



From Idea to Research

Frances Clark Center

Research Webinar Series

Collecting and Analyzing Data

- Different modes of analysis require different data
- Quantitative - numbers
 - Nominal
 - Ordinal
 - Interval and ratio (scale)
- Qualitative – lived experiences
 - Narratives
 - Artifacts

Quantitative Data

- Common data tools
 - Surveys/questionnaires
 - Rating scales (ex: Likert-type, *Strongly Agree-Strongly Disagree*)
 - Experiments
- Common analysis strategies
 - Descriptive statistics
 - Correlations
 - Tests of differences



Example #1

- I am interested in music from all around the world and I feel that there is a need for inclusivity in pedagogical resources for piano teachers.
- I have been interested in learning Spanish and South American music for a long time, but I have found that many of my teachers have shied away from teaching me pieces that they are unfamiliar with or that they didn't think would fit the curriculum of the school
- I would like to research if teachers are finding ways to diversify the repertoire they are teaching their students and how they are approaching inclusivity of multiple cultures.



Example #1

- I am interested in music from all around the world and I feel that there is a need for inclusivity in pedagogical resources for piano teachers.
- I have been interested in learning Spanish and South American music but I didn't think would fit the curriculum of my school.
Survey design: collect data from many teachers about their views and strategies on repertoire diversity
- I would like to research if teachers are finding ways to diversify the repertoire they are teaching their students and how they are approaching inclusivity of multiple cultures.



Example #1 possible data

- Demographics
 - Country (nominal)
 - Years teaching (ratio)
- Attitude items
 - “I believe teaching diverse repertoire is important” SA-SD (interval)
 - “I make an effort to include diverse repertoire for student performances” SA-SD (interval)
 - “For each approach in the list below, rate how frequently you use the approach in your teaching...” A-N (interval)
- Analysis
 - Frequencies
 - Means & standard deviations



Example #2

- How warm-up exercises are a vitally important activity for pianists both mentally and physically.
- I will research the best methods for pianists to warm up before piano practice, lessons, and performance.
- Applying the above strategies will transform the ways pianists approach the piano to produce a better quality of movement, reduce tension and prevent pain. A pianist who is completely warmed up can better concentrate on the creation of sound, musical gesture, and interpretation.



Example #2

- How warm-up exercises are a vitally important activity for pianists both mentally and physically.
- I will research the best methods for pianists to warm up before piano practice, lessons, and performance.
- Applying the research to help pianists find the best warm-up method for themselves. The goal is to help pianists approach their playing with a better quality of movement, less tension, and less pain. A pianist who is less tense and in pain will have a better concentration, a more fluid and expressive gesture, and a more enjoyable playing experience.

Experiment: compare two or more methods of warming up (independent variable) and measure levels of tension and pain after playing session



Example #2 possible data

- Independent variable: which way did the participants warm up? (Ex: control = no stretching, treatment = 10 minute set of specific stretches)
- Dependent variables
 - Self-reported scale of pain (interval)
 - Observation scale of tension (interval)
- Analysis:
 - Difference test of means between I.V. groups





Qualitative Data

- Common data tools
 - Interviews
 - Observations
 - Artifacts
- Common analysis strategies
 - Coding
 - Development of themes



Example #3

- I would like to concentrate on the unknown women composers and their compositions, particularly pieces by Mel Bonis from the “Album pour les tout petits”.
- I want to display how these works can be an excellent choice for recitals, competitions, and other public events as well as promote awareness and value of female composers.
- As an emergent topic, the evident lack of sources and different approaches is a veritable issue while treating this topic. How would you suggest dealing with this?
- In your opinion, what would be a good way to bring up this topic with the different participants of the musical education field in order to raise awareness?

Example #3

- I would like to explore the repertoire of female composers and their compositions, such as “our les tout petits”.
- I want to discuss the importance of female composers in the field of music, their contributions, and the challenges they face. I would like to explore this repertoire for the first time.
- As an emergent topic, the evident lack of sources and different approaches is a veritable issue while treating this topic. How would you suggest dealing with this?
- In your opinion, what would be a good way to bring up this topic with the different participants of the musical education field in order to raise awareness?

Example #3 possible data

- Interviews: with the teacher, with the students
 - “How does knowing about the composer affect the way you learn or perform a piece?”
 - “What does it mean to you when you perform a piece by a composer who may have experienced marginalization?”
- Observation: observe some of the lessons, performances
 - Triangulate with the interview data
- Coding
 - Read transcripts of the data, code for items of interest
- Themes
 - As patterns emerge, develop larger themes based on the lived experience of the participants