

**Evaluation of
Articulation/Phonology**
华语构音/音韵评估

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Context 前提

- Normal Children may have articulation/ phonological errors
正常孩童也可能有构音/音韵错误
- Cleft children may have errors similar to normal children
唇腭裂孩童的构音错误也可能类似正常孩童
- or related to clefting 或与唇腭裂相关

Articulation

- Articulation errors are common in speakers with cleft palate, even after surgical repair
- May be related to several physiological problems
including: malocclusion, hearing impairment, fistula, VPI
- Why associated with VPI?
 - many speech sounds require intraoral air pressure (especially 'pressure consonants')
 - VPI leads to 'leakage' of air through the velopharyngeal port and nose, and difficulty achieving/maintaining intraoral air pressure

Purpose of Evaluation 评估的目的

- Transcribe / Classify sound system
语音系统记录与分类
- Diagnose articulation/phonological disorders: Developmental vs Cleft related
诊断构音/音韵错误是发展现象或与唇腭裂有关
- Determine whether speech therapy is needed
决定语言治疗的必要性

The Best Evaluation Tools 最佳的评估工具

- Trained "Golden Ears"
受过训练的金耳朵
- Knowledge of Phonology and Cleft
对音韵学及唇腭裂的知识
- Curious mind for problem solving
解决问题的好奇心

Evaluation Procedure 评估步骤

Informal 非正式	Formal 正式
Screening 构音筛检	Articulation Test 构音测验
Name, Address, 1-10 名字、住址、数数	Sentence Repetition 测验句覆诵
Read/repeat 朗读或覆诵	Connected Speech 连续性对话
Tell a short story 说段小故事	

Articulation Test 构音测验

- Picture Naming 看图命名
- Word list 词汇

Sentence Repetition /Paragraph Reading 测验句覆颂或短文朗读

- High oral pressure sounds
口内压高的声母/辅音
例：去去去，去荡秋千
- Low oral pressure sounds
口内压低的声母/辅音
例：来来来，来溜滑梯

Connected Speech 连续性对话

- Sequence cards 连续性图卡
- Story telling 说故事
- Spontaneous Conversation
自发性对话



Look for 探寻

- Consistency 一致性
- Stimulability 可塑性/可引发性

Forms of Speech Errors

语音错误形态

- Substitution 取代
 狗狗→斗斗 (ㄉ/ㄍ, d/g) 跑跑→宝宝
 (ㄅ/ㄆ, b/p) 谢谢→切切 (ㄑ/ㄒ, Q/X)
- Omission 省略
 笑笑→要要 (o)
- Distortion 歪曲
- Addition 添加
 老师→老书 shu (+u)

Articulation vs Phonological Errors

Articulation Errors

构音错误
 Phonetic errors
 语音错误
 Motoric, placement,
 manner of the sound
 与发音位置与方法的
 动作有关
 Maybe structurally,
 learning related 可能
 与构造或学习有关

Phonological Errors

音韵错误
 Phonemic errors
 音素错误
 Cognitive, linguistic-
 based, learning of
 phonological rules
 与认知、语言系统及
 音韵规则的学习有关

Articulation/Phonological Errors 构音/音韵错误

- Phonological disorders are common in children with cleft palate (Powers, 1990; Chapman, 1993; Pamplona & Ysunza, 1999a)
音韵障碍常见于唇腭裂儿童
- The articulation errors associated with cleft palate becomes incorporated into the child's rule system for sounds and, in this way, evolve into phonological disorders (Chapman, 1993; Pamplona & Ysunza, 1999a).
与唇腭裂相关的构音障碍常发展成音韵障碍

Classification of Articulation/Phonological Errors 构音/音韵错误的分类

- Developmental 发展型
- Compensatory 代偿型
Both are responsive to therapy
上述两者语言训练效果显著
- Obligatory 必然型
Not responsive to therapy
语言训练无所助益

Analysis of Errors Phonological process 依音韵历程分析错误音

- Placement rules 构音位置法则
- Manner rules 构音方法法则
- Structure rules 音韵结构法则

**Developmental
Patterns of Errors
Changes in Placement**
华语发展型构音位置异常的形态

- **Backing** 舌后置化
兔子→葵子 (k/t, ㄅ/ㄊ)
- **Fronting** 舌前置化
狗狗→斗斗 (ㄉ/ㄍ, d/g)

**Developmental
Patterns of Errors
Changes in Manner**
华语发展型构音方法异常的形态

- **Stopping** 塞音化
j, q, x, z, c, s, zh, ch, sh → d, t
- **Unaspiration** 不送气化
p, t, k → b, d, g (b/p, d/t, g/k)

**Developmental
Patterns of Errors
Changes in Structure**
华语发展型构音结构异常的形态

- **Deletion of initial consonant** 声母/辅音省略
- **Final consonant deletion** 声随韵母省略
- **Simplification of diphthong**
结合韵母/复元音简化

Articulation related to Clefting
与唇腭裂相关的构音错误

- Compensatory 代偿型
- Obligatory 必然型

Compensatory Articulation
代偿型构音

- May be associated with VPI or learned
与咽咽闭锁不全有关或习得的行为
- Substitution of Placement error
→posterior/inferior
构音位置的取代→後移/往下
- Using the place in the vocal tract to valve the air
利用整个发声道作气阀
- Responsive to therapy
语言训练效果显著

Compensatory Articulation
常见代偿型构音

- Glottal stops 声门塞音
- Pharyngeal stops 咽塞音
- Pharyngeal fricatives/ affricates
咽擦音, 咽塞擦音
- Laryngeal fricatives/affricates
喉擦音, 喉塞擦音
- **Posterior nasal fricative 鼻音化的擦音

Obligatory Articulation 必然型构音错误

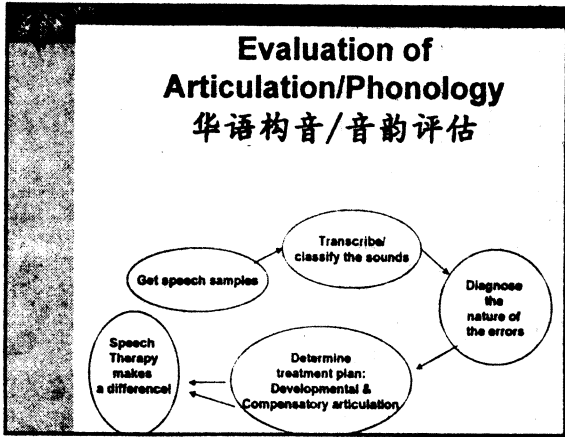
- Direct result of an anatomic or physiological defect, e.g. VPI, palatal fistulae, malocclusion
构造上或生理上的缺陷导致，如VPI，硬腭瘘洞，牙齿咬合不正
- Not responsive to therapy, but to the cause
语言训练无所助益，改变构造及解决构音

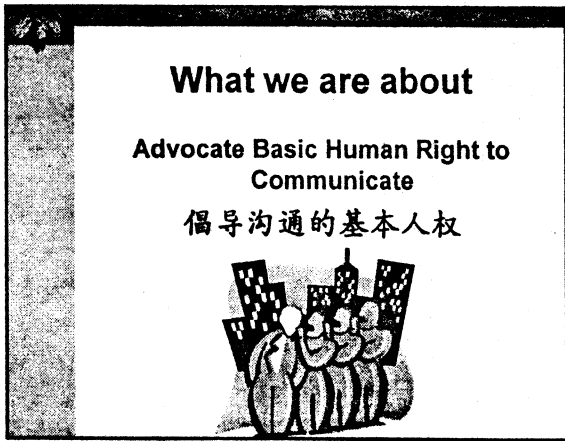
Obligatory Articulation 必然型构音型态

- Basically distortions 歪曲型构音
- Weak Po consonant 辅音/声母弱化
- Nasal emission 鼻漏气
- Sibilant distortion/lisping 齿擦音歪曲
- Mid-dorsum palatal stop 腭面塞音

Articulation in cleft children 唇腭裂孩童的构音

	Developmental	Compensatory	Obligatory	Mislearned
Error Types	Fronting Backing Stopping Unaspiration Initial consonant deletion Final consonant deletion Simplification of diphthongs	Glottal stops Pharyngeal stops Pharyngeal Fricatives/affricates Laryngeal fricatives/affricates	Mid-dorsum palatal stops Weak Po consonants Nasal emission Sibilant distortion/ Lisping	Posterior nasal fricatives
Etiology	Developmental Learning	VPI learning	VPI Fistula Malocclusion	Faulty learning
Treatment	Speech-language therapy	VPI TX Speech TX	Structure correction	Speech therapy





References 参考文献

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