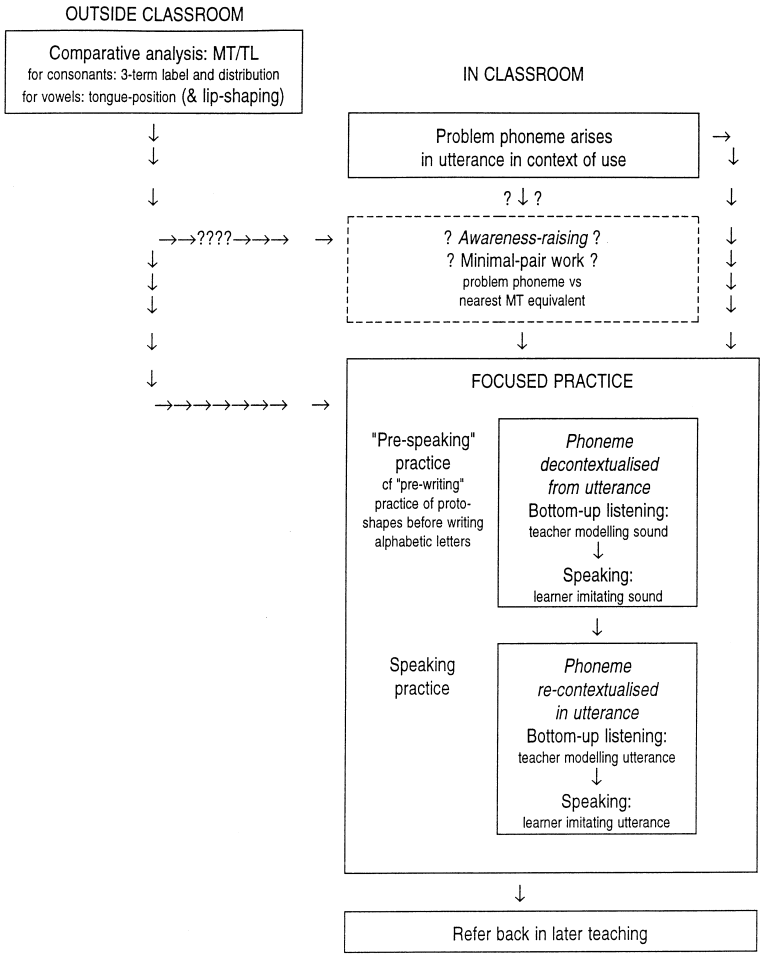

Fig. 4. A tactical pedagogic model for segmental features in meaningful contexts of use: teacher-modelling and learner-imitation.

It is noteworthy that (1) and (2) here use the channel of hearing, whereas (3) is a visual abstraction of aural phenomena, and should perhaps be used only as a last resort, if the learner fails to hear the phonological feature in focus. Similarly we might add that level (2) devices should perhaps be used only if level 1 fails, since there is a risk that learners may become overdependent on them (Roach, 1991, p. 123).

Overt work may also include the use of phonemic-script and stress-marking conventions as used in the learners' dictionary, partly to support the controlled speaking activities discussed earlier, and partly to enable independent learning of the pronunciation of new vocabulary. It may also be appropriate for an overt approach to be supported by phonological explicitness in the form of phonological labelling (Morley, 1991, p. 490; Pennington, 1996, pp. 221–222). This would be true for some

learners (Brown, 1992, p. 7), e.g. those preparing to teach the TL or to theorise about it for some other reason.

In any case, for both the comparative analysis of the MT and TL mentioned in Section 4.2.2, and to underpin any phonological explicitness, it is important for the teacher (whether a native-speaker or a non-native speaker of the TL) to be aware of the features of his or her own accent, which may well differ in various ways from what we will call a 'reference' accent, e.g. Southern British RP or General American. It is perhaps best to conceive a triangular relationship between the reference accent, the teacher's accent, and the learners' accent (which may not be the same as the teacher's). It is often the teacher's accent which the learners take, or are expected to take, as the target for their performance, or at least as an important target among others. The teacher can compare his or her own accent with the reference accent (which is well understood and described in a broad body of literature), in order to come to a descriptive and objective understanding of the features of his or her own accent. This triangle will, therefore, be one of the factors in the selection of phonological features to be studied in TELT (in Section 4.3.2 of this paper).

4.3. TELT: pronunciation-teaching methodology and phonology

4.3.1. Integration of pronunciation-teaching methodology and phonology-study

We have argued that phonology should not be taught to trainees and practising teachers in a way that separates it from approaches to teaching pronunciation, but at least alongside and preferably through them. This is one interpretation of what Wharton (1998, p. 128) calls "an exploratory approach to learning". Pronunciation issues can be raised through treating TELT course-participants as learners in an initial lesson in an unknown language. In this type of way, priorities can usefully be made in the area of teachers' phonological knowledge according to priorities in the area of SFL learners' practice of pronunciation. The strategic pedagogical model discussed in Section 4.2.1 of this paper offers one framework within which integration of pronunciation-teaching methodology and phonology-study can be achieved. If pronunciation is approached through an integrated pedagogy, phonological features may arise apparently spontaneously and arbitrarily for the attention of the TELT course-participants, though in fact it is likely that the TELT course-designers will have organised the course with particular phonological phenomena in mind.

4.3.2. Selection and ordering of phonological features to be studied

Teachers coming even to Masters-level programmes of study in language teaching (at the University of Manchester, at any rate) report that they and other teachers feel ignorant of phonology, though they are aware of the need for helping learners with their pronunciation. They often express frustration at being mystified (Ross, 1992, p. 18) by the terminology of phonology.

But how does one select and order the phonological features that are to be studied in TELT programmes? Let us consider selection first. It seems important to consider the aim of language learners in terms of what is widely called 'comfortable

intelligibility'. This can be defined in a number of ways, perhaps with reference to regional accents, or even to a theoretical English as an International Language as discussed, for instance, by Jenkins (1998). In any case, as demonstrated for instance in a small piece of research by Kelsey (1997) into the importance of pronunciation for learners of English in Canada, many learners know that they wish to be understood by speakers of a variety of accents.

It is important here to remind ourselves of the triangle that we mentioned in Section 4.2.3 and illustrated in Fig. 5. As we have said, it is vitally important for the teacher to know his or her own accent (at one corner of the triangle), since this is likely to be an important target for the learners. This knowledge can best be achieved by taking RP, General American, or any other well-described accent, as a reference point (at a second corner of the triangle). (We prefer this term 'reference'; Jenkins, 1998, p. 124, prefers the term 'model', along with Dalton and Seidlhofer, 1994, but this term is potentially confusing in that usually, e.g. in Gimson and Cruttenden, 1994, p. 271, it is taken to mean the target pronunciation.) Both non-native-speakers and native-speakers who teach English are likely to speak some other accent than the reference, and are unlikely ever — given that they are adults — to match it on a consistent basis, even if they aspire to (as non-native-speaker teachers often believe they should). The reference accent allows the teacher to plot his or her accent's segmental features in relation to it, and to understand the similarities and differences between the two accents in terms of suprasegmental features. For instance, they may find their own accent is nearer than the 'reference' accent to the syllable-timed end of the rhythm continuum (Jenkins, 1998, p. 123; Dalton and Seidlhofer, 1994, pp. 41–42), or that it is different from the reference accent in voice-setting (Jenner, 1992). If the TELT course involves only speakers of one particular accent (or group of accents, e.g. in one particular region of the world), it is perhaps relatively straightforward to define the teachers' accent as a group. If, on the other hand, the course-participants are from a variety of linguistic backgrounds and their accents have a variety of features, it is more complex: each course-participant needs to undertake something of an individual analysis of his or her own accent.

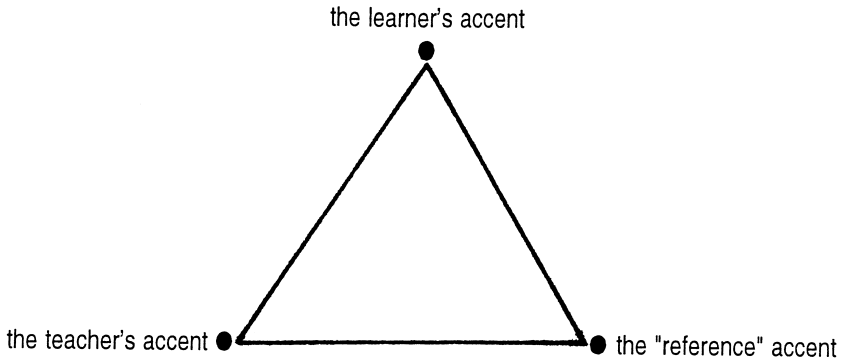

Fig. 5. The accent triangle.

At the third corner of the triangle is the learner's accent (which may share features with the teacher's accent). It is through a conventional comparative study of the learner's MT with the target accent (usually the teacher's) that selection will usually be made concerning the features to be attended to. These will be segmental and suprasegmental.

As for the ordering of phonological features in the TELT course of study, we might choose to adopt the 'top-down' approach (i.e. beginning with the study of suprasegmental features) which Dalton and Seidlhofer (1994, pp. 69–71) argue is appropriate for language-learners working in a communicative learning context. (Celce-Murcia et al., 1996, p. 193, further claim that one can order the suprasegmental features for language-learning to deal with word-stress first, then utterance stress, and rhythm.) But this may be inappropriate for TELT for the following reason. Phonology may be seen to have a dependency structure (Fig. 6) .

The utterance-level (i.e. highest level) suprasegmental features of intonation and utterance-stress work as major pragmatic features of spoken discourse, influenced by its functions and contributing to its organisation. These features incorporate word-stress and word-linkage features; word-stress is related to the lower level of syllable-structure; syllables incorporate phonemes, modified by linkage features at syllable-boundaries. And, of course, phonemes themselves may be prioritised, given the greater communicative significance of consonants, (i.e. that together with word-stress they contribute a great deal to the distinctive identity of a word), as compared with that of vowels (which contribute less). To fully understand and be able to describe syllables, one needs first to fully understand and be able to describe phonemes, and so on up the structure.

It may well be a fundamental principle then that in SFLT we will wish learners to practise suprasegmental features from the outset, whereas in TELT the phonological progression should work from the bottom up, i.e. from segmental features to the larger-scale suprasegmental features.

4.3.3. Phonology-teaching methodology

This last point has implications for strategic phonology-teaching methodology. The strategy will involve a regular shift of focus from pronunciation-teaching to phonology and back again. Once a strategic pedagogic model for integrated

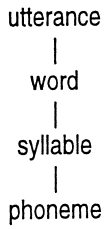

Fig. 6. The dependency hierarchy of English phonology.

pronunciation has been investigated, and the principle of the communicative supremacy of the suprasegmental features has been established, the phonology can be studied in a bottom-up order as suggested earlier. At each stage of the phonological study, specific pedagogical issues related to the aspect of phonology currently in focus can be addressed.

There is great strength in a task-based approach to the study of phonology within this strategic approach; Wharton (1998, p. 131) characterises this as "trainer input coming as a response to trainee work", so that in TELT course-participants should discover heuristically for themselves the phonological principles that have been selected and ordered, and this discovery would then be supported and extended through tuition and reading. Good examples of heuristic games and other awareness-raising and familiarisation activities are presented by Ross (1992); we might add such ideas as crossword puzzles using phonemic symbols rather than orthographic letters in the answers.

The degree of detail in the phonological study in a TELT programme will broadly be dependent on whether the course is a pre-service initial training one or a post-experience course of teacher-education. For instance, one would naturally expect more theory and technical labelling at Masters level than at initial Certificate level. But bearing in mind the orientation and experience of the TELT course-participants, the degree of technical phonological information required might be seen to depend on their analytical needs. For instance, teachers following a post-experience Masters programme come to the programme with a knowledge of what learners find difficult, and are usually keen to find technical explanations and pedagogic solutions for the difficulties. Participants on initial pre-service programmes, on the other hand, need perhaps fewer phonological technicalities and less labelling. It is rather an awareness of the processes and qualities of features that they need at this stage of their professional development. So, for instance, considering an aspect such as the voicing of consonants, it is its sensations and effects that they need to investigate, rather than technical explanations and labels. Perhaps the main 'labelling' that these initial course-participants need will be a facility with the same symbols as their learners will be using, i.e. phonemic symbols and stress-marking devices. In fact, even on post-experience programmes of study many participants find they have only partially understood the theoretical arguments that they have come across, so that it is often useful to investigate the more practical aspects to enhance their understanding.

5. Conclusion

We have argued in this paper for strong links between the fields of pronunciation-teaching and language-teacher education and training. The argument is perhaps more a matter of emphasis than true substance: the pieces of research we have cited have tended to indicate a need for stronger links between the two fields than perhaps have always been present in either the initial training or the post-experience education of language teachers.

Appendix A. The questionnaire

Section A

Please tick the following phonological features according to how much you use them in your TEFL teaching. Please give an answer to every question.

Key: B = Beginners: Complete beginners to Key English Test level
I = Intermediate: Preliminary English Test to First Certificate level
A = Advanced: Certificate in Advanced English level to Certificate of Proficiency level
DK = "I don't know what this is"

	DK	Not at all			Sometimes			Frequently			Constantly		
		B	I	A	B	I	A	B	I	A	B	I	A
1 **Phonetic alphabet** I use it to help in teaching													
2 **Phonetic alphabet** I teach it in full to classes													
3 **Voiced** or **voiceless** eg /g/ is voiced /k/ is voiceless													
4 **Assimilation** eg *meat pie* pronounced /mip paɪ/													
5 **Elision** eg *father and son* pronounced /fɑðrn̩ sʌn/													
6 **Schwa**: /ə/ eg the sound in *attend* /ətend/ *forget* /fəget/													
7 **Allophones** eg In *lull* there are 2 /l/ sounds: clear [l] at beginning; dark [l] at end													

	DK	Not at all			Sometimes			Frequently			Constantly		
		B	I	A	B	I	A	B	I	A	B	I	A
8 **Word stress** eg *arrive* = a**RRIVE** *intellect* = **IN**tellect													
9 **Weak forms** eg in *I need an answer*, the word *an* is less strong than the other words													
10 **Utterance-stress** on certain words in utterance eg *I want that BAG* or *I want THAT bag*													
11 **Stress-timed rhythm** eg **GUESTS CAME** takes roughly the same length of time to say as **VIS***itors'll be* ***aRRIV****ing*													
12 **Intonation** use of pitch change (eg rising or falling tone) to convey meaning													
13 **Received Pronunciation** I speak this accent as a model for learners													
14 **Received Pronunciation** I do not speak this accent, but refer to it													
15 **Consonant clusters** eg *twelfths* /twelfθs/													
16 If you wish, please add other features below.													

Section B

Please answer the following questions as fully as you wish by writing in the space provided after each one.

1. How long have you been teaching English to speakers of other languages?
2. What kind of professional/institutional context do you work in (e.g. private language school, university, etc.)?
3. What qualifications do you have?
4. What levels of learners do you teach? (e.g. KET level, FCE level)
5. Do you teach pronunciation as a separate lesson?
6. Do you integrate pronunciation teaching with other skills?
7. Do you have a systematic approach to pronunciation (such as a separate pronunciation syllabus), or do you deal with problems as they arise?
8. Which of the following methods do you use in your teaching of pronunciation? (Please relate the methods to levels and explain how you use them. If you are unfamiliar with a term please write DK.)
   back-chaining
   chanting
   Cuisenaire rods
   drama
   drills
   group work
   language laboratory
   minimal pairs
   pair work
   role-play
   video
   others
9. What do you find are the main difficulties in pronunciation teaching?
10. How do you think your pronunciation teaching has changed over your career?
11. Please give any further comments on the teaching of pronunciation (continue overleaf if necessary).

Appendix B. The textbook analysis

Features included in the book	*Headway Elementary Workbook*	*Elementary Conversation*	*Flying Colours 2*	*New Cambridge English Course*	*Making Sense of Spelling & Pronunciation*
Phon. alphabet	✓	✓	✓	✓	✓
Voicing				✓	✓
Word stress	✓		✓		✓
Shifting stress					✓
Utterance stress			✓	✓	
Intonation		✓	✓	✓	
Pitch				✓	
Linking		✓		✓	
Rhythm				✓	
Consonant clusters				✓	
Weak forms				✓	
Spelling/pron.				✓	✓
Rapid speech				✓	
Dark /l/				✓	
Rhyme					✓
Homophones					✓
Homographs					✓

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