Module 6

Most Effective Pedagogical Approaches

for Trans & Gender-Queer Singers to Learn Formant Tuning

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VOICE STUDY CENTRE

ACROSS CULTURES - ACROSS GENRES - ACROSS BINARIES

Personal problem to professional pursuit

PERSONAL PROBLEM

Why did I excell in theory and ear training, but struggle in language and diction?

SENSORY SINGING

- Cross genre journey
- Kinesthetic awareness
- Modify vowels
- Module 1 research

ADOPTION FROM KOREA

Phonetic perception narrows at 6 months (Werker, Yeung and Yoshida, 2012)

Grapheme processing overcompensated for phoneme disruption

PROFESSIONAL APPLICATION

Homeward Bound: cross genre solo narrative music show on the 7 core issues of adoption

Resonant Return next week

WHY THIS RESEARCH?

Voice is one of the key markers of identity

VOICE

Voices are categorized with labels that imply gender and roles for singers have gendered assumptions and expectations

(Sauerland, 2022)

PERCEPTION

Gender perception can be influenced by more than fundamental frequency (F0/pitch) including formants

(Södersten et. al, 2024; Hero and Houston, 2023;

PEDAGOGY

How can educators can best support those with specific learning needs or unique sensory processing

(Tollit, 2024; Dattaro, 2020)

WHAT THE LITERATURE SAYS

The research establishes the acoustic and pedagogical foundation for the lesson plan.

ACOUSTICS & GENDER PERCEPTION

- F0 is primary indicator of gender
- Additional Formants play significant role in gender perception
- Spacing between formants
- Culture influences gender
- Accents shape formants
- Genres shift formants

PEDAGOGY

- Sensory learning - visual bio feedback
- Scaffolding (Spiral Curriculum
- Social, co constructed experiential learning
- Reflective Learning (Kolb)

Perception is subjective, presentation and learning needs are invidiudalized

HOW I TESTED IT

A mixed-methods approach

FRAMEWORK

- constructivist realist ontology
- interpretive-constructivist epistemology
- quantitative/ qualitative mixed methods

LESSON PLAN

- Kolb (reflective)
- Bloom (objectives)
- Vygotsky (ZPD)
- Bruner (spiral)

APPLICATION

- Seen and Heard: Group class 3/28
- 6 Masterclass participants
- 4 Observers (one took survey for group class)

DATA

- Pre/post surveys
- Questionnaires
- Reflection
- Thematic Coding
- Field notes

ETHICS AND BIAS: insider positioning- confidentiality consent anonymity

WHAT THE CLASS CONCLUDED

Participants indicated increased understanding of formant tuning and vowel modification.

EFFECTIVE GROWTH

- Survey and observational data showed improvement
- Participants scaled application for Gender Affirmation from 3-5/5

MULTISENSORY- Multiple students

- Listening / watching videos (auditory/visual)
- Visual EQ spectrograph
- Locating resonance sensations
- Mimicry: call and response

IDENTITY- Individual

- Pedagogical adaptation for individual application
- Perception vs. Presentation
- Inquiry Based (Kolb's reflective model)

LIMITATIONS

- Overall improvement cannot be formally concluded due to one participant who did not complete the exit survey
- More participants would ne needed to draw meaningful correlations for sensory processing and learning methods

MEANINGFUL MODIFICATIONS

Adjustments for teaching practice and future research.

REFINE EXPLANATIONS

- Clearer differentiation of overtones vs. formants
- Formant correlations
  - F1 with vowel height
  - F2 with forward/back axis
  - F3 is associated with rounding

CONTINUE THE WORK

- Gender affirming tools
- Expanding from music to more applications
- Correlate sensory learning methods to developmental/processing disorders
- Measuring individual vs group learning

IMPROVE STUDY DESIGN

- larger sample
- specific measures of sensory learning
- additional insight on participant experience

PREPARATION FOR CLASS

- Visuals properly displayed
- Room set up
- Masterclass format

SEEN & HEARD

The lesson plan supported comprehension and application while revealing how individualized voice pedagogy needs to be.

> **“We need to make space for the vowel like we need to make space for each other. We need to let the tongue take up space, as we also should take up space.”**
>
> ”

CO CONSTRUCTED REFLECTIVE LEARNING, SENSORY METHODS, AND SCAFFOLDING TECHNIQUES ARE EFFECTIVE

References:

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