

Click to verify

































The numbers in north-eastern half of the table are the actual numbers of pairs identified, the numbers in the south-western half give an indication of the importance or difficulty of the pair calculated as follows: from a maximum of 6, deduct 1 for difference between vowel and diphthong, 1 for a difference of length within monophthongs, 1 for difference of direction within diphthongs, 1 for a difference in lip-rounding, and then for the distance apart of the starting tongue position deduct 1 for a distance of up to one cardinal vowel, 2 for up to two cardinal vowels, 3 for any wider distance. Thus a score of 4 or 5 would show two very similar sounds, a contrast likely to be a cause of difficulty for some or all learners, while a score of 1 or 2 would be unlikely to cause problems. In the table of consonants each link leads to a list of minimal pairs involving the phonemes in the relevant column and row. The numbers in north-eastern half of the table are the actual numbers of pairs identified. The numbers in the south-western half give an indication of the importance or difficulty of the pair calculated as follows: from a maximum of 6, deduct 1 for difference of length within monophthongs, 1 for a difference of direction within diphthongs, 1 for a difference in lip-rounding, and then for the distance apart of the starting tongue position deduct 1 for a distance of up to one cardinal vowel, 2 for up to two cardinal vowels, 3 for any wider distance. Thus a score of 4 or 5 would show two very similar sounds, a contrast likely to be a cause of difficulty for some or all learners, while a score of 1 or 2 would be unlikely to cause problems. Where the numbers in the phoneme key differ only by one, the two phonemes are similar. Minimal pairs are listed in the column and row where the two phonemes differ only by one. The other numbers are given for reference and to provide an overview of the existence of minimal pairs which enables linguists to build up the phoneme inventory for a language or dialect, though the process is not without difficulties. Each cell in the tables above is a link to a list of minimal pairs derived from a dictionary. Use the tables of vowels and consonants to retrieve the relevant lists. All the vowel and consonant lists have now been edited and commented on. Earlier versions of the lists included only one pair for each pronunciation, such as *heal*/*heal*. Newly revised versions have been added which include all the pairs which arise when one or both members of the pair have a homophone, so giving a better indication of how much confusion a given pair may cause.

Both the /p/ and /b/ share many features in that they are both labial stops. Similarly, the minimal contrast between pea and key is that the phoneme /p/ is a bilabial whereas the /k/ is a velar. In this instance, the minimal contrast is place, in that the phoneme /p/ is a labial stop, while the phoneme /k/ is a dorsal stop. A maximal feature contrast is quite different from a minimal feature contrast but still follows the same principles. Phonemes with maximal contrasts have feature differences that are on opposite ends of the spectrum for phonemes with only minimal feature differences. Maximal contrasts can involve major class differences, such as obstruents and sonorants, as well as non-major class differences, such as frontally rounded vowels and plain vowels, or /p/ as opposed to /t/ as labial stops, or /g/ as opposed to /d/ as alveolar stops. In this example, the minimal contrast is place, in that the phoneme /p/ is maximally contrasted with the phoneme /t/. The phonemes are considered maximal contrasts because they feature a significant sound difference in that one is an obstruent whereas /t/ is a sonorant. The /p/ is voiceless, the /t/ is voiced. One is a bilabial stop, the other a coronal lateral fricative click in the empty set therapy link or the multiple oppositions therapy page. To learn more about linguistic methods of speech intervention for severe phonological disorder or childhood apraxia of speech, References Barlow, J.A., & Gierut, J.A. (2002) Minimal Pair Approaches to Phonological Remediation Seminars in Speech and Language, Volume 23, No 1 Bowen, C. (2009) Children's Speech Sound Disorders Wiley-Blackwell Williams, A.L. McLeod, S., & McCauley R.J. (2010) Interventions for Speech Sound Disorders in Children Paul H Brookes Publishing Co. Williams, A.L. (2006) SCIP Sound Contrasts in Phonology: Evidence Based Treatment Program. User Manual Super Duper Publications Updated 11/2013 Return from Minimal Pairs Theory Home Page According to Baker (2010), the minimal pair approach is one of the most popular and oldest phonological interventions. As an SLP, you are likely familiar with the minimal pairs approach for a way to treat phonological processes (e.g. fronting, backing, stopping etc.). However, what exactly is it? How does one implement it? and what is the evidence backing it? What is a minimal pair? Pairs of words that differ by one phoneme (e.g. bat - bad, go - dough) which alters the meaning of the word is referred to as a "minimal pair" (Barlow & Gierut, 2002). How do you carry-out this approach? Firstly, there are two ways the approach can be implemented: the first is called "meaningful minimal pair intervention" and the second is called "perception-production minimal pair approach." In this post I am discussing the "meaningful minimal pair intervention" (Blache, Parsons, and Humphreys, 1981; Weiner, 1981). This intervention approach has three steps. The first two steps are completed in the first session and the third step begins in the first session and continues on into subsequent sessions (McLeod & Baker, 2017). Familiarization. Familiarization involves familiarizing the child with the 10 pictures that will be used during the sessions. For example, as per McLeod and Baker (2010), word pairings could include cape-tape, key-tee, call-tall, corn-torn, and kick-tick. The child is then shown each picture, told the picture's label (e.g. "This is tape,"), told the initial sound of each picture, and told details about the picture (e.g. "Teachers use tape,"). Listen and pick up. The next step is "listen and pick up," which involves the clinician spreading out the pictures on the table. The child is then asked to pick them up one at a time. Fronting. The final step is "fronting," where the child is asked to say the words and then repeat the words after the clinician says them. The child is then asked to say the words and then repeat the words after the clinician says them. For example, if they say "tape," the clinician or therapist would pick up the tape. If the child responds with "No the tea," then both are to be picked up and the clinician can ask, "Do you mean tea or tape?" The activity continues on with instructions and additional cues (e.g. visual, phonetic cues) as required (McLeod & Baker, 2017). What is the ultimate like for this approach? There is a large body of research for the minimal pair approach as it has been present since the 1980s (McLeod & Baker, 2017). McLeod and Baker (2011) present a review of 134 studies on phonological interventions with 43 of them being studies on the minimal pair approach (McLeod & Baker, 2017). The review ultimately shows the minimal pair approach to be quite effective. Therapy example: Fronting A common phonological process children with a phonological disorder may exhibit is called "fronting" which is when sounds that should be produced in the back of their mouth (e.g. k, g) are fronted and produced at the front of their mouth (e.g. t, d). For example, a child who fronts may say "tat" for "cat" or "do" for "go." Print pictures of the words below and use them as explained above. Examples of words for this process are: g becomes d-go-dough, gate-date, gear-deer, gown-down, gave-Davek becomes t-cape-tape, key-tee, call-tall, corn-torn, and cake-take-SReferencesBaker, E. (2010). Minimal pair intervention. In A.L. Williams, S. McLeod & R.J. McCauley (Eds.), Interventions for speech sound disorders in children (pp. 41-72). Baltimore, MD: Paul H. Brookes. Barlow, J.A., & Gierut, J.A. (2002). Minimal pair approaches to phonological remediation. Seminars in Speech and Language, 23(1), 57-67. Blache, S.E., Parsons, C.L., & Humphreys, J.M. (1981). A minimal-word-pair model for teaching the linguistically significant difference of distinctive feature properties. Journal of Speech and Hearing Disorders, 46, 291-296. McLeod, S., & Baker, E. (2016). Children's speech: An evidence-based approach to assessment and intervention. Upper Saddle River, NJ: Pearson. Weiner, F.F. (1981).