Dancing on the Catwalk: Qualitative Data Analysis Using Music Coding

Abstract

For a long time, data analysis has been associated with quantitative research. However, students can also benefit from qualitative analysis, which requires deeper understanding of the meaning and relationship of concepts. This experiential exercise illustrates how quantitative content analysis can be taught through a fun and engaging activity regarding student music playlists. In addition, we will demonstrate how to use one popular qualitative software tool, NVivo, which is often accessible to colleges and students. The session provides an innovative teaching activity that can be adopted to any classroom situation and will help to build bridges between students, instructors, and data.

Keywords: (3) content analysis, qualitative data analysis software, problem-solving

- Paper Track: "Bridges" Track

- Session Format: (60 minute virtual) Experiential Exercise

- Level of Proposal: New to experiential learning

Introduction

Over the past two decades, qualitative research has gained immense popularity not only in the field of education and health disciplines but also in the arts and humanities (Mays & Pope, 2000). Business school students may inherently lean toward quantitative data, however for some activities, a qualitative or mixed methods approach is most effective. A mixed-methods approach bridges the interpretation of information using both words and numbers, allowing greater scope to understand research questions (Almalki, 2016). Business students have a large array of quantitative tools and resources; therefore, our activity focuses on bringing qualitative research methods into business classrooms. Qualitative research is used to analyze structured, unstructured, or semi-structured data such as interviews, surveys, social media posts, and articles (Richards, 2002). Within the realm of qualitative and quantitative data analysis lies content analysis which generally relies on frequencies and associations of text instead of numbers. Qualitative content analysis is a type of analysis that looks at the meaning and interpretation of data. This type of analysis is often used to analyze texts, images, or other forms of data (Krippendorf, 2018) . While the evaluation and interpretation can be done manually, a growing number of researchers are using software packages to manage and organize data which provides more in-depth information about the behaviors of people, their emotions, beliefs, and motives (Wong, 2008). One such popular software is NVivo (QSR, 2020) which is a qualitative data analysis computer software package for qualitative research on text-based information. Our activity will cross two modalities of qualitative data collection, allowing participants to complete a qualitative content analysis manually (by hand), and in addition, show how data analysis can be accomplished using NVivo, with a short demonstration, through a creative and fun activity that

considers analyzing participant music playlists. This activity assists learners to understand qualitative analysis by gathering information that is accessible, relatable (and danceable!).

Theoretical Foundation/Teaching Implications

Our activity is suitable for online, in-person and hybrid classes targeting undergraduate, graduate, and professional students given the universality of music. This exercise offers an easy-to-implement, engaging exercise to educate students about qualitative data collection and content analysis. We will provide instructions on how to analyze data using a manual coding system and, separately, illustrate how to use NVivo software to accomplish the same task. In business schools, faculty can leverage this exercise during lessons focusing on exploration and understanding additional concepts, for example, employee motivation or leadership style. Quantitative data is usually defined as inductive compared to qualitative data, which is defined as deductive, for example testing a theory. As students transition from student to employee, the intent of higher education learning should be to make them capable critical thinkers and problem solvers, both inductively and deductively.

Learning Objectives

This exercise has learning objectives for both students and instructors. Our objective is to help participants bring a fun and engaging qualitative data analysis activity into their classrooms. Participants will learn how to deploy easy, fun, and impactful qualitative data analysis projects, using music playlists as a content area. The activity will be accomplished manually, using pen and paper tools that anyone can use. We will then demonstrate how a more expansive data set can be analyzed using a popular qualitative software tool, NVivo. Participants will leave with a ready-made classroom exercise and exposure to a broader qualitative foundation for future projects and activities.

Exercise Overview

This activity has been used in multiple undergraduate business and communications courses in classes with 15 to 48 students. The primary purpose is to expose students to decision making with qualitative data. Data analysis can be a term that generates anxiety in some students, so we use music to introduce the topic. The research question of this activity explores what kind of music participants like, their favorite artists, songs, and categories of music.

Data analysis can be a term that generates anxiety in some students. Music can be used as a source of comfort when listening to a favorite song or dancing at a party. The importance of music in one's life depends on the context in which one hears it, how one engages with it and how one feels when listening to it (North et. Al., 2004). Participants in the exercise will classify, sort, and arrange their music playlist based on artist and rank songs, by categories, types, and gender. The activity ultimately helps students see how different types of information can be analyzed. For example, a quantitative employee satisfaction survey might inform management about the degree of satisfaction, however a qualitative focus group would give more insight into why they feel the way they do and what are the potential solutions. This exercise is designed to facilitate a safe learning environment where students and instructors engage with each other while learning a new skill through a creative exercise

The activity can be completed in one class session, however for maximum participation having students curate the music list (dataset) prior to sharing is optimal. It is worth noting that students are often surprised by the personal nature of the activity; Sharing their own musical choices shared in a public setting can be unsettling for both student and instructor so setting some music parameters are important, such as no songs should have profanity in the title, as this activity only looks at titles for the manual exercise. The computerized activity does not have any parameters as it is a more comprehensive investigation of the music. The description of the

activity below is written for the classroom. The activity will be abbreviated for the session

participants. Students are offered the option to share a top 20 hits list if they are uncomfortable

sharing their own music list. Students become more comfortable when we share our playlist first.

Be prepared for students to go listen to the songs on your playlist if you share the titles. It makes

for a very interesting bridging experience because students do not often think of their faculty as

people who have musical preferences. Choose what you are comfortable sharing.

Below is a list of the steps used by students in the classroom. For our purposes, we will

use a paired down playlist of 5-10 songs to demonstrate the activity to conference participants.

Step 1: Instructor explains the assignment to the class (35 minutes)

We begin this activity by explaining what qualitative data analysis is and the transferability of

the skills learned through this exercise. We discuss the primary tools used to complete qualitative

analyses. Students are told their data set will need to be prepared in one week from the

discussion date.

The assignment is designed to help students understand how to use text based or

unstructured data in decision-making. To explore this methodology that may be unfamiliar we

use a dataset that is very familiar to the participant, the top 20 songs on their music playlist. The

nature of the activity generally elicits a low murmur of interest after the playlist is mentioned.

Students are instructed to use their phones to access their playlists as we discuss the activity. It is

important to reassure them they do not have to share in the present moment. Students are

encouraged to start their playlist activity while we discuss it and advised they will have a week to

complete the assignment. This disruption, using music, of the expected approach to learning a

new tool eases the normal anxiety students can experience when engaging with a new skill.

Instructors are encouraged to provide a Q&A:

- What kind of songs are allowed? This is where I suggest parameters are discussed clearly. Our rule is no obscenity in the title.

- How am I supposed to know an artist's gender? You aren't but you might. Assume for the sake of this discussion or you could research it online to have the most accurate data.

- What if I don't know the artist's name? Look it up or select another song.

- What is a genre? We discuss (https://www.musicgenreslist.com/).

- Categorize: Create five terms using your own words to describe the feeling this music invokes for you.

- Type: there are three reasons people have identified for listening to music. Some examples have been power, motivation, love.

The last two categories are designed to promote discussions on the variety of ways people will share information and how that will apply to the data-cleaning process. The *categorize* option is unstructured data, while *type* has a limited answer set.

We collectively agree on three reasons people listen to music by writing the class suggestions on the board and having students vote by raising their hands. This can be done using reactions on video collaboration platforms.

Students can share their compiled playlists in the learning management system. I do not specify file type because incompatible file types are something often encountered in analyzing data, and the experience is more valuable than the submission of an Excel-preferred file type. The following week, students present their datasets.

Step 2: Compile the complete datasets and analyze (60 minutes)

Students who come to class without one are tasked to create one in the first 15 minutes of class. We have never had a student refuse to participate, but we have had them forget to do the

assignment or bring their curated lists. Some submit YouTube playlists (which include the video and transcript along with the other required information are used to inform the software tool demonstration). All of the datasets are submitted either on paper or via some form of electronic submission.

It takes about 25 minutes to collect all the datasets. It takes another 15 minutes to sort through them and identify data sets that will be harder to merge. This begins the data collection and cleaning discussion and leads to a discussion on acceptable file type parameters. The usable (or easily transformable) data sets are compiled in Excel, and frequencies run. We decide which is the most popular artist, type, category, genre and if it is important to discuss the gender findings. This leads to an inclusive practice in data collection discussion. We discuss the business need for the type of information we have collected and the process for its analysis. EX: How could a music store use this information? How could a business use this information to create an event playlist? We close the activity after 10 minutes of discussion and then share how qualitative data analysis software can make some of the analysis a little easier.

Step 3: Demonstrate the advanced abilities of the tool for students (15 minutes)

This is a demonstration of how and why the tool is used to perform additional ways of investigating data. The students are not required to use the NVivo tool. Instructors can facilitate this exercise online or in person. Before facilitating, verify that your virtual platform has the necessary functions and features (e.g., NVivo software or excel). Instructors can provide resources for students to continue developing their analysis capabilities, such as additional readings about NVivo (https://youtu.be/QNjEygXM_bE), an Intro to NVIVO Qualitative Data Analysis Software (7:10). Furthermore, we suggest reminding students of the available resources at the college or university, in the local community, and/or online services.

We demonstrate the audio coding function, the text search query and create a word cloud visualization. We show the framework matrix, which helps students recognize that the tool can be used for literature reviews.

Step 4: Discuss how the skill or tool might be used in future classes or work.

Periodically throughout the semester, we remind students where the tool could be used to further their work.

Session Description

Start with an overview of qualitative research, the NVivo tool, and the song exercise.

Have participants walk through the paper & pencil from the perspective of students.

Discuss the results and implications.

Demonstrate how the activity can be advanced and conducted in NVivo.

Talk about how the assignment could be adapted by the participants toward a specific class, and if a qualitative tool is available and helpful.

Share SCORM package that allows faculty to use the resources that will be shared during the session if selected to present.

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