

TEST REVIEW BY THE SpLD TEST EVALUATION COMMITTEE – STEC

DATE OF REVIEW	July/August 2018
Test	TAPS-4: A Language Processing Skills Assessment
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Publisher and date published	Academic Therapy Publications Publication Date: 2018
What it tests	<p>Key Differences from TAPS3: TAPS-4 is no longer entitled ‘Test of Auditory Processing’. It has been ‘rebranded’ using the acronym only followed by a colon and a descriptor. This is based on a reconsideration of the term ‘auditory processing’, which ‘is now generally conceptualised ... as a narrow set of skills specifically related on Central Nervous System processing of the acoustic signal ... Auditory processing is just one component in the broader set of skills described as oral language processing ... which also includes phonological awareness, auditory attention, auditory memory and conceptual knowledge. Given this evolution in thinking, it is more accurate to view the TAPS-4 as measure of language processing skills than as a measure of auditory processing skills’ (see pp 7-8 in Manual). Rationale: Language Processing Deficits are common in a variety of developmental and learning conditions (p 14).</p> <p>TAPS-4 includes new and revised subtests; standard audio administration of certain subtests to improve consistency and reliability of administration; updated and expanded norms (up to age 21 years and 11 months) that include individuals with specific language impairment, hearing impairment, ADHD, and learning disabilities.</p> <p>Index and Subtests:</p> <p>Designed to be used flexibly; can administer single subtests, one or two indices, or entire battery</p> <p>Supplemental subtests cannot replace core subtests to compute the composite but are meant to provide further information, probe and clarify</p> <p>Phonological Processing Index (All subtests must be administered via CD to ensure ‘consistent pacing and pronunciation’).</p> <ul style="list-style-type: none"> • Word Discrimination – hear a word pair and identify whether the words are same or different • Phonological Deletion – hear a word and say the word again without an identified syllable or phoneme • Phonological Blending – hear a series of phonemes and combine them into a word • Syllabic Blending (supplemental) – hear a series of syllables and combine them into a nonsense word

	<p>Auditory Memory Index (All subtests presented by Examiner verbally);</p> <ul style="list-style-type: none"> • Number Memory Forward – hear a series of single-digit numbers and repeat them in the same order (primarily a measure of short-term memory and may also require working memory for longer sequences) • Word Memory – hear a series of words and repeat them in the same order (primarily a measure of short-term memory and may also require working memory for longer sequences) • Sentence Memory – hear a sentence and repeat the sentence exactly as it was said (primarily a measure of short-term memory and may also require working memory for longer sequences; also relies on syntactical knowledge) • Number Memory Reversed (supplemental) – hear a series of single-digit numbers and repeat them in the correct reversed order (measure of working memory) <p>Listening Comprehension Index (1 subtest presented by Examiner verbally; other 2 administered via CD);</p> <ul style="list-style-type: none"> • Processing Oral Directions – hear a short scenario that contains a direction and asked what the person in the scenario is supposed to do (CD required) • Auditory Comprehension – hear a short passage and answer questions about the passage (variety of ‘wh’ and ‘how’ questions along with items that include inferential and figurative language) • Auditory Figure-Ground (supplemental) – similar structure to Processing Oral Directions, with the scenarios presented against competing background noise; use of complementary items with similar sentence difficulty and structure makes it possible to compare performance on the two subtests to determine if individual is having specific difficulties with listening comprehension when there is competing background noise (CD required) <p>Key Features</p> <ul style="list-style-type: none"> • Developed in line with current theories of language processing and CHC theory: Index structure supported by factor analysis • Skills tapped are deemed useful in identifying the underlying factors contributing to reading and writing difficulties. Also, for any individual who presents with listening and communication challenges. • Manual notes that there are distinct profiles of reading difficulty (poor decoders, poor comprehenders and global difficulties) that are related to patterns of underlying skill difficulties with phonological processing, language comprehension or both (p. 10)
Age range	5:0 – 21:11
Access level (assessors) Open/Closed	Open Test Interpretation ‘must be conducted by individuals who have formal training in psychometrics, know how to use derived scores, and understand the limitations of test results’ (p. 15)

Advantages	<ul style="list-style-type: none"> • Open to Specialist Assessors • Flexibility in choice of subtests and administration order • Up-to-date standardisation norms (albeit US based) • Clear, easy-to-follow manual, tables, standardised scores and confidence intervals for subtests and index composites. • Manual offers easily accessible and useful information on factors which may influence performance in each subtest and actively encourages qualitative evaluation of performance. • Instructions easily accessible on Record Form in Bold • Auditory memory is assessed using a range of measures (digits, words and sentences). Having several subtests of short-term memory at different levels (numbers, words, and sentences) allows for greater confidence if weaknesses are found; also allows for comparison of results at different levels of meaning. • Syllabic Blending (using nonwords) would appear to be a particularly useful subtest for older students as it provides a purer measure of phonological skills than tests using real words that can often be easily recognised/guessed • Good reliability for 3 Indexes and Overall Score • Validity checks indicates that the test differentiates between subgroups (e.g. those with specific learning difficulties) • Attempt to make administration more consistent across Examiners with the use of a CD for presenting some subtests (although there are negative aspects to this as well; see below) • Inclusion of additional language processing tests involving comprehension under different conditions; Understanding of directions with and without background noise would be useful. Auditory-Figure Ground subtest gives directions embedded within background noise and is an interesting subtest for inclusion for candidates who report difficulties with listening/understanding in noisy situations. • Purposeful omission of descriptive ranges, due to acknowledgement that these can and should vary based on assessment purpose • Offers word and sentence memory subtests in addition to the numbers forward and reversed subtests.
Disadvantages/ Cautions/ Considerations	<ul style="list-style-type: none"> • Standardised only up to 21 years and 11 months, although this is an extension of the age ceiling from the TAPS-3 • Instructions on the CD are slow and potentially frustrating for adults • Use of CD with American accent and slight differences in phoneme and word pronunciations may potentially affect (by lowering) scores; Communication with publisher indicates that CD should still be used, allowances made for different dialects/accents in responses, and noting of any items that may have been affected in interpreting results • For older students, the rate of delivery on the CD for phonological processing subtests seems quite slow, increasing the administration time; this would also seem to add to the demands on Short-Term/Working Memory and Attention especially as the number of sounds to remember increases.

	<ul style="list-style-type: none"> ● Caution is needed when using the core phonological processing subtests. Subtests (1-3) are primarily for children aged 10 and under, as phonological skills develop and hit mastery for most children relatively early. Standardised scores have only been provided for older children/adults to assist with quantifying <u>serious</u> problems with phonological skills. With this older age group, the scores do not follow a normal distribution. If scores from these tests fall at 85 or above assessors need to consider the following when deciding whether or not the score represents a weakness: <ul style="list-style-type: none"> ○ Ceiling effects (e.g. for Word Discrimination and Phonological Deletion the highest score possible is only SS=100 at older ages) ○ Just one or two errors can lead to a significant drop in score ○ The effect of the CD's slow speed of delivery and potentially confusing American accent in Phonological Blending <p>It will also be important to interpret these results in the context of other evidence indicating weaknesses in this area and impact on literacy skills to ensure accurate interpretation.</p> ● The Syllabic Blending test may offer useful information, but with the usual proviso that memory also plays an important role in the longer items towards the end. ● Similar caution is needed for Auditory Comprehension. The language in the listening comprehension subtests is not complex. For higher-level students, therefore, it may reflect their ability to accurately recall what they have heard, rather than their understanding of the content. This could be a useful test to explore issues with remembering verbal information, but it should be used with caution when analysing underlying comprehension. ● Wide Confidence Intervals ● No Rapid Naming (unlike CTOPP-2) ● Assessment was normed on individuals from the US and therefore may not fully reflect the demographics of the UK ● Some American references (e.g. references to terms such as 'basketball' and 'cookies', and use of less common names) may affect storage in short-term memory or interfere in slight ways with memory of other parts of sentence as not quite as familiar ● Assessors should ensure familiarity with administration procedures, rate of delivery of auditory memory subtests, use of the CD, and conduct several trials prior to administration ● Be mindful of different ceilings for different subtests ● Some subtests are lengthy (e.g. Auditory Comprehension and Auditory Figure Ground) due to the format, no graduated age-related basal, and ceiling of 6 consecutive incorrect answers. ● Note: Subtests 1-6 are the ones requiring the CD. The CD audio tracks are divided into two sections (examples followed by administration) after the initial Volume Control track; this may seem confusing at first. When using the CD, you will need to pause the playback after each item to provide time for the examined to answer and for logging the answer on the Record form.
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	<p>Practice with finding subtests on the CD, and pausing CD in between items is needed so that this can be done smoothly.</p> <ul style="list-style-type: none">• Be sure to provide as much feedback as needed on example items to ensure task understanding; no further feedback can be given• Care needs to be taken with item scoring: example items are not included in scoring; scoring can vary by item for individual subtests <p>Comments Regarding Use of CD from Test Developer/Publisher:</p> <ul style="list-style-type: none">• Any administration that is not carried out according to standardisation protocol leaves the validity of norms in question.• CD recorded in neutral American English accent; multiple dialects and accents in various regions of the US did not lead to performance discrepancies; audio recording eliminates variation in Examiner accents and dialects (which may be different from the Examinee); use of CD also consistent with other major assessments of phonological processing.• It is recommended that the Examiner make note of any items where caution is advised in interpreting results due to pronunciation or dialectical differences (see pages 21 and 36 of Manual).• If examinee is producing the word(s) in a typical way for his or her dialect or accent, then the response should be considered correct. Errors due to known articulation difficulties should not be penalised.
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