

TEACHING FIDELITY IN THE AGE OF LOFI

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DIFFERING AESTHETICS?



INSTRUCTORS



STUDENTS

WHAT IS FIDELITY?

Faithfulness to . . . something

TRANSPARENT	RECREATE LIVE EXPERIENCE	CLEAR
DETAILED	HIGH FREQUENCIES	FLAT FREQUENCY RESPONSE
TONAL BALANCE	ELEMENTS "SIT" TOGETHER	POLISHED

TEACHING FIDELITY

**MY REAL
QUESTION**

**HOW DO WE
HELP STUDENTS
RECOGNIZE
AND CREATE
"HIGH FIDELITY"
AUDIO?**

TEACHING FIDELITY

SURVEY OF MUSIC TECH INSTRUCTORS

November, 2020

29 RESPONSES

➤ TYPE OF INSTITUTION

25 taught at large universities (over 10k students)
1/3 had taught at smaller institutions
5 had taught primary or K-12 school
5 had taught independent private lessons

➤ COURSES TAUGHT

24 had taught Introduction to Music Tech
20 had taught Electronic Music Composition
12 had taught Recording Techniques
12 had taught Sound for Media

➤ **RESPONDENTS HAD PRIMARILY TAUGHT IN THE US AND UK**

WHAT MUSIC DO YOU PLAY IN YOUR CLASSES?

- Asked to name 3-5 pieces
93 pieces were named
71 of these were Electroacoustic

- 7 pieces were Ambient or Electronica
6 were Acoustic Classical or Film Scores
5 were Hip-hop
3 were Rock
1 was Jazz

COMMONALITIES

➤ MOST NAMED WORKS

Kits Beach Soundwalk by Hildegard Westerkamp

I Am Sitting in a Room by Alvin Lucier

Etude aux chemins de fer by Pierre Schaeffer

➤ MOST NAMED COMPOSERS

- **5x:** Karlheinz Stockhausen and Hildegard Westerkamp
- **4x:** Elainie Lillios, Alvin LUCier, Pauline Oliveros
- **3x:** Jonty Harrison, Kaija Saariaho, Pierre Schaeffer, Morton Subotnick, Iannis Xenakis, and Pamela Z.

REASONS & REACTIONS

➤ **WHEN CHOOSING PIECES TO PLAY, WHICH OF THE FOLLOWING DO YOU CONSIDER?**

- Historical significance -- 82%
- Example of a genre or style -- 86%
- Example of a technique -- 79%
- Accessibility/familiarity -- 18%
- Composer/artist's identity (i.e. diversity) -- 61%
- Students' interests -- 43%

REASONS & REACTIONS



NAME A PIECE FOR WHICH STUDENTS RESPONDED POSITIVELY, AND ONE FOR WHICH THEY RESPONDED NEGATIVELY

Positive (both noted twice):

Come Out by Steve Reich

Appalachian Grove by Laurie Spiegel

Negative (noted by 3):

Gesang der Jünglinge by Karlheinz

Stockhausen

**SELECT THE TOP 3 CONCEPTS
OR TECHNIQUES THAT YOUR
STUDENTS STRUGGLE TO
MASTER**

STUDENTS STRUGGLE WITH

Spatialization/panning -- 43%

Equalization/filtering -- 39%

Compression/gating -- 39%

Reverberation/delay -- 14%

Mixing balance -- 71%

Editing -- 29%

Mic techniques -- 32%

Sound sample quality -- 43%

OBSERVATIONS

➤ **BASED ON THE SURVEY AND MY OWN EXPERIENCES BOTH AS AN EDUCATOR AND STUDENT**

Maybe we are playing music that is ineffective in teaching the goal of *learning fidelity*

Maybe Electroacoustic *practices* are more important than Electroacoustic *literature*

Maybe we are playing music that requires previous exposure and experience to understand

MY PEDAGOGY

Fundamentals of Audio course - Art Institute of Dallas

➤ **START WITH
SOUNDWALKS**

R. Murray Shafer
Hildegard Westerkamp

➤ **INTRODUCE
INSTRUMENTS
AND EFFECTS**

"Reduced listening"
Pierre Schaeffer
Michael Chion

➤ **ANALYZE &
MIX POP
PRODUCTIONS**

Jason Corey
Alan Moore

TEACHING FIDELITY

SOUND WALKS

Group tour of campus

Listen for:

- Ambient noise
- Leakage
- Reflection and absorption

Individual project

Document 5 spaces

Audio recording, photo, SPL reading,
listening observations

REDUCED LISTENING

Individual in-class exercises

Grow in complexity:

- Make a collage with instrument samples
- Synthesize basic waves
- Add effects plugins to loops
- Make a basic mix using only volume and panning

Individual Projects:

- "Kitchen percussion" groove
 - must find and record 6+ sounds
- "Sound collage"
 - may use pre-recorded sounds
 - need to employ 4+ different processing effects

TEACHING FIDELITY

ANALYZE & MIX

Mixing demo

Begins with listening & discussing mix of 4-5 songs in same genre

I walk through a mix, emphasizing "cleaning up" and "consistency" using only volume control, panning, EQ, and compression

Listening & discussion sessions

Listen to songs from different eras and genres

Discuss concepts such as:

- Textural layers
- Instruments & timbres
- Sound-box
- Structural labels and signposts

Individual Project

Create a mix from supplied stems

CONCLUSIONS

➤ BASED ON STUDENT WORK AND COMMENTS

Students routinely call this class "ear opening" or similar

Students are better able to classify instruments and processing

Students are employing more effects that previously

Students are producing better-sounding mixes

FUTURE WORK

➤ **BASED ON STUDENT WORK AND COMMENTS**

Better pre/post documentation of student work

Repeat survey with larger sample size and better-targeted questions

Survey students on their own reactions to listening selections and skill gaps

THANK YOU

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