

Exploring the perceptual experiences of singers using a French nasal vowel as an approach to facilitate belting

Work-Based Learning Project - BMPF 7326

How does the use of French nasal vowels affect the singer's experience of singing and their perceived ability to facilitate a belt sound?

Why It Matters

Context, Justification, and Intent

- Belting is a widely used stylistic choice in contemporary genres of singing¹
- Similarities to high-intensity speaking can make belting a higher-risk vocal task²
- High demand for belting skills among singers = emerging as a field of vocal instruction³
- Developing body of extant research, but lacking in qualitative, singer-centred studies
- Intent: contribute to the advancement of instructional strategies for contemporary singers by examining singers' experiences of an articulatory strategy for belting

Foundations in Literature

Pharyngeal Narrowing, Twang, and Efficient Belting

- Twang may have a positive effect on belting by increasing sound intensity and reducing the need for high subglottic pressure⁴, which could result in reduced impact stress⁵
- Vowel nasalisation as done in the French vowel /**ã**/ has been shown to result in pharyngeal narrowing consistent with twang vocal production but appears to lower second vocal tract resonance⁶
- French nasalised /**ã**/ may be helpful for facilitating twang vocal production in exercises, but modifications may be needed for song application in order to maintain speech-like quality⁷

Exploration through Application

The Data Collection Process

- Recruited a sample of six participants through purposive sampling
 - Same biological gender, similarities in age, years of singing experience, skill level, and primary language
 - Free of vocal illness, injury, or pathology
- Utilised open-ended questionnaires such as intake forms and reflective journals to collect background information and additional insights after the voice lesson
- Assigned a song excerpt from Céline Dion's "Where Does My Heart Beat Now?" to be used for assessment

Exploration through Application

The Data Collection Process

- Singers participated in one 30-minute voice lesson each, consisting of:
 - Basic vocal warm-up using semi-occluded vocal tract exercises
 - Initial song assessment using the assigned song clip, followed by self-assessment
 - Vocal exercises using the French vowel /**ã**/
 - Vowel modification exercises on assigned song clip, using full vowel nasalisation (perceived at 100%), followed by partial vowel nasalisation (perceived at 10%-15%)
 - Second song assessment using the assigned song clip, followed by self-assessment
- Semi-structured interviews were interspersed throughout the lesson using a combination of pre-written prompts and questions organically derived from conversation

Findings and Analysis

Examining Perspectives, Extracting Patterns

- Was the tool helpful for facilitating a belt sound? [CLIP]
- Going beyond the acoustic results and examining participant insights, six themes emerged:
 - Belting is subjective and situational
 - Accent exposure is a factor in the effectiveness of articulatory tools
 - Variable mechanical experiences can still lead to uniform acoustic results
 - Mentally harder but vocally easier
 - Potential for vocal economy does not automatically change singing behaviour
 - A more efficient and less aggressive path to a belt sound...with caveats

Conclusion and Future Direction

Looking Back and Looking Ahead

- The outcomes reflected the relationship between vowel nasalisation, pharyngeal narrowing, twang, and belting
- There may be value in further studies on the relationships between linguistics, articulation, vocal function, and vocal acoustics as it pertains to singing
- There may be an opportunity to develop pedagogical strategies that not only account for typical factors such as existing vocal habits, skill level, sensorimotor capabilities, and performance expectations, but also language and cultural background
- Synergising the above could yield effective, singer-centred instructional models that have capacity for individualisation, creativity, and cultural relevance

References

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