SIMPLE & EFFECTIVE

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Phonemic Synthesis: Therapy for Decoding

In the last issue we began discussing therapy procedures based on the Buffalo Model. The August issue dealt with an effective procedure with which you may not have been familiar called Phonemic Training Program (PTP). It is an inexpensive way to improve phonemic knowledge for just about anyone, associating letters and speech sounds. This month we will address another very effective Decoding (DEC) procedure with which you all may be more familiar.

Phonemic Synthesis (PS) has been around forever in the form of an APD test that hones in on the very basis of DEC; the basic functions of the auditory cortex: phonemic discrimination, phonemic memory and phonemic analysis and synthesis. The therapy approach that began at the very same time addresses faulty processing of these DEC skills that impact important communicative and academic functions. PS is the presentation of individual phonemes (about 1.5 seconds or more apart) and the person is to put them together to form a word or nonsense word (in this program we use only real words).

If you have little experience with APD therapy this would be an ideal approach to start you off on the right foot. The PS therapy program is commercially available so most of the phonemic productions, organization and planning are provided. How you use these tools is up to you.

Phonemic Synthesis Program

This program (distributed by Precision Acoustics (360) 892-9367) has 15 lessons on a CD as well as forms for scoring each lesson and a summary sheet to monitor progress and to plan strategies. The program begins at a very easy difficulty level with 2-choice multiple choices responses and instruction with words that are vastly different from one another (e.g., *she* vs. *pencil*) and the child need only point to the answer. From this point it moves up to 3 choices with the same words on the next lesson and on lesson #3 it starts out with 3-choices and then the child generates his or her own answer. Because to this point the same 5 key-words are used again and again; therefore, there is a very good likelihood that the child will generate the correct answer.

Starting with the 4th lesson all the work is based on oral responses. At first the child moves from 2 phonemes to 3 by adding a sound to the words already trained, so each step is just a slight increment from the previous level.

Easy sounds (e.g., sh) in the beginning are followed by some more difficult sounds and then to liquids (e.g., l and w). Then things become more complex with consonant blends and slightly less familiar words. Eventually, longer words are used up to 6 phonemes. In this program phonemic analysis is introduced. Phonemic analysis is the opposite of PS. In this task the person is given the word and asked to break it apart and to say the sounds individually (e.g., *me* is */m/* then a pause; then the *long-E*). Again we start easy and then increase the difficulty level. The early lessons have about 15 items and last few have about 50 items.

Using the PS Program

Although much of the preparation is provided by the program the clinician must decide where to begin the program (as most children nowadays don't require the first few lessons) what to do when there is an error, how much interaction and feedback to give and how to proceed if the person hits a roadblock. The manual was written years ago and the author did not revise it. While it is perfectly fine to follow those instructions' it is even better if you follow these suggestions.

Where to start

Most children that we see now have had phonics in school and some had intensive phonics programs, experience with sounding out words in reading and spelling work, speech therapy in which individual phonemes were used etc. Thus, these children are more sophisticated than the normative cases. Therefore, a below normal PS score likely represents a more important problem than the score would otherwise suggest. Based on their Phonemic Synthesis test score you can determine if the person is extremely weak or not bad on the PS (sound blending) task. In young children (e.g., 5-year-olds) especially we are more likely to start with lesson one (especially if it was necessary to evaluate them using the PS-Picture test instead of the regular PS test and they did not get all/nearly all correct). Some can start with lesson #2 because they have shown some ability to put a 2 or 3 sounds together to form a simple word on the PS test (but not many items were correct). Most children that I see can start with lesson # 4 or #5. Start with #4 if there were quite a few errors on the harder items and with #5 if it was better than that. Because lesson #6 concentrates on the L-sound that is quite hard for some people I usually start with #5 even if they have done very well on the pre-test to get them started on the right foot.

No matter where you start other than on #1 you should indicate to the person to wait for the beep before answering.

Phonemic Synthesis is the presentation of individual phonemes (about 1.5 seconds or more apart) and the person is to put them together to form a word or nonsense word (e.g., /m/ pause /i/ (long-E) is "me").

Phonemic Analysis is the opposite of PS. In this task the person is given the word and asked to break it apart and to say the sounds individually (e.g., me is /m/ then a pause; then the long-E).

Feedback

In the manual it indicates that you should not give feedback. That is because in the early days I felt it was important to be sure that we were not giving away the answers (i.e., the program was doing the work). My philosophy is quite different now; I know it is a powerful procedure and don't feel that we need to prove it in this way. I give lots of positive reinforcement, but usually the first time usually do not indicate if there was an error as this will serve as a baseline to see where the person is performing. The next time I generally use a Word Chart to teach or emphasize the difference between the perceived word and that actual word where there were errors.

The general feedback is provided at the end of the lesson when the child/person gets to fill in the box on the PS summary sheet to show how they scored. I also include the number of delays as this is a measure of processing time and shows the need to go beyond the simple processing to come up with a correct response. At first the emphasis should be on

getting the items correct but later on the person might be made aware of the desirability of speeding up a bit (if needed).

There are 2 special line-indictors on the summary chart. Near the top of each column for the 15 lessons are 2 heavy lines that indicate the Completion Level (CL). If the person scores at the CL or above that lesion is considered finished and you can move on to the next higher lesson. There is also a dashed line further down on each column of summary sheet. This designates the Target Zone (TZ). If the person is within the TZ or above you can go on to the next lesson if you care to. But if the person scores below the dashed line then you can stay at the same level or go back to an easier level if you care to. The reason is that each succeeding lesson is harder than the previous one so the person is not ready for yet a more challenging lesson if they are below the TZ.

dump	jump
fit	fish
come	came
book	took

What to do if there is an error

The first time the lesson is presented one need not make any corrections, but for the next therapy session it would be a very good idea to prepare a Word Chart for the errors. The way that I do it is to have a sheet of paper divided into 8 boxes (one fold to make the paper look long (like a hotdog) and then in half in the other direction (to make it look like a hamburger) and then once again in that direction. If there were 4 errors (e.g., dump/jump; fit/fish; come/came and book/took) the first pair would be side by side in the top 2 rectangles, the second 2 next etc. However, I have found it useful to have the correct word on the left for the first pair and the error word on the left for the next pair etc. so it is not obvious which is the error word.

Show one pair at a time and have the person point to the word that you say. Give the 2 words sound by sound. When they are contrasted in this way it is a fairly easy task (the ones that are a problem may be repeated). Go through each pair and then do "The Big Test" with all 8 of the words showing. Skip around and give each one. This procedure minimizes the errors and increases the repetitions and sophistication needed when the CD presentation is given again.

What to do if the Completion Level is not reached

Generally I give a Word Chart (Wd Cht) on the following lesson and then give the lesson again (from the CD). I would provide a Wd Cht even if I was going on to the following lesson just to be sure that those skills for the missed items were acquired.

What if the person gets all or almost all the words correct on the various items

The program is designed to provide maximum success and fewest errors as we are teaching the brain what the sounds are really like and not testing the child's knowledge. So it is fine if the child keeps riding along with few if any errors from lesson to lesson.

Judging the results of therapy

In recent years the people with whom I have worked get both PTP and PS training for DEC issues so we can't separate the findings for each. We look at improvement in 3 ways:

1. How has the person performed during therapy? Has the person shown the ability to overcome confusions that are noted during therapy and able to demonstrate good ability later on in other applications?

2. How has he/she performed on retest compared to pre-test? For DEC we look mostly at 2 measures the PS test-retest and the PEA test-retest. The Quantitative PS score is very helpful but the Qualitative score gives further information (does it take the person extra time to get the items correct). PEA is the Phonemic Error Analysis that is the total of phonemic errors on the 3 Buffalo Model tests. This measure has been written up in SSW Reports in the last year or so. I will probably write some more about it in a future issue of SET.

3. Have the benefits that were noted in the 2 items above carried over to performance at school and home? I use the Buffalo Model Questionnaire initially and at retest ask the parent to indicate if there has been a change in the problem areas they have identified.

Therapy results data

DEC is the most important aspect of therapy for APD because it involves such important communicative and academic functions. It is important to consider what we know about the effectiveness of the PTP and PS procedures. We have data on test-retest results on the Buffalo Battery and on the Buffalo Model Questionnaire indicating parent/teacher assessment of behavioral or academic changes at home and at school.

The next issue of SET will provide the results of the PTP and PS Decoding therapies. In the meantime please send your questions or comments to me (jackkatz@buffalo.edu) or to our Simple Effective website. In this way we can clarify the procedures and associated rationale.