

SIMPLE & EFFECTIVE

Editor: Jack Katz, Ph.D., CCC-A/SLP of Auditory Processing Service, LLC
5240 W. 94th Terrace, Suite 110, Prairie Village, KS 66207
www.jackkatzphd.com (913)643-0123 JackKatz@Buffalo.edu

Associate Editor: Angela Loucks, M.A., CCC-A



The Results of Decoding Therapy

The results of therapy for Decoding (DEC) problems showed greater effectiveness than I could have imagined. In the two previous issues of SET we discussed the Phonemic Training Program (PTP) and Phonemic Synthesis (PS) which are the two main Buffalo Model procedures that we use to address the DEC problems (of children in this case; 6 to 18 years of age). This issue will describe the results of these therapies.

The therapy program in my practice provides as many as 14 sessions of 50 minutes each. The amount of time devoted to PTP and PS varies from about 20 minutes per session to about 30 or 35 minutes. The data for these children are based

Looking at the PS Therapy Materials

I have not figured out how to monitor progress in PTP because we start so easy and very gradually add sounds. For this reason the children progress without much error, not because they have a good handle on all the sounds, but because the task is quite easy. We increase the difficulty level gradually only as they develop better skills.

We do have a metric for PS but this reflects not only the PS training but also the improved

INSIDE THIS ISSUE

The Results of Decoding Therapy	1
Phonemic Synthesis Program	1
Using the Phonemic Synthesis Program	2
Where to start	2
Feedback	3
What to do when...	3 -4
Results of therapy	4

almost exclusively on this first round (R-1) of therapy. Because of the brevity of the therapy period none of the children received all 15 lessons. Younger children rarely completed lesson 15 and the vast majority of all children begin with lesson 4 or 5 and skipped one or 2 lessons if it looked like they could complete lesson 15 in R-1.

We look at three factors in determining the success, or lack thereof, for a particular child. The first is progress in therapy, the second is test-retest and the last one is parent ratings of change.

phonemic clarity from the PTP. To measure PS improvement we use the 'completion level' of each PS lesson. A level is designated for each lesson to indicate that the child has mastered the material. It permits completion when all of the items are correct for early lessons or have as many as three errors for the last lesson. In this way we can determine how many tries were need to pass each lesson.

Article continued on page 2

Data for 26 unselected children, who underwent PS and PTP training, were at hand. The average child had 8.2 different PS lessons and a mean of 11.3 tries (for a total of about 3 hours of PS therapy). Figure 1 shows the performance for these children versus those in the original PS- program field study.

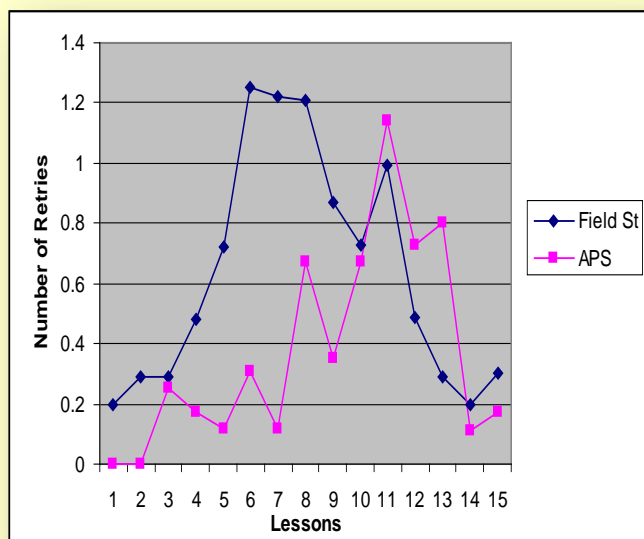


Figure 1. PS therapy data for the field study (N=54) and my current work (N=26) at APS

It can be seen that for the field study (blue curve) there was a steep increase in the number of retries needed to complete lessons 4–6. Between lessons 6 and 8 there was a plateau and then fairly rapid improvement from lesson 8 to 13 with the exception of lesson 11 that appears to be more challenging. By contrast the present group had scores that were better than the field study from lesson 1 to 9 and about the same score as the field study for lessons 10 and 11 with poorer scores for 12 and 13 and roughly equal scores for the last two lessons.

The mean retries for the field study was 64% of the time and for the present group 38% so overall it appears that the current group was more

successful in competing the lessons. This is not surprising because the current group also received PTP training that the field study children did not receive and more positive feedback.

How about the different patterns of progress for the two groups? I was always impressed by the field study's steep curve suggesting a rapid increase in the difficulty level in the first half of the PS lessons, but amazed by the rapid decrease of errors on the second half. I figured that after the most difficult sounds (the liquids) were addressed that the children were so strong that the rest of the lessons were easy for them. If that was so; how could we account for the present data? A big training difference between them is that originally we did not give reinforcement during the lesson and there was no training outside of the program unless there was a consistent problem (perhaps on the third try). Now we give occasional feedback and address the errors from the previous session with word charts. Thus, we expedite the learning instead of letting the program do all of the work. For this reason the current group did not require many retries early on, however, it appears that with fewer lessons or retries early on it may have reduced the success of the APS children for a few lessons later on, but they wound up in the same place at the end.

One more comment about the data in Figure 1. The second curve pattern conforms more to our original design of the programs. They were to start off very easy and gradually get harder and harder. The APS kids showed this progression from lesson 1 to 11 and only for the last few lessons had the sharp improvement.

Decoding Test-Retest Information

We have test-retest data for 82 children (6–18 years of age). Figure 2 shows the test-retest PS Quantitative (PS Qt) and Qualitative (PS QI) scores after R-1 of therapy. The figure shows impressive improvement in the number of errors on the PS test for both Quantitative and Qualitative scores. The mean age for these children was 9.3 years. Normal limit for number of errors for 9-year-olds is 7 for Qt and 9 for QI. Thus, the children were almost 4 points poorer than the Qt normal limit before therapy and were 3 points better than that level after R-1 of therapy. Similar results were obtained for the QI.

It is not surprising that the children improved on the PS test after therapy as part of the therapy was PS. So they had a distinct advantage over the field study group. However, the Phonemic Error Analysis (PEA) and SSW tests represent generalizations of the training. PEA (see Katz, 2009) is the number of phonemic errors on the 3 Buffalo Battery tests (SSW, PS & SN). There are 926 phonemes and each error is analyzed to determine if the error was a phonemic error (substitution, omission or addition). The pretest shows 55 errors and the post test just 30. This suggests improved phonemic processing.

The SSW presents quite a different situation. It is a general measure of APD and not heavily loaded on DEC. As a matter of fact the left competing (LC) condition is the poorest and often the least changed on retest because it is heavily associated with Integration which is not addressed in R-1 of therapy. LC also has TFM demands as well as some DEC so some but not a great deal of improvement is to be expected on the SSW after DEC therapy. Ten errors represent the normal limit for 9-year-olds so this figure shows that many of the children improved but not enough to fall within those limits after R-1.

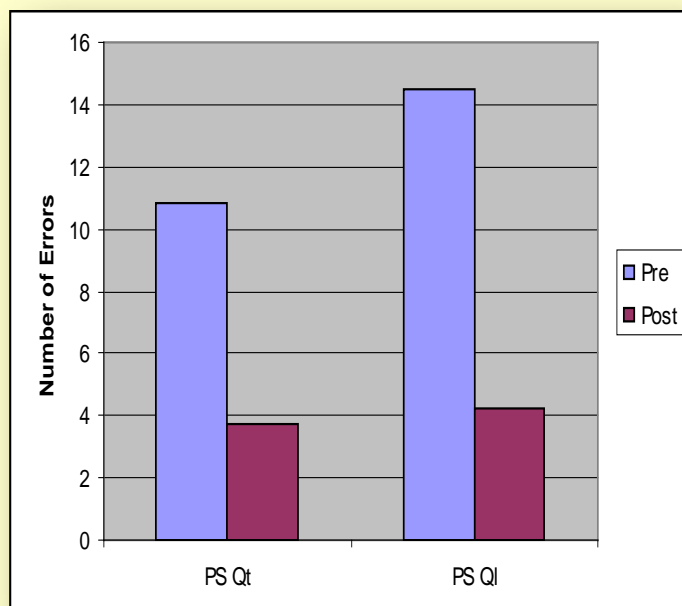


Figure 2. Test-retest scores before and after therapy for PS Quantitative (Qt) and Qualitative (QI) scores for the APS group.

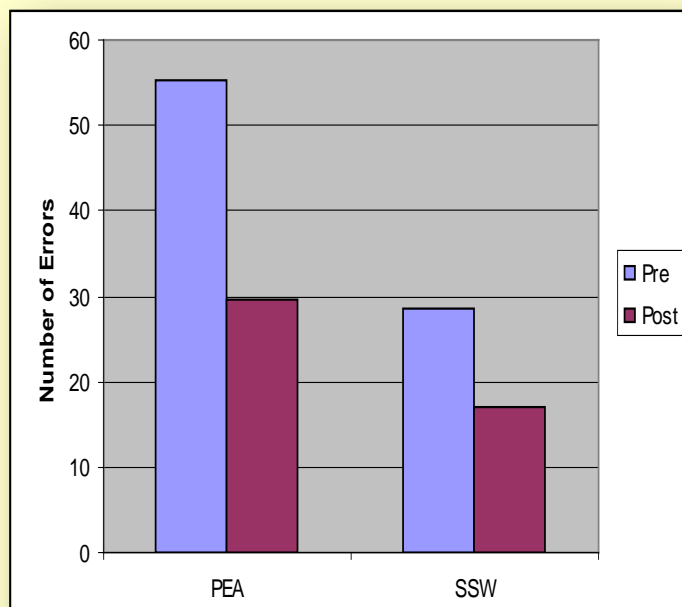


Figure 3. Test-retest scores before and after therapy for PEA and SSW tests.

Parent-Teacher Evaluation of Change

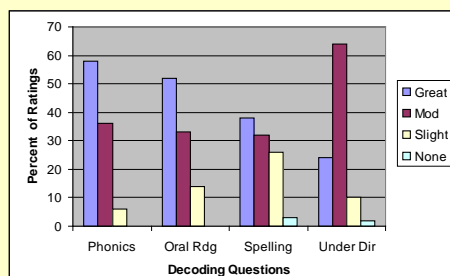


Figure 4. Ratings of change for 55 children following R-1 of therapy.

The two previous sections involve monitoring the children's performance in therapy and the change noted on retest on the Buffalo Battery. This section takes a completely different look at therapeutic change. The Buffalo Model Questionnaire (BMQ) (see SSW Reports, Nov., 2004; Nov., 2006; Feb., 2008) provides us with excellent (almost always) information about the child's problems so after therapy I ask the parent/teacher to rate the changes; whether negative or positive, on the behaviors associated with the therapy. One child was doing very well in therapy but when it came close to the end of R-1 she developed a severe hormonal problem that greatly impacted her. When asked to fill out the follow-up of the BMQ the father, a researcher, refused to fill it out because he felt that the onset of her illness greatly biased the data.

Forms for 55 children were studied to determine the parent ratings of change over the therapy period. Based on the initial concerns the parents indicated if there was great, moderate or mild improvement, no change or if performance became poorer. So far we have no poorer ratings. The four main DEC questions dealt with Phonics, Oral Reading, Spelling and Understanding Directions. Figure 4 shows the percent of children in the four improvement ratings for each question: Phonics were 58, 36, 6, 0. Thus 94% of the parents indicated great or moderate improvement. The percentages of great or moderate improvement were 88% for Oral Reading, 70% for spelling and 88% for Understanding Directions. These percentage outcomes ranged from excellent to at least good. I suspect that quite a few of the children with spelling problems did as well as they did prior to therapy because of their strong visual skills. While they improved in their auditory skills it may not have shown as much of a difference as the other questions because they could now perform the task either visually or auditorily which may not have been as dramatic for spelling.

Summary

It is important to know if our procedures are working effectively. We looked at this question in three ways: improvement on the therapy materials, test-retest on Buffalo Model procedures that are sensitive to DEC problems and on the parent/teacher rating of change on DEC of the BMQ. Each of these approaches support very good improvement in auditory/phonemic decoding.

Reference

Katz, J. (2009) Therapy for APD: Simple, Effective Procedures. Educational Audiology Association. pp. 20-21, 27.

