

# Phonological therapy: a collaborative approach

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## **Introduction**

Here we have a model of phonological therapy based on sound theoretical principles drawn from literature extending back over the past 20 years. There are two parts to this paper, the brief account of the validating research and the description of the model itself. The account of the research raises questions which this discussion will address first. With regard to the model itself, this paper provides a welcome opportunity to address specific issues in phonological therapy.

## **The research study**

Although the experimental group is small and detail regarding the nature of each child's difficulties scant, it has to be said that the results of the study are encouraging. All 13 children included in the final analysis achieved age-appropriate phonological patterns within 19 months. At the probe (post-treatment) assessment the authors report that the 14 treated children showed accelerated improvement in their phonological patterns while the children in the control group showed no significant phonological gains. Ethical considerations aside, this must surely reassure us all that, at least in the realm of developmental phonological impairment, speech and language therapy does work. This is a welcome achievement. It is not clear from this account of the research precisely when the probe assessment was made. Given that the model includes breaks from therapy as an aspect of the treatment one must question whether or not the probe assessment was made immediately after the first treatment period or after a 10 week treatment period followed by a 10 week break. If the probe assessment was made immediately post-treatment then this would indicate that the therapy techniques used were effective but would call into question the efficacy of the 10 week break. Further questions raised with regard to this efficacy study are directed at future research, rather than intended as criticism of the present study.

This research study tested the presented model of therapy against a no-treatment alternative, it would be interesting to know how this model compares with other treatment approaches. The model has five basic components—family education, metalinguistic tasks, phonetic production procedures, multiple exemplar techniques and homework. The eclecticism of the model raises questions regarding the relative importance of each component. That is, is it the synthesis of several existing approaches which leads to a positive outcome or is there one particular constituent which substantially accounts for the success? It may be that the relative effectiveness of each component is dependent upon the exact nature of each individual child's difficulties. With the emergence of psycholinguistic assessment (e.g. Chiat and Hunt

1993, Stackhouse and Wells 1993, 1997) we have a framework to evaluate the idiosyncrasy of each child's impairment and attempt to match the relative weighting of each component appropriately.

Another aspect of the model which might fruitfully be further investigated is the planned-for 10 week break in clinician-based therapy. The brief outline of the efficacy study does not make explicit whether or not there were identifiable phonological gains following the 10 week break. If gains were made, it would be interesting to know if phonemes targeted in therapy were consolidated over the break period or if there were more general phonological gains. Another question here is what happens during the 10 week break? It would seem unlikely that parents who have been educated about techniques to help their child will stop using those techniques in a break from therapy. Future research might address the change in parental response to children's speech difficulties following the education outlined. It may be that once parents have been given full information regarding their child's difficulties and opportunities to practice specific techniques, future blocks of therapy could be of progressively shorter duration or clinician input could be reduced to a consultative role.

### **The therapy model**

The authors state that there are three key aspects of their model that set it apart from existing approaches to treatment—family education, planned alternating blocks of treatment and breaks, and the synthesis of five components drawn from existing approaches. In fact, family education is not an approach unique to this model. Flynn and Lancaster (1996) include in their sourcebook a chapter of photocopyable information sheets directed mainly at parents but also at teachers. It is encouraging to see, therefore, that clinicians on opposite sides of the globe have arrived at the conclusion that parent education and involvement in the programme is a key constituent of successful therapy. Taking an eclectic approach to therapy is not unique to this model either. Lancaster and Pope (1989) advocate the combined use of meaningful minimal contrast therapy, auditory input therapy and articulation therapy, suggesting that the relative weighting of each component is decided on the basis of the individual needs of each child. Again, the independent conclusions of these two sets of clinicians would appear to lend support to the view that eclecticism in phonological therapy is an appropriate model.

The planned alternating blocks of treatment and breaks from treatment does appear to be unique to this model. As indicated above, the brief research account does not provide evidence for the efficacy of this aspect. The theoretical basis for the planned breaks approach is competently expounded by the authors and if evidence to support this approach is available this would indeed be valuable information to have. Planned breaks from therapy could reduce pressure on clinicians for ongoing face-to-face contacts with children and could make a notable difference to lengthy waiting lists.

One appealing aspect of the model which the authors have not highlighted themselves is the emphasis on the individuality of each child. In this model we do not have a 'cookbook' approach to therapy. Whilst there are broad indications of what to include in a therapy session and examples of certain activities, it is made clear throughout the paper that specifics must be decided after the detailed assessment of each child's phonological system.

Given this broad outline to structuring a therapy programme, clinicians may then draw on other resources for specific therapy tasks. Lancaster and Pope (1989) provide a wealth of activities for meaningful minimal contrast therapy and articulation therapy. In addition, these authors advocate that auditory input should always be included in therapy for children with phonological impairment. Like Bowen and Cupples, they include information on auditory bombardment (Hodson and Paden 1983, 1991) but also extend the principle of auditory bombardment to *auditory input therapy*. Auditory input therapy involves engaging the child in games which allow the clinician to make frequent use of words containing the target phoneme. Following further experience with auditory input therapy Flynn and Lancaster (1996) produced a sourcebook which includes auditory input therapy resource materials for all singleton English phonemes in all word positions and for word initial clusters. They state that '...focusing on auditory input as a fundamental part of a treatment programme is an effective method of working with these [speech disordered] children' (p. ix) and point out that 'A second strength of the auditory input approach to treatment is that parents and others can easily participate in the therapy programme' (p. ix).

It is good to see the inclusion of metalinguistic tasks in this model. It has long been known that children with phonological disorders may be at risk for developing later reading and writing difficulties. Research into dyslexia indicates that children at age 5 with persisting speech disorders who have poor phonological awareness and poor letter-sound knowledge are at greatest risk for developing reading difficulties, particularly if there is a history of dyslexia in the family (Snowling 1995). However, it may be helpful to emphasize the developmental nature of metalinguistic tasks. Reading researchers suggest that phonological awareness training should begin with sound localization activities, move on to syllable segmentation tasks, rhyme awareness and onset and rhyme tasks *prior* to phoneme segmentation tasks (Lundberg *et al.* 1988, Stackhouse 1991).

Bowen and Cupples find it necessary to defend the inclusion of traditional phonetic production techniques in their model. Perhaps the reason for this is the fact that they have called their model 'a phonological therapy'. As they state, 'phonological therapy is, by definition, directed at activating the child's underlying system for phoneme use but somewhere along the line the child has to learn how to produce the phonemes'. In a strict theoretical sense, children who have a *pure phonological disorder* (Grundy and Harding 1995) are able to produce all of their native speech sounds but do not use all of these sounds appropriately in their speech. Clinical experience evidences that few children with speech intelligibility difficulties have a pure phonological disorder, many children have at least one or two speech sounds that they are unable to articulate. For these children it is wholly appropriate to use traditional articulatory methods to facilitate the articulation of sounds that they cannot produce. If we accept that, in a lot of cases, children with intelligibility difficulties have some articulatory component to their impairment, perhaps we could move away from the term 'phonological therapy' and begin to use an alternative term such as 'intelligibility therapy'. The key then to deciding whether or not to include traditional phonetic production procedures in the therapy programme will lie in each individual child's diagnosis. Children who are diagnosed as having *articulation disorder*, *articulation disorder with phonological consequences* or *mixed articulation and phonological disorder* (Grundy and Harding 1995) will require some measure of phonetic production therapy; those diagnosed as having *pure phonological disorder* will not.

In conclusion, the model itself is theoretically sound and the results of the efficacy study are encouraging. Future research might usefully be directed at investigating the relative importance of each of the aspects of the model, the efficacy of the planned breaks and the effects of parent education and involvement in therapy. The model offers a broad outline to aid clinicians in planning effective therapy programmes. The emphasis of approach will be based on the detailed analysis of each child's phonological system and articulatory skills and therapy tasks can be drawn in from several different resources.

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## Reply

### A phonological therapy in depth: a reply to commentaries

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### Introduction

It was most rewarding for us to read the commentaries relating to our description of a broad-based, family-centred approach to phonological therapy ('Parents and