Teaching Complex Clusters

General Strategies

Blending Sounds

*Teach the idea of moving through sounds.*

- Use blocks – each block represents a sound
- Sweep hand next to each block to show blending of consonant sounds
  - Two blocks for CC clusters
  - Three blocks for sCC clusters
- Use wheels on vehicles – each wheel represents a sound
- Sweep hand across each wheel to show blending of consonant sounds
  - Two wheels for CC clusters
  - Three wheels for sCC clusters
- Use letters to demonstrate moving through sounds (e.g., SPL or THR)

Novel Syllables or Nonwords (Van Riper, 1978)

*Teach cluster target in new contexts; may break through a “frozen form.”*

- Experiment with teaching cluster in novel contexts by introducing different vowels to facilitate production.

Stimulability (Miccio & Elbert, 1996)

*Teach singleton sounds through play with characters and associated hand signals.*

- Teach nonstimulable sounds in a play-based context
- After sounds established, use associated hand signals to prompt child when needed
  - e.g., /r/ Rowdy rooster (Rev motorcycle gears)

Segmentation (Skelton, 2004)

*Sequentially practice a target part and then sequentially add the other parts to it.*

- Start with segment needing practice, then build the word from that point.
- Whole word – “Say *slip.*”
- Segmentation (in either direction) –
  - “Say /s/” OR “Say /ɪp/”
  - “Say /slɪp/” “Say /lɪp/”
  - “Say /slɪp/” “Say /slɪp/”

Another Segmentation Option (Skelton, 2004)

*Practice from a motor behavior to the target in a word.*

- “Do ‘tongue up to the bumps’”
- “Do ‘tongue up to the bumps and drop it’”
- “Do ‘tongue up to the bumps and drop it with ‘Mr. voicebox on’”
  - “Do /le/”
  - “Do /lek/”
CC (Two-Element) Clusters

General Considerations

- No prior knowledge of either sound in CC clusters required
- In fact, nonstimulable sounds shown to create more change (e.g., teach /fl-/ if /f/ and /l/ absent from child’s system and nonstimulable) (Powell et al, 1991)
- /r/ easier to teach in clusters than in singletons (Kent, 1982)
- Refer to resources for establishing singletons as discussed below (Secord, 2007; Bleile, 2005; Iowa Phonetics Website, 2001; Bauman-Waengler, 2004)
- Expect accurate productions (not approximations) of target clusters in syllables or words before proceeding to mixed practice

/θr-/ Strategies

- Teach /θ/ in isolation/syllables (visual)
- Tell child that he/she is allowed to stick tongue out at an adult for this sound
- Teach /θr-/ as unit because /r/ clusters easier to teach (Kent, 1982)
- Retraction of tongue from /θ/ facilitates /r/ production for some children
- Slow motion /θ/ to /r/ then speed up
- Some children will insert a schwa vowel (e.g., [θəri] for “three”); in that case, provide corrective feedback that results in a shorter duration of the schwa vowel over time until it no longer occurs
- Retracted /r/ more likely when paired with velars, /o/ and /u/
- Retroflexed /r/ more likely when paired with alveolars, /i/ and /e/

Possible target: “three”

- “Say /θ/” OR “Say /ri/”
- “Say /θri/” “Say /θri/”

/fl-/ Strategies

- Teach /f/ in isolation/syllables (visual)
- Teach /l/ in isolation/syllables (visual)
- Then blend the two – careful to model /f/ not /fʌ/; ease from /f/ to /l/ (may temporarily emphasize tongue lift on /l/)
- For some children, suggest saying the sounds “at the same time”
- Slow motion /f/ to /l/ then speed up
- Some children will insert a schwa vowel (e.g., [fʌlɪp] for “flip”); in that case, provide corrective feedback that results in a shorter duration of the schwa vowel over time until it no longer occurs
- /u/ vowel may be facilitative because back and tense

Possible target: “flume”

- “Say /f/” OR “Say /um/”
- “Say /flu/” “Say /lum/”
- “Say /flum/” “Say /flum/”
/fr-/ Strategies
• Teach /f/ in isolation/syllables (visual)
• Teach /fr-/ as unit because /r/ clusters easier to teach (Kent, 1982)
• Slow motion /f/ to /r/ then speed up
• Some children will insert a schwa vowel (e.g., [fʌrem] for “frame”); in that case, provide corrective feedback that results in a shorter duration of the schwa vowel over time until it no longer occurs
• Retracted /r/ more likely when paired with velars, /o/ and /u/
• Retroflexed /r/ more likely when paired with alveolars, /i/ and /e/

Possible target: “frame”
• “Say /f/” OR “Say /em/”
• “Say /frem/” “Say /rum/”
• “Say /frem/” “Say /frem/”

/sl-/ Strategies
• Teach /s/ and /l/ in isolation/syllables
• Slow motion /s/ to /l/ then speed up
• Some children will insert a schwa vowel (e.g., [sʌlu] for “slew”); in that case, provide corrective feedback that results in a shorter duration of the schwa vowel over time until it no longer occurs
• /u/ vowel may be facilitative because back and tense

Possible target: “slew”
• “Say /s/” OR “Say /lu/”
• “Say /slu/” “Say /slu/”

/fr-/ Strategies
• Teach /ʃ/ in isolation/syllables
• Teach /ʃr-/ as unit because /r/ clusters easier to teach (Kent, 1982)
• Slow motion /ʃ/ to /r/ then speed up
• Some children will insert a schwa vowel (e.g., [ʃʌru] for “shrew”); in that case, provide corrective feedback that results in a shorter duration of the schwa vowel over time until it no longer occurs

Possible target: “shrew”
• “Say /ʃ/” OR “Say /ru/”
• “Say /ʃru/” “Say /ʃru/”
sCC (Three-Element) Clusters

General Considerations
- Child must have C2 and C3 in phonemic inventory (at least two occurrences of both sounds acting as phonemes) (Gierut & Champion, 2001)
- No prior knowledge of /s/ in sCC required (okay if nonstimulable)
- Important to establish a good /s/ production (not a distortion) within the cluster
- Refer to resources for establishing /s/ (Secord, 2007; Bleile, 2005; Iowa Phonetics Website, 2001; Bauman-Waengler, 2004)
- Establish production of part of the sCC cluster first; for example, when teaching /str-/ start by teaching /st-/ together and adding /r/ later or start by teaching /tr-/ together and then add /s/ (Gierut & Champion, 2001)
- Expect accurate productions (not approximations) of target clusters in syllables or words before proceeding to mixed practice

/str-/ Strategies
- Teach child to first blend /t/ and /r/ (both known sounds) in syllables or words and then add /s/ (/tr-/ first → /str-/ next)
- Careful to teach /t/ not /t̠/; ease from /t/ to /r/
- For some children, suggest saying the sounds “at the same time”
- Slow motion /t/ to /r/ then speed up
- /tr-/ often first /r/ cluster acquired (Elbert & McReynolds, 1975; Kent, 1982)
- Some children will insert a schwa vowel (e.g., [st̠rit] for “street”); in that case, provide corrective feedback that results in a shorter duration of the schwa vowel over time until it no longer occurs
- /i/ vowel may be facilitative because alveolar and tense

Possible target: “street”
- “Say /s/” OR “Say /rit/”
- “Say /st/” “Say /trit/”
- “Say /stri/” “Say /strit/”
- “Say /strit/”

/skr-/ Strategies
- Teach child to first blend /k/ and /r/ (both known sounds) in syllables or words and then add /s/ (/kr-/ first → /skr-/ next)
- Careful to teach /k/ not /k̠/; ease from /k/ to /r/
- For some children, suggest saying the sounds “at the same time”
- Slow motion /k/ to /r/ then speed up
- /kr-/ often /r/ cluster acquired before other /r/ clusters (Elbert & McReynolds, 1975; Kent, 1982)
- Some children will insert a schwa vowel (e.g., [sk̠ru] for “screw”); in that case, provide corrective feedback that results in a shorter duration of the schwa vowel over time until it no longer occurs
- /k/ may facilitate /r/ because back sound
- /u/ vowel may be facilitative because back and tense

Possible target: “screw”
- “Say /s/” OR “Say /ru/”
- “Say /sk/” “Say /kru/”
- “Say /skru/” “Say /skru/”
/spr-/ Strategies

- Teach child to first blend /p/ and /r/ (both known sounds) in syllables or words and then add /s/ (/pr-/ first → /spr-/ next)
- Careful to teach /p/ not /pʌ/; ease from /p/ to /r/
- For some children, suggest saying the sounds “at the same time”
- Slow motion /p/ to /r/ then speed up
- Some children will insert a schwa vowel (e.g., [spræʊt] for “sprout”); in that case, provide corrective feedback that results in a shorter duration of the schwa vowel over time until it no longer occurs

Possible target: “sprout”

- “Say /s/” OR “Say /raʊt/”
- “Say /sp/” “Say /praʊt/”
- “Say /spræʊt/” “Say /spræʊt/”
- “Say /spræʊt/”

/skw-/ Strategies

- Teach child to first blend /k/ and /w/ (both known sounds) in syllables or words and then add /s/ (/kw-/ first → /skw-/ next)
- Careful to teach /k/ not /kʌ/; ease from /k/ to /w/
- For some children, suggest saying the sounds “at the same time”
- Slow motion /k/ to /w/ then speed up
- Some children will insert a schwa vowel (e.g., [skwɪd] for “squid”); in that case, provide corrective feedback that results in a shorter duration of the schwa vowel over time until it no longer occurs

Possible target: “squid”

- “Say /s/” OR “Say /wɪd/”
- “Say /sk/” “Say /kwɪd/”
- “Say /skwɪd/” “Say /skwɪd/”
- “Say /skwɪd/”
/spl−/ Strategies

• Teach child to first blend /p/ and /l/ (both known sounds) in syllables or words and then add /s/ (/pl−/ first → /spl−/ next)
• Careful to teach /p/ not /pᴧ/; ease from /p/ to /l/
• For some children, suggest saying the sounds “at the same time”
• Slow motion /p/ to /l/ then speed up
• Some children will insert a schwa vowel (e.g., [splᴧlt] for “split”); in that case, provide corrective feedback that results in a shorter duration of the schwa vowel over time until it no longer occurs

Possible target: “split”

• “Say /s/” OR “Say /lᴧt/”
• “Say /sp/” “Say /plᴧt/”
• “Say /splᴧt/” “Say /splᴧt/”
• “Say /splᴧt/”

Bibliography


