

Music and Radio Preferences on the Cal Poly Campus

A Senior Project

presented to

the Faculty of the Statistics Department

California Polytechnic State University, San Luis Obispo

In Partial Fulfillment

of the Requirements for the Degree

Bachelor of Science in

Statistics

by

Rory Bloch

June, 2011

© 2011 Rory Bloch

Table of Contents

- Introduction 2
- 2.) Methods and Materials..... 3
 - 2.1 Data Collection..... 3
 - 2.1.1 Design of Questionnaire 3
 - 2.1.2 Sampling Design 5
 - 2.1.3 Challenges with Data Collection and analysis..... 8
- Data Analysis:..... 9
 - 3.1 Sample Demographics: 9
 - 3.2 Summary Statistics 11
 - 3.2.1 Are Cal Poly students avid listeners of music?..... 11
 - 3.2.2 Favorite Genres of Cal Poly Students..... 11
 - 3.2.3 Local Radio 13
 - 3.2.4 Radio Programming 14
 - 3.2.5 Local Radio Stations 15
 - 3.2.6 Local Radio Enjoyment..... 17
 - 3.2.9 Mp3 player use 18
 - 3.2.10 Satellite radio use..... 18
 - 3.2.11 Smart phone use 19
 - 3.2.12 Most Prevalent Medium 21
 - 3.2.13 Finding New Music..... 22
 - 3.2 Inferential Statistics 23
 - 3.2.1 Cross-Tabulations and Chi-Square Tests..... 23
 - 3.2.2 Research Question Findings..... 27
 - 3.2.2 Research Question #1: How often do Cal Poly Students listen to local radio?..... 27
 - 3.2.2 Research Question #1a: In what types of programming are students primarily interested? 28
 - 3.2.2 Research Question #1b: To what local stations do students listen? 29
 - 3.2.2 Research Question #1c: Do students enjoy the local radio? 30
 - 3.2.2 Research Question #2: How do students listen to music these days? 32
 - 3.2.2 Research Question #2a: What are the preferred genres of music of Cal Poly students?..... 36
 - 3.2.2 Research Question #3: What sources do students use to find new music?..... 38
- Summary: 39
- Focus Group: 40
- Appendix 42

Introduction

Music has always been a major influence on my life. I am one who is constantly listening to music in one form or another, and when I am not, I am still thinking about it or singing along to a song in my head. This past summer I had a great opportunity to be an intern at a local San Luis Obispo radio station, 93.3 KZOZ. It was a very rewarding experience, but it raised the question of who actually still listens to radio these days? KZOZ usually aims for an older crowd than the one I fall into; meaning they try to attract men and women around the age of 35. There are other stations, such as KURQ, and New Rock, that try to attract a younger, “hip” crowd. After four years of living in San Luis Obispo, I do not care for the local music. However, I have a very eclectic taste in music and I am a musician myself, so I cannot speak for everyone my age, which motivates my research study.

The purpose of this study is to answer the following seven research questions. First, (**RQ1.**) Do Cal Poly students listen to the local San Luis Obispo radio? (**RQ1A.**) If they do, what types of programming are they primarily interested in? Do they listen to local radio for the music aspect, to find new hit songs, or maybe just listen to morning talk shows for the jokes, or even for the news? If students do indeed listen to the local radio, the next question to be asked is (**RQ1B.**) What local stations do students listen to and (**RQ1C.**) Do they enjoy the local radio? College students usually have their preferred taste in music, and have many different ways to enjoy their favorite tunes instead of FM radio. Commonly used forms of audio devices include the mp3 player (for example, the iPod), CD players, internet radio (such as, Pandora which conveniently plays only genres that you specify), satellite radio (for example, Sirius), vinyl records, etc. With all of these devices available, it is possible that FM radio might not be a priority choice for music enjoyment. My next research question is **RQ2.**) How do students listen to music these days? Has the mp3 player taken over as the primary medium of musical enjoyment? It is also possible that internet and satellite radio has taken the place of the local FM radio stations. Along with how students listen to music, the next question to be answered would be **RQ2A.)** What is the general music preference of students at Cal Poly, meaning, what are the most prevalent genres that students listen to. I feel like most students here enjoy a much more laid back style of music, going along with the whole ocean side scene and beautiful weather. My hypothesis is that reggae is going to be one of the most prevalent genres, along with country, since Cal Poly does have a big agricultural base. One genre I find to be a very interesting “up and coming” style is the genre known to Cal Poly students as Dubstep. Dubstep is a style of electronic music that has a very reggae-bass influence

to it. I have heard this style of music at a lot of house parties and what is known to college students as ‘Kick-Backs’, when students gather to just enjoy one another’s company. I know a lot of my friends enjoy this genre, so I put it in my senior project survey to see if Dubstep is actually a prevalent genre, or if it just another non-existent sub-genre that could just be classified into electronic music. The last question that I wanted to look into for my project is **RQ3.)** What sources do students use to find new music? It used to be that the FM radio was the main source for finding new music. They would play all the new “hits,” and there weren’t too many other ways to find new music. But now with the internet, there are many different websites to find new music that one would enjoy.

2.) Methods and Materials

2.1 Data Collection

2.1.1 Design of Questionnaire

As part of data collection, I first created a rough draft of a survey with questions that I believed would capture the answers to the research questions that I am trying answer. The initial survey was 21 questions long, and had questions dealing with the types of devices used to listen to music, how people find new music, what genres they like, how often they listen to local radio and what stations. The survey also had a few questions that were specific to listening to music in the car. Questions addressed whether people listen to the radio in the car, and what types of devices they use to listen to music in the car. However, the survey was quite lengthy, and the questions regarding being in the car seemed to be obsolete, so I removed those questions leaving the final draft of the survey at 18 questions.

The survey was pretested on fellow statistics majors to make sure the questions were clear and precise, and was addressing my research questions. The first question asked specifically “Are you a resident of San Luis Obispo County?” This question was designed to filter out people who attended Cal Poly, but lived outside the county where they would possibly be exposed to different local radio stations than San Luis Obispo residents. So in the context of the question, a freshman living on campus was to be considered a San Luis Obispo resident. However, this question was answered incorrectly many times,

and I had to explain the correct way to answer the question along with the idea behind it. This question basically became worthless with all the incorrect answering of it, so it was omitted from the survey within a week of data collection. The “second” final survey was then only 17 questions long (See Appendix A.). The survey itself took about 5-7 minutes to complete. It seemed lengthy, but most questions were pretty simple to answer. Table 1 shows the questions on the survey listed with the type of response it generated.

Table 1. Questions included in final survey along with type of response produced

Question	Type of Response
1.) Gender:, 4.) Are you a current student or faculty/staff member at Cal Poly? 5.) To what college within Cal Poly do you belong? 7.) Do you own an mp3 player/ipod? 8.) Do you have a subscription to satellite radio? 9.) What is your primary source of a music player? (Please check one) 10.) If you have a smart phone, do you listen to pre-downloaded songs or stream music off the internet? 12.) What is your primary source for finding music you personally have not heard before? (Please check only one) 14.) To what type of program do you primarily listen on FM, AM or satellite radio? (Please check only one) 16.) What is your favorite local San Luis Obispo radio station? (Please Check One)	NOMINAL, CHECK ONLY ONE
2.) What is your current age?	FILL IN THE BLANK
6.) I am an avid listener to music. (Please check one) 17.) (Please check one) I enjoy the music on the local San Luis Obispo FM radio	LIKERT SCALE
13.) How often do you listen to local radio?	ORDINAL
3.) What is your ethnicity: Check all that apply 15.) What local San Luis Obispo radio station(s) do you listen to? (Check all that Apply)	NOMINAL, CHECK ALL THAT APPLY
11.) Please pick and rank your top three favorite musical genres:	RANKING

To make data entry as painless as possible, I first tried creating a survey monkey (surveymonkey.com) document so I would be able to update the surveys electronically and a

spreadsheet would be updated automatically every time I added a survey. However, the survey monkey (free) version I intended to use had a policy that each document could only have up to 10 questions, while my survey had 17. So this proved to be a problem. So to stay with the idea of electronically updating a spreadsheet, I created a Gmail account and a Google document with my survey. This works the same as survey monkey, but I was able to fit my whole survey on to one document. I tried to update the spreadsheet the same day after collecting the data. After omitting 5 surveys in which people forgot to rank their favorite genre, my sample size was 242. It took approximately 10 hours to enter all the data into Google Documents.

2.1.2 Sampling Design

I started my project thinking I wanted to get the general music and radio preferences of the population of the city of San Luis Obispo, however, this seemed a little too difficult to accomplish by myself. So I narrowed down my target population to the students of Cal Poly.

When the final draft of the survey was completed, I had to go through the Human Subjects Committee to get approval for my project. You must go through this committee whenever a study involves human subjects. Since my intention was to survey people, I too had to go through the process. Along with the survey, I had to create a consent form to hand to people if they wanted information on the study. My study posed little to no risk to participants, and the questions on the survey were not intrusive or uncomfortable for people to answer. This made the process a little easier and faster. I had to complete the proper forms for my study, and turn in three copies of each form along with my survey and consent form. It took about two weeks for my project to get through the committee, and it was approved as long as changes to the consent form were made, which I rightfully did.

The data collection stage of my senior project happened during the days of January 24 – February 17, every Monday through Thursday for a one hour period each day. There were four distinct one hour blocks that were selected because they fit my school schedule. These four time blocks were from 9-10am, 11am-12pm, 12-1pm, and 6-7pm. These four blocks of time were then randomly assigned to one of the four weeks of interest. With these four times slots, there were also four distinct locations of interest that were selected for the density of people that usually are in that area, and the possible good mix of the population of interest that would be found there. The four locations were: the entrance to the University Union, the entrance to the campus library, the entrance area for campus market, and

the entrance to the Recreation Center. These four places were randomly assigned to a letter, A, B, C, and D. A was assigned to the UU, B was assigned to Campus Market, C was assigned to the Library, and D was assigned to the Recreation Center. The areas were then arranged into a Latin Square design, with each area present once in each week, paired with each time slot exactly once. The final sampling design can be seen in Figure 1.

Figure 1.) Random Sampling Latin Square Design

	Monday	Tuesday	Wednesday	Thursday
6-7pm/ Jan24-27	UU = A	Campus Market = B	Library = C	Rec Center = D
11am-12pm/ Jan 31-Feb 3	Campus Market = B	Library = C	Rec Center = D	UU = A
9-10am/ Feb 7-10	Library = C	Rec Center = D	UU = A	Campus Market = B
12-1pm/ Feb 14-17	Rec Center = D	UU = A	Campus Market = B	Library = C

The sampling method I used at each of these day-time-location combinations was a modified version of systematic sampling. I would ask every tenth person who entered the area to please help me out with my senior project survey. This eliminated experimenter bias to the sample. Every tenth person was chosen because this number seemed to be a good number of people to pass by if I wanted to get an average of 15 people per day in a one hour period of time, given the amount of foot traffic at each of the sample locations. If a person refused to take the survey at that time, I would then start over and ask the next tenth person who entered the area to take my survey. On days when I was surveying alone, it was hard to keep track of every tenth person who walked by because I had to talk to the first person I wanted to survey, and during that time people would pass by that went unaccounted for. To account for this problem, I would immediately start counting after I was done talking to the first person who was selected to take the survey, and go on from there. Thus, this sample scheme was based on a systematic sample, but it was slightly modified to make collecting data more feasible.

The initial plan for surveying was to set up a table in front of the area of interest, and to have laptops out and have people take the survey electronically. In this way, whenever people took the survey, the answers would be immediately recorded and updated onto a spreadsheet, making surveying and data entry very efficient. However, to set up a table on any part of campus requires one to go

through the events committee. To set up one table, I would have had to complete the necessary paperwork weeks in advance. My advisors would also have to fill out separate paperwork for the “event”. Apart from with these small setbacks, I found out that the events committee only has jurisdiction for the University Union and Dexter Lawn, along with other grassy areas on campus. That would mean that apart from going through the events committee for their approval on having a table set up at the UU, I would also have to get separate permission from the recreation center and the Library to get a table set up. I decided that the amount of work involved in just getting a table set up for these weeks was not worth it, and decided to just have people complete the survey in paper form and I would enter the data in myself. You can survey people anywhere on campus because according to the events center doing that is your right to freedom of speech.

For the first week of sampling, I had a lot of help from friends, and it was a strong week of data collection. However, the weeks to follow were not quite as successful, as I was on my own for most of the time. The busier areas to sample from were definitely the University union and campus market. The recreation center proved to be the toughest area to sample, as most people were anxious to start their work out and did not want to stop and take a survey. The library was neutral in this aspect, because there were people that needed to study and didn’t want to stop, and there were people who were looking for an excuse to procrastinate. To limit refusal rates, I would say right off that this survey was for my senior project, and that would get people to stop and listen. I would immediately follow up with the goals of the survey and that would usually get the person to oblige to take the survey, since most people want to share their opinion on music.

2.1.3 Challenges with Data Collection and analysis

People seemed to find two questions somewhat difficult. The question asking them to pick and rank their three favorite musical genres and the first question regarding residency in San Luis Obispo County. A few people, 5 to be exact, picked their three favorite genres, but forgot to rank them. I told people to read questions carefully and when it says mark one, to please only mark one. One interesting thing I did come across was I forgot to place the genres Indie and funk in my survey, and a couple of people placed these genres in the “other” category. I had to then modify the Google document I created to make a place for both of these genres. Another couple of interesting “other” responses were “Trip Hop” and “Folk Singer/Songwriter.” Since I came across these genres only once, I just placed Trip Hop in the Hip Hop category and the Folk Singer Songwriter in the Folk/Bluegrass category. This also happened with one radio station. Two people put 102.5 into the other category as one of their favorite stations. This is a station that comes out of Santa Maria, but I decided to modify my Google document to incorporate this station. There were actually a few item non-responses that I came across after entering the data. They were on the questions of what radio stations do you listen to? There were five people that apparently did not know what radio stations they listened to, even though they claimed to listen to the local San Luis Obispo Radio. So for the five that I had to code as item nonresponse, I merely disregarded the non-response for the general demographics of radio stations listened to.

Data Analysis:

3.1 Sample Demographics:

I will first present some simple graphical and numerical summaries of my data, starting with the basic demographics of my sample (Table 2). There were 247 completed surveys. However, I removed five of the surveys that did not rank their three favorite genres, leaving 242 surveys with complete data. There were 127 males and 115 females in the sample; that is, roughly 52% of the sample was Male and 48% was Female. Comparing these percentages to the Cal Poly Fall 2009 statistics, (56% Male, 44% Female) we can see that my sample accurately represents the genders on campus. As expected, the sample was mostly of students attending Cal Poly. However, one person in the sample was part of administration, and one person was not affiliated with Cal Poly. Due to the nature of the sampling scheme used, it was definitely possible for someone who does not attend Cal Poly to be randomly selected. One sampled person was a college student that attended Cuesta and was familiar with the local radio stations here, so I kept this person in the sample. The other 240 people represented in the sample were all Cal Poly students.

The breakdown for the percentage of people in my sample, from the different colleges within Cal Poly is displayed below. The largest part of the sample came from College of Engineering (26%), followed by College of Architecture and Environmental Design (19%), College of Science and Math (16%), College of Liberal Arts (14%), College of Food Science and Nutrition (12%), and Orfalea College of Business (12%), . There was 1 person (.41%) who was not affiliated. These percentages run fairly close to the Fall 2009 enrollment percentages. The College of Business is a little underrepresented by 3%, and the College of Architecture is overrepresented (Fall 2009 percentage was 9.87%). This overrepresentation is probably due to the fact that Architect majors are on campus a very large amount of the time.

The age distribution came out to be what was expected. The median age for the sample is 20, with most of the sample being between 18 and 22. There were a few people ages 25 and 26, and one student who was 32. The mean age for age was 20.67 with a standard deviation of 2.017. The median age was 20.

The breakdown for ethnicities was very one sided. A huge majority of the sample was White/Caucasian at 83.9%. The other ethnicities that were represented in the sample were Asians (7%), Hispanics (7%), and African Americans (1.2%). The rest of the sample was of mixed race, with Caucasian usually being one of the races mixed in along with others. This was expected since if you look at the overall

demographics of Cal Poly, it is a predominantly White/Caucasian school. Due to small samples sizes, I combined a few of the ethnicities into one group. If the person was Asian, or Asian and White/Caucasian, they were put into the White/Caucasian group. People who were Hispanic/Latino and White/Caucasian, were put into the Hispanic/Latino group. The two people who were African American and White/Caucasian were put into the African American group, and the rest were put into the Mixed races group.

Table 2: Table of Demographics, counts and percentages

Levels	Count	Percent	Fall 2009
Male	127	52.48%	56%
Female	115	47.52%	44%
Total	242	100%	
College of Agriculture, Food and Environmental Science	30	12.40%	20.46%
College of Architecture and Environmental Design	47	19.42%	9.87%
College of Engineering	63	26.03%	28.91%
College of Liberal Arts	33	13.64%	13.58%
College of Science and Mathematics	39	16.12%	12.53%
Orfalea College of Business	29	11.98%	14.17%
Non Affiliated	1	0.41%	
Total	242	100%	

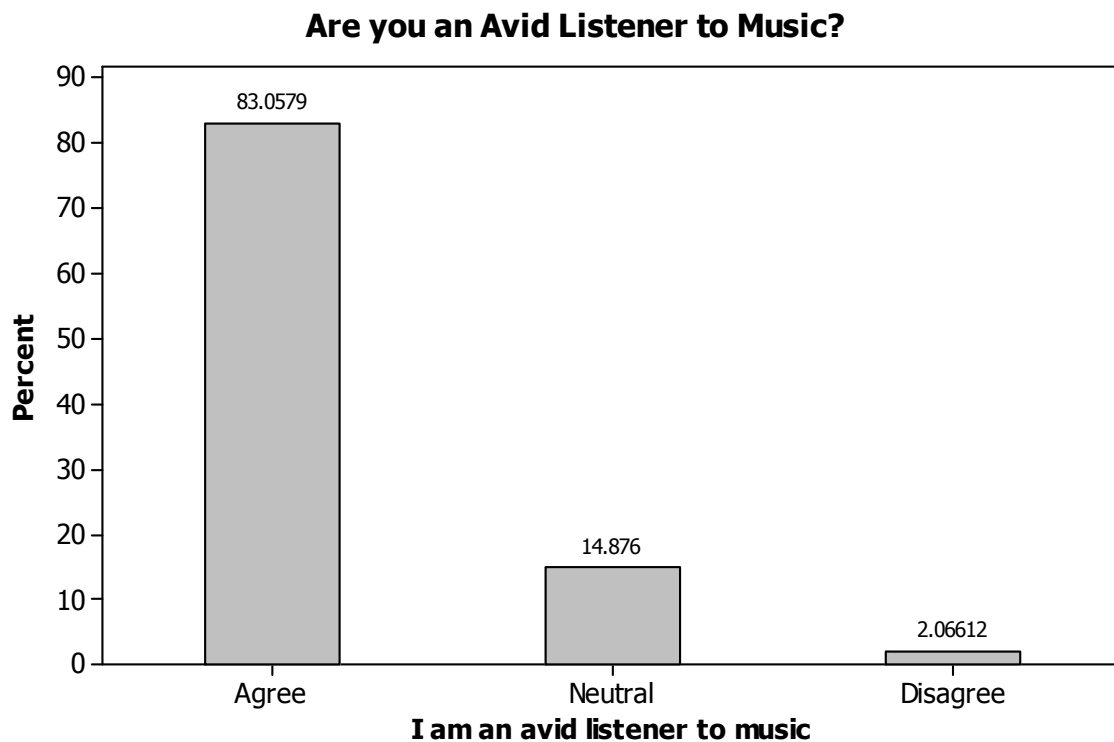
3.2 Summary Statistics

We will now look at summary statistics for each question that was in the survey.

3.2.1 Are Cal Poly students avid listeners of music?

Of the 242 people who took the survey, 83% said that they were avid listeners of music. What I found to be interesting was that two people strongly disagreed with the statement. Otherwise, the majority of the sample either strongly agreed or had no opinion (See figure 2).

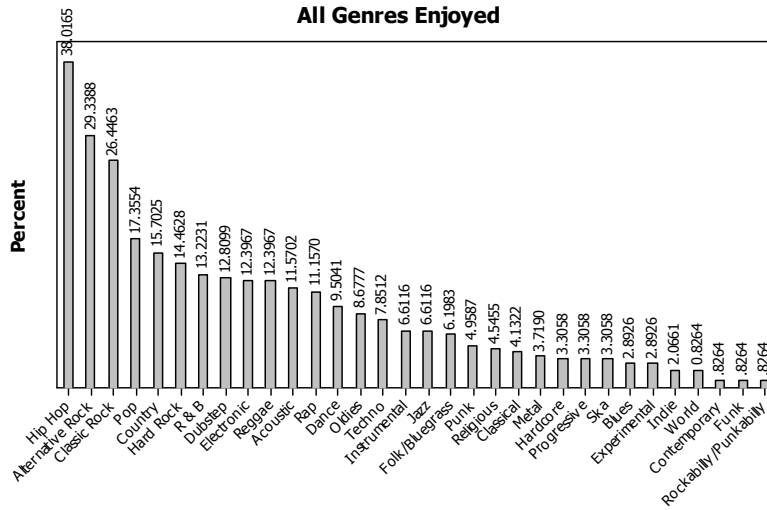
Figure 2.) Bar graph of avid listener response.



3.2.2 Favorite Genres of Cal Poly Students

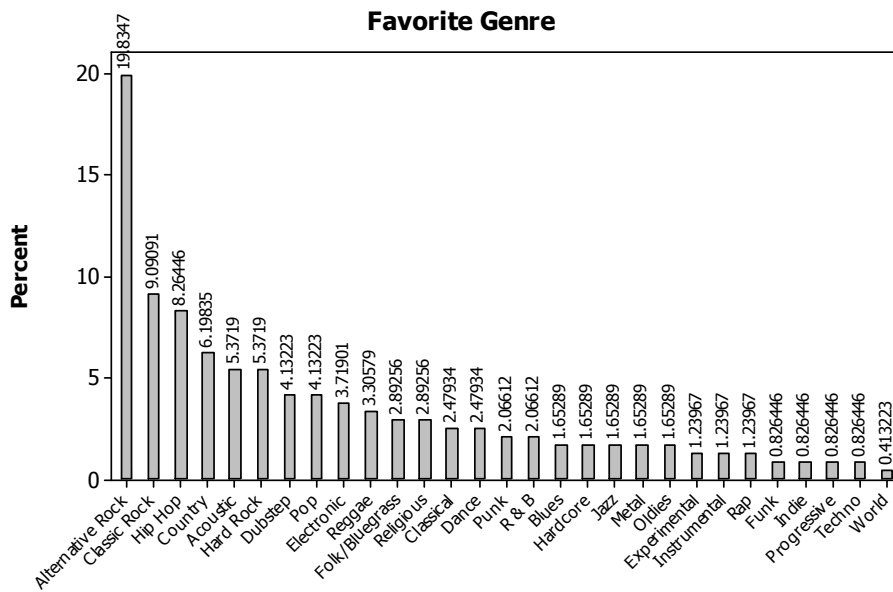
Now let us look at the types of genres that Cal Poly students enjoy on campus. First of all, I had participants pick and rank their three favorite genres. When I got the data, each participant had three different genres as a response. I wanted to see which genre was most generally picked, regardless of rank. The most prevalent genre in my sample was Hip Hop with 92 of the 242 people picking it, then Alternative Rock with 71 of the people, then Classic Rock with 64. The genres that I hypothesized to be the most popular, Country and Reggae, only had 38 responses and 30 responses respectively. Dubstep, the other genre I was curious about, had 30 responses (See figure 3).

Figure 3.) Bar graph of All genre response.



When looking at favorite genre only, the genre selected most often was Alternative Rock with about 20% of the responses. The second favorite genre came out to be classic rock with 9% of the responses. The most prevalent genre overall, Hip Hop, was the number three choice for favorite genre. Country was the fourth favorite choice, with about 6% of the responses (See figure 4).

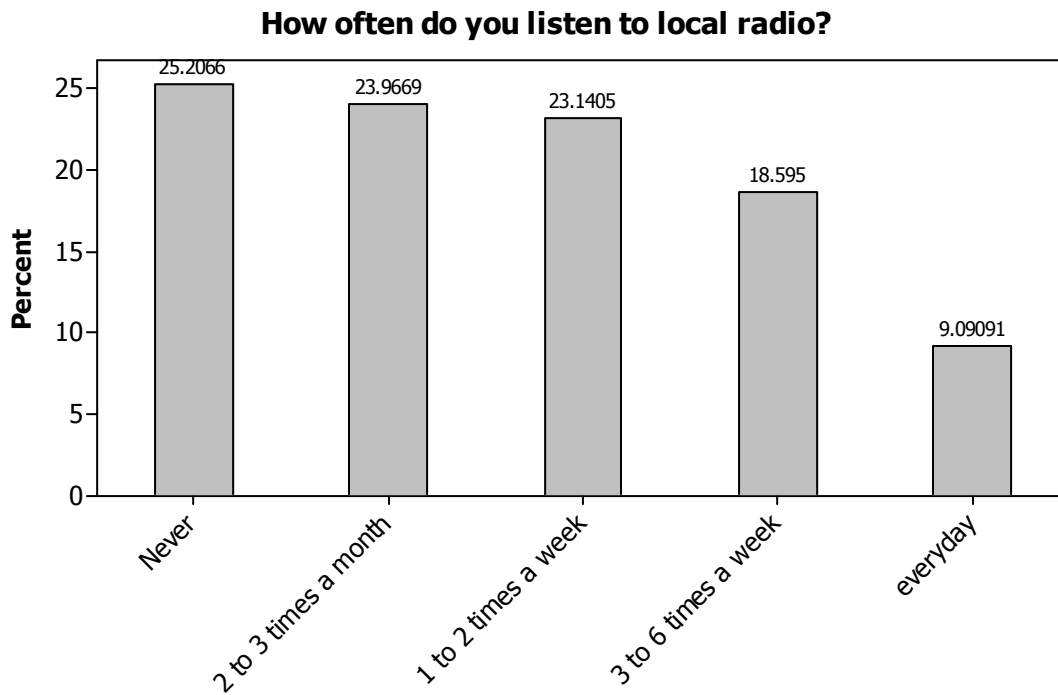
Figure 4.) Bar graph of favorite genre response.



3.2.3 Local Radio

Now let us move on to the questions that deal with the local San Luis Obispo radio. The first question asked in this section was, “How often do you listen to local San Luis Obispo Radio?” The largest response to this question was “I never listen to the local radio” with 61 responses. This is 25% of the sample, so not a majority. , Seemingly a good chunk of the sample simply does not listen to the local radio. On the other side of the spectrum, there were 9% who said they listen to the radio every day. Then the other 58% the sample listen to the radio a number of times throughout the month (See figure 5.).

Figure 5.) Bar graph of radio listening time response.

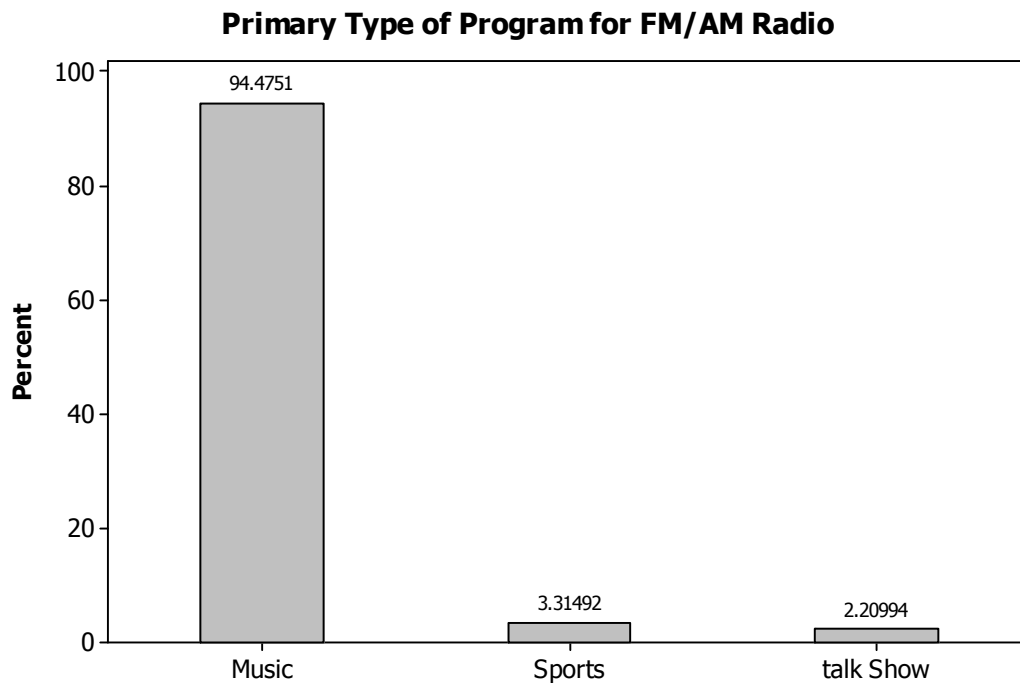


3.2.4 Radio Programming

For the rest of the questions, I removed the 61 people who said they never listened to radio, since they were told to stop the survey there. In hindsight, I think it would have been good to ask these people why they don't listen to radio. Do they not like it, or do they just never get around to it? This would've been a great thing to look into, but it was something I didn't think about until after the fact.

For those survey participants who responded that they listened to the radio, what programs do they primarily listen to: music, talk shows, news updates, sporting events, etc.? Of the 181 radio listeners, 95% said they primarily listen to music on the local radio, 3% said they listen to sporting events, and 2% listen to the radio for talk shows (See figure 6.)

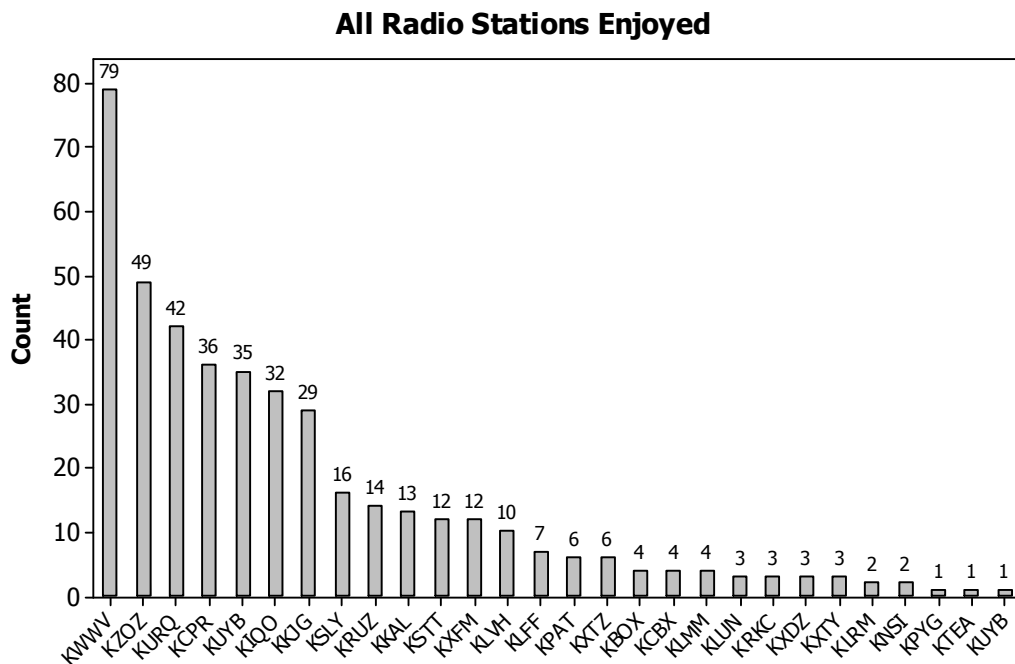
Figure 6.) Bar graph of radio program response.



3.2.5 Local Radio Stations

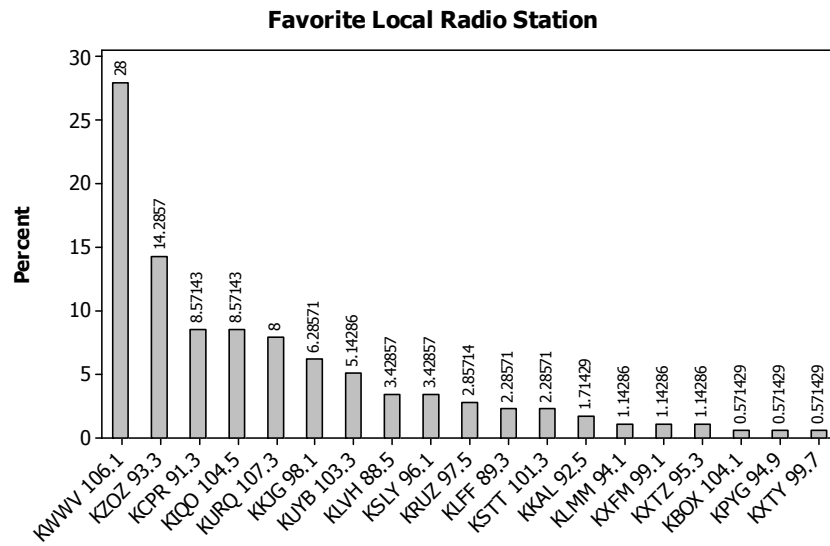
The next question asked for the person to check off all the local stations that they listened to. For this question six people said they listened to local radio, but they did not know which ones. These 6 people were removed from the data. The most listened to radio station appeared to be KWWV, which is a more hip hop station. Then second came out to be KZOZ, the station I worked for and am currently helping out. KZOZ is considered to be a classic rock station. Third was KURQ New Rock, and fourth is KCPR, the college radio station (See figure 7.).

Figure 7.) Bar graph of all local FM stations enjoyed.



This next question asked the person to pick their one favorite local station. Again, KWWV came out as the favorite station on campus, with KZOZ in second, and KCPR in third. Even though KURQ was one of the more popular choices for check all that apply, it falls to the fifth favorite radio station on campus coming behind KIQO, the oldies station (See figure 8.).

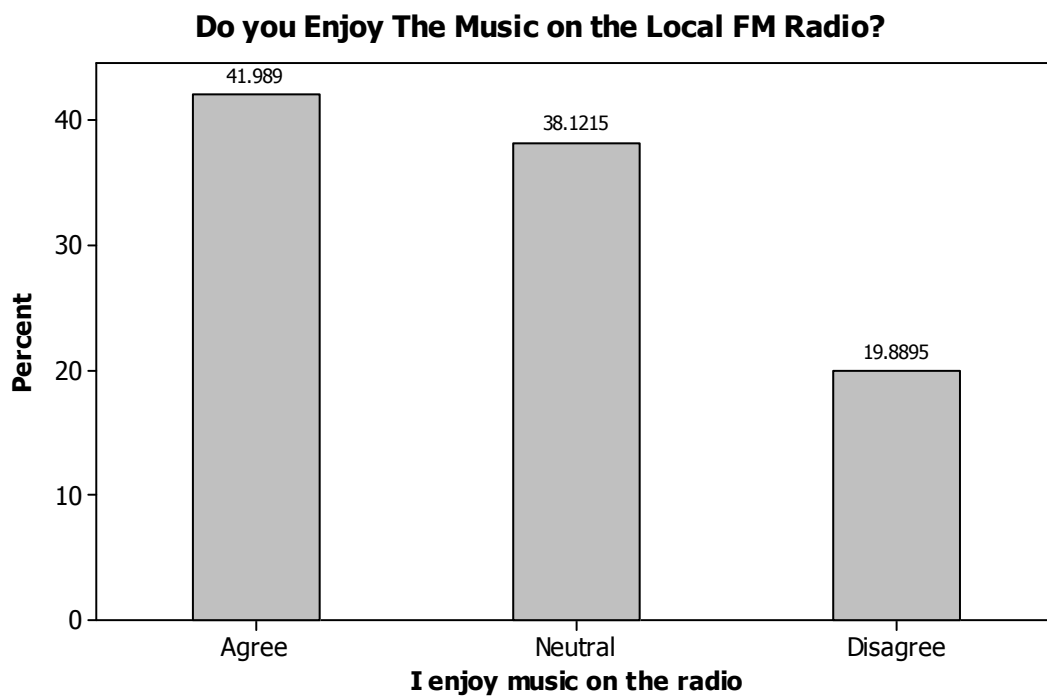
Figure 8.) Bar graph of favorite FM station response.



3.2.6 Local Radio Enjoyment

Now the final, most important descriptive question; for the people who do listen to the radio, do they enjoy it? The most popular choice for this question was a feeling of neutrality, so neither yes nor no; 69 people responded neutral. Sixty six people agreed that, yes they did enjoy the music on the radio, while 27 people disagreed with this statement, 10 strongly disagreed, and 9 strongly agreed. So if we combined some of the groups, we can say that 41% of Cal Poly students agree to like the music on the radio, and 20% disagree to liking the music on the radio. 38% still stand neutral (See figure 9.).

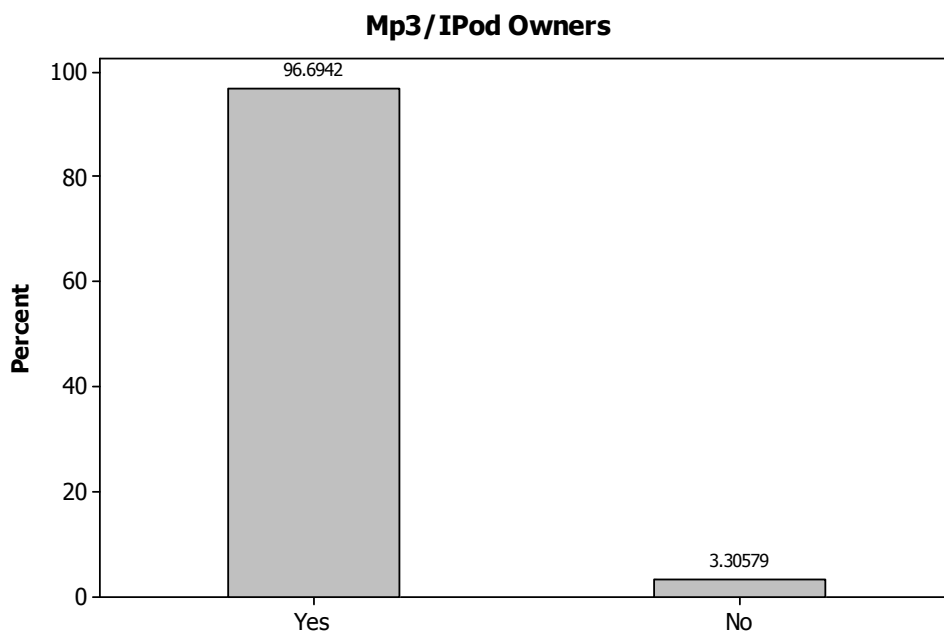
Figure 9.) Bar graph of all local FM radio enjoyment response.



3.2.9 Mp3 player use

I wanted to find out what percentage of Cal Poly students use Mp3 players, and so included a basic question in the survey asking whether the survey taker owned an mp3 player. When walking around campus, you invariably notice that students wearing ear phones as they get from one place to another. As you can see from my survey, a huge majority of the sample owns an mp3 player. Two hundred and thirty four people out of 242, or roughly 98% of the sample owned an mp3 player (See figure 10.)

Figure 10.) bar graph of Mp3 owner response

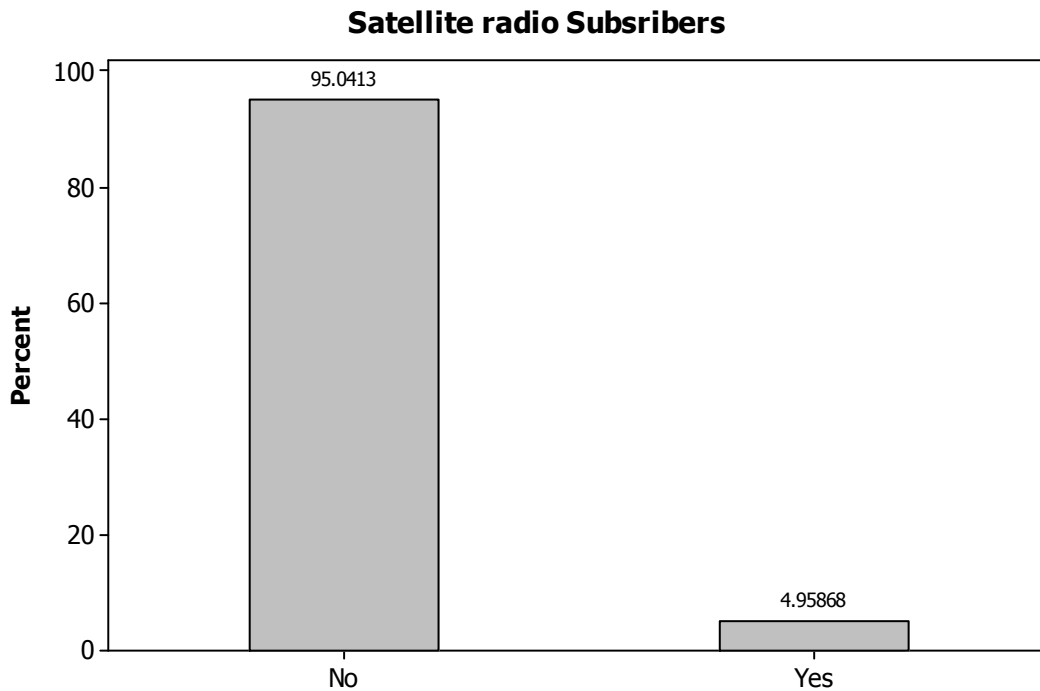


3.2.10 Satellite radio use

Next, the survey asks about subscription to satellite radio. People subscribe to satellite radio so that they can listen to very genre-specific stations that suit their specific taste. Another advantage of satellite radio is that there is minimal to no advertisements that one has to listen to. Most people who have satellite radio have it installed in their car. This type of medium is more accessible to people with newer models of cars and people who have the money to subscribe to radio. Now this doesn't sound like the description of a typical college student, however it is a newer medium to enjoy music, and I was curious to see if Cal Poly students use it. My survey shows that most students do not have subscriptions to satellite radio. Only 3% who completed the survey had a subscription to satellite radio. This makes sense, since satellite radio can be an expensive commodity for a struggling college student. Also, since a

student has many more options to choose from for musical enjoyment, it makes no sense for someone who probably doesn't have much spending money to use it on a subscription to satellite radio (See figure 11.).

Figure 11.) Bar graph of Satellite radio response



3.2.11 Smart phone use

With new technology also comes new and more convenient ways to listen to music. The new smart phones, the iPhone, the Droid, etc. are not just phones anymore. They can be thought of as entire media entertainment centers. Not only can you use these phones as mp3 players, but you can also connect to the internet and go to websites such as Pandora, to stream music live. I was curious to see how many people who had smart phones used this new power to listen to music. So I incorporated a question about smart phones that read, "If you have a smart phone, do you listen to pre-downloaded songs or stream music off the internet?" 43% of the people in the sample replied that they did not own a smart phone. For the part of the sample that do own smart phones, 38% of them replied that they used both methods on their phone, 26% people replied that they exclusively streamed music off the internet, 25% said they listen exclusively to pre-downloaded songs, and 10%replied that they owned a smart phone,

but did not use any of these methods. So out of 138 people who had smart phones, roughly 90% of the people used their phone as another source of musical entertainment (See figure 12.).

Figure 12a.) Bar graph owning a smart phone.

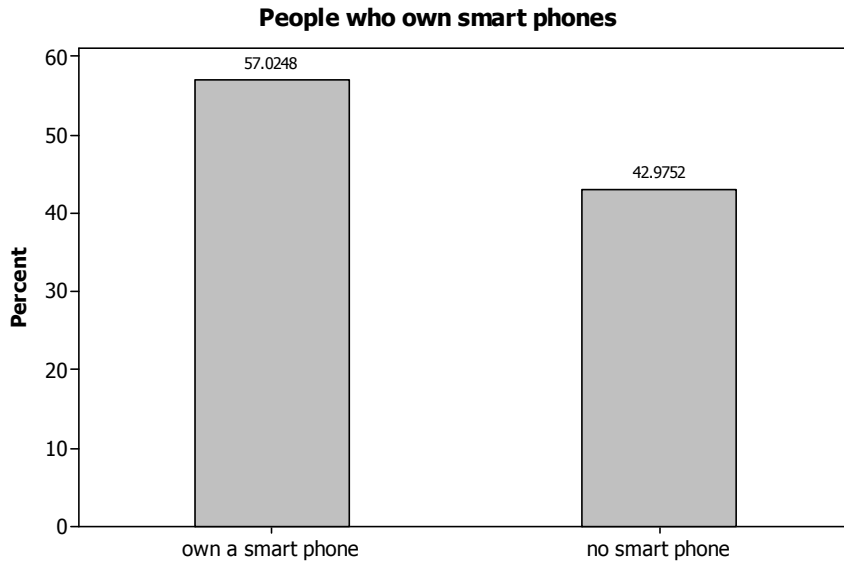
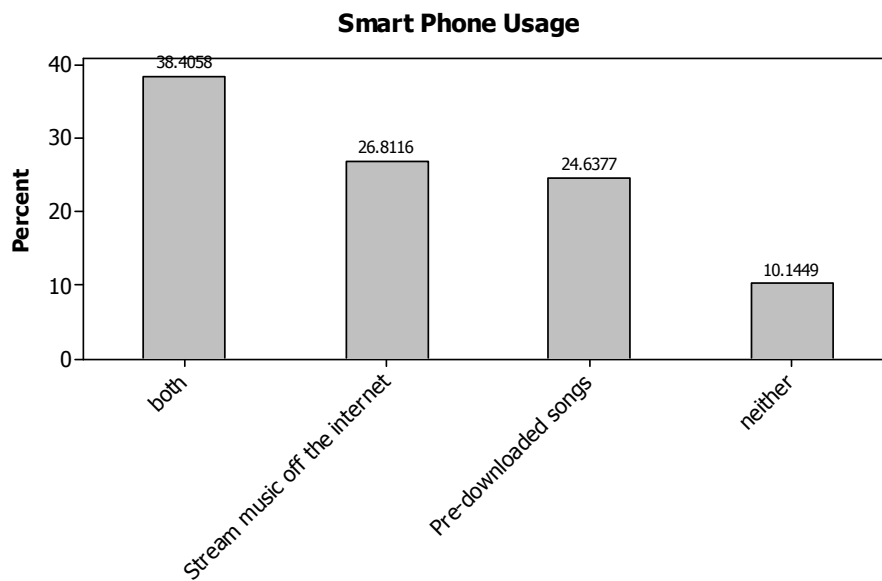


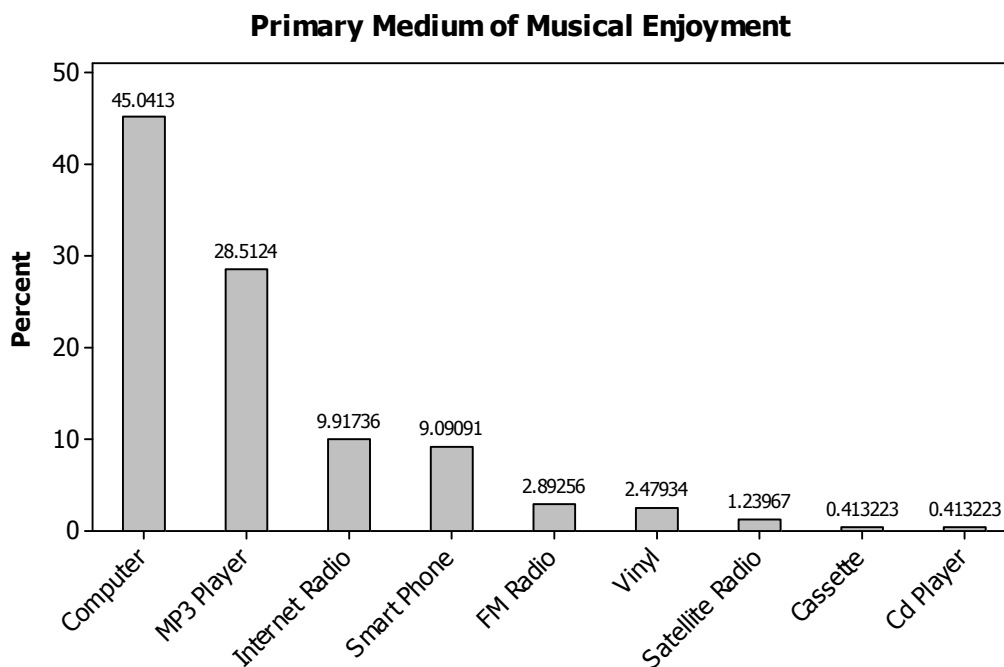
Figure 12b.) Bar Graph of smart phone usage



3.2.12 Most Prevalent Medium

After looking at specific media for listening to music, the next question addressed the most prevalent music-listening medium. In my sample, 45% of the people said that they use their computer as their primary music-listening medium. The mp3 player is the second most used device at 28%, followed by internet radio with 10% and smart phones at 9%. These are followed by FM radio with 2.8%. With only 2.8%, it appears that FM radio is not a primary medium for musical enjoyment for Cal Poly students. This may be attributed to the fact that Cal Poly students are exposed to so much new technology that allows them to listen to exactly what they want to hear. The FM radio does not have the freedom to play whatever everyone wants to hear, and it is possible that people would rather use their devices than have to wait for a song they really like to be cycled through the local radio. One small discrepancy I wish I were able to clarify better is that using the computer as a medium can mean a lot of different things. People can listen to downloaded songs, or stream music off the internet. However, I did try to break the two apart using internet radio as one of the options. An interesting outcome is that vinyl had more responses than cassettes and CD players. This is interesting because you can say the vinyl is a much older technology than both of the other two; however, more people in my sample said they used vinyl as a primary source than CD player and cassette combined (See figure 13.)

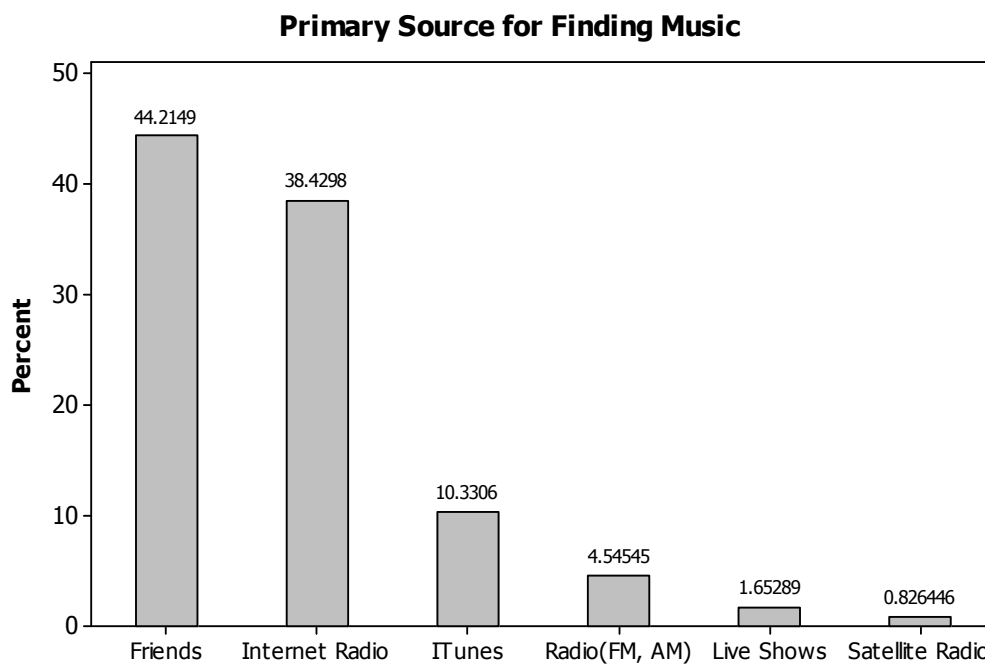
Figure 13.) Bar graph of device response.



3.2.13 Finding New Music

How do Cal Poly students find new music? I usually find new music through my music fanatic friends. With this in mind I included that as a possible choice for my survey. This response was the most common with 107 people, or 45%. In hindsight even though some people find new music from their friends, their friends had to find that music somehow, and this was not addressed in the survey questions. The second largest response to this question was satellite radio with 99 responses, followed by FM radio, and iTunes. Again, I feel that this shows that FM radio is losing some of its pull. In the past, radio used to be the only way to find new music. However, nowadays there are so many new ways to find new music that radio appears to be falling behind when it comes to keeping up with bringing new music to the masses. Radio still definitely plays the new hits of the time, but it is no longer a primary source to finding these new hits (See figure 14.).

Figure 14.) Bar graph of ways of finding music response.



3.2 Inferential Statistics

3.2.1 Cross-Tabulations and Chi-Square Tests

When trying to run some of the inferential statistics, I came across some errors such as variables having too small of a cell count. In order for the analysis to go any further I needed to collapse some of the categories in select questions to make larger cell counts within each category. In the ethnicity variable, as previously explained, I grouped all possible ethnicities into 4 basic categories. For Likert scale questions, I collapsed strongly agree responses into the agree responses, and the same with strongly disagree with disagree responses. All the favorite genres were collapsed into three categories as you can see in table 3. Favorite radio stations were collapsed together in similar fashion as seen in table 4. I also created new variables with the variable regarding the primary musical device used, grouping all the different radios with each other and all the legacy devices such as CDs, cassettes and vinyl records together. This made some cell counts bigger, making it possible to run chi-squared and logistic regression models.

Table 3: Groupings of Genre

Rock	Dance	Mellow
Alternative Rock	Hip Hop	Country
Classic Rock	Dubstep	Acoustic
Hard Rock	Electronic	Reggae
Hardcore	Dance	Folk
Metal	R & B	Classical
Experimental	Rap	Oldies
Punk	Funk	Religious
Blues	Techno	Jazz
Indie	Pop	World
Progressive	Ska	Instrumental
Rockabilly		Contemporary

Table 4: Groupings of Radio Stations

Rock	Dance	Mellow
KBOX	KLMM	KCPR
KPYG	KUYB	KIQO
KRUZ	KWWV	KKAL
KSTT	KXTY	KKJG
KURQ		KLFF
KXFM		KLVH
KXTZ		KSLY
KZOZ		

We will now look at the cross tabulation of Gender by type of music player used. As you can see, our Likelihood ratio test value came out to be 11.4505 with a corresponding p-value being .009. Therefore we can conclude that the primary type of music player used depends on gender. What we can see from the column percent values is that more women listen to the radio as their primary source of a musical enjoyment and use older devices than men. Keep in mind that the radio category consists of all types of radio (FM, AM, satellite and internet). The “Old School category consists of the older types of devices such as CDs, cassettes, and vinyl records. Handheld devices and using the computer is pretty evenly distributed between the two genders.

Table 5: Chi-Squared test of Gender by Music Player

	Radio	Handheld	Computer	OldSchool	Total
Female	22	41	45	7	115
	9.13	17.01	18.67	2.9	47.72
	19.13	35.65	39.13	6.09	
Male	12	50	63	1	126
	4.98	20.75	26.14	0.41	52.28
	9.52	39.68	50.00	.79	
Total	34	91	108	8	241

Cell Count: Frequency
 Percent
 Row Percent

An interesting result with the cross tabulation technique was that of gender and use of a smart phone. According to this test, the use of a smart phone as a musical listening device is indeed dependent upon gender (LRT p-value = 0.0012). Out of the 104 participants that didn't own a smart phone, 60% of them were female. If males own a smart phone, they tend to use their phone as a means of listening to music more than women. This is shown that out of the 138 people that owned a smart phone, men who owned a smart phone accounted for 58% of the 138 that used their phone as a means of musical entertainment. Out of the sample that owned a smart phone and did not use it as a musical device, 60% of this subsample was made up of women.

Table 6: Chi-Squared of Gender by Smart Phone Usage

	Both	Don't Own Smartphone	Neither	Pre-Downloaded Songs	Stream Music off the Internet	Total
Female	17	62	10	12	14	115
	7.05	25.73	4.15	4.98	5.81	47.72
	14.78	53.91	8.70	10.43	12.17	
Male	36	41	4	22	23	126
	14.94	17.01	1.66	9.13	9.54	52.28
	28.57	32.54	3.17	17.46	18.25	
Total	53	103	14	34	37	241

Cell
 Count: Frequency
 Percent
 Row Percent

The final cross tabulation I found to be interesting and significant was that of college and radio listening time. Radio listening time is dependent on college (LRT p-value = 0.005). The College of Agriculture listens to the radio the most, with only 3% of the sample from that college saying they never listen to the radio.

Table 7: Chi Squared Test Radio Listening time by College

	CAED	CENG	OCOB	COSAM	CAFES	CLA	Total
Sometimes	25	41	21	25	24	23	159
	10.37	17.01	8.71	10.37	9.96	9.54	65.98
	53.19	65.08	72.41	64.1	80	69.7	
Everyday	3	7	0	5	5	1	21
	1.24	2.9	0	2.07	2.07	0.41	8.71
	6.38	11.11	0	16.67	16.67	3.03	
Never	19	15	8	9	1	9	61
	7.88	6.22	3.32	3.73	0.41	3.73	25.31
	40.43	23.81	27.59	23.08	3.33	27.27	
Total	47	63	29	39	20	33	241

Cell Count: Frequency
Percent
Column Percent

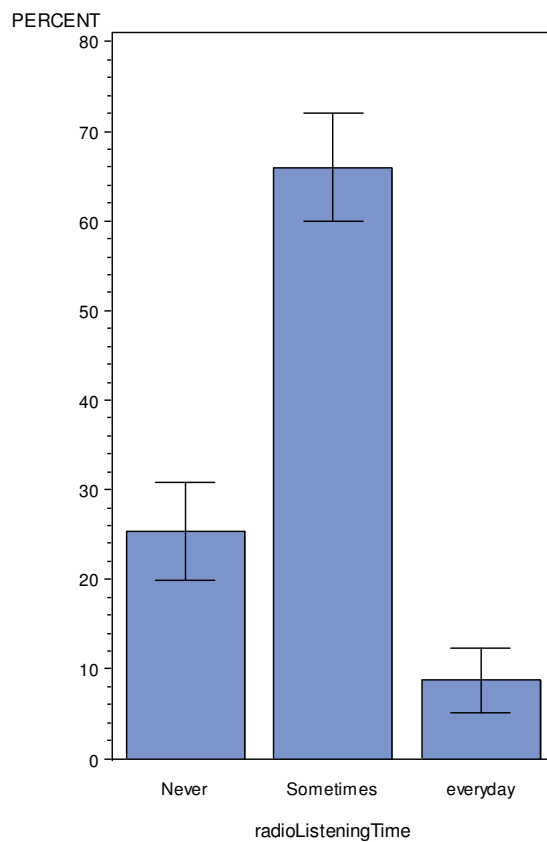
3.2.2 Research Question Findings

We will now look at the questions that addressed my main research questions.

3.2.2 Research Question #1: How often do Cal Poly Students listen to local radio?

Let us first look at the proportions for radio listening time displayed in figure 15. As we previously mentioned, the middle categories of this survey question were grouped into the “sometimes” category. As we can see, a very good proportion of students do listen to the radio. Only around 19% to 31% of students that replied they never listen to the local radio. So there are a good proportion of students that do indeed listen to local radio.

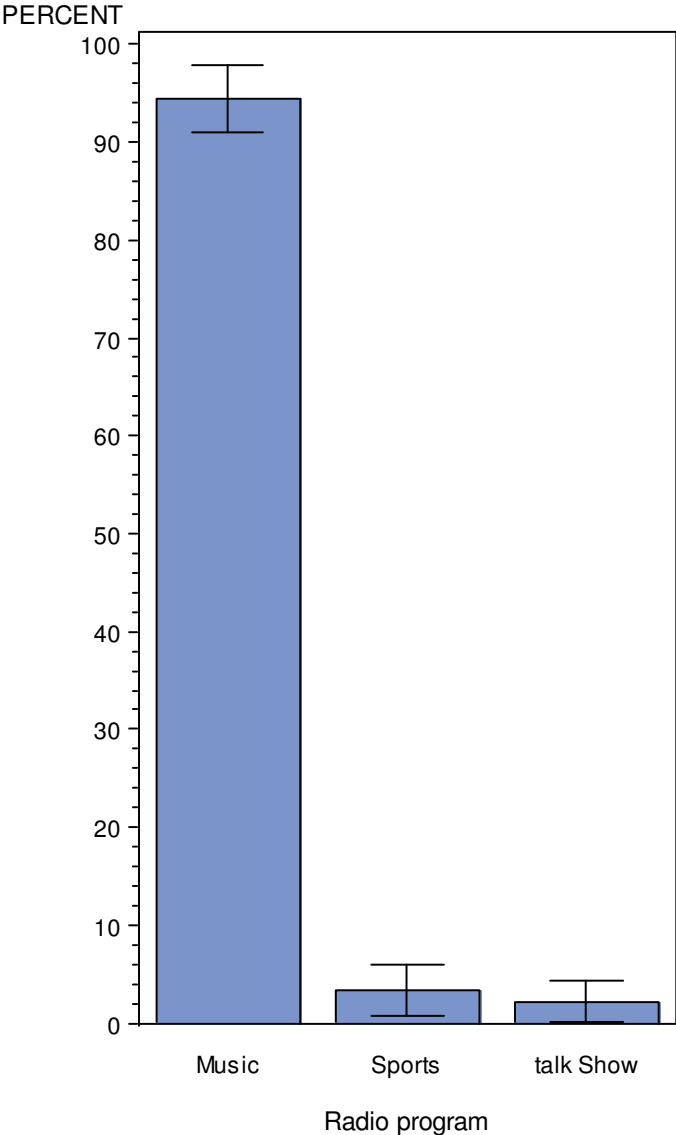
Figure 15: Bar graph of Radio Listening Times.



3.2.2 Research Question #1a: In what types of programming are students primarily interested?

Now for the people who listen to the radio, a huge majority of them listen to the radio primarily for music. 94.5% (95% CI: 90.1%, 97.3%) of Cal Poly students who listen to local radio listen for the music aspect. This is displayed in figure 16.

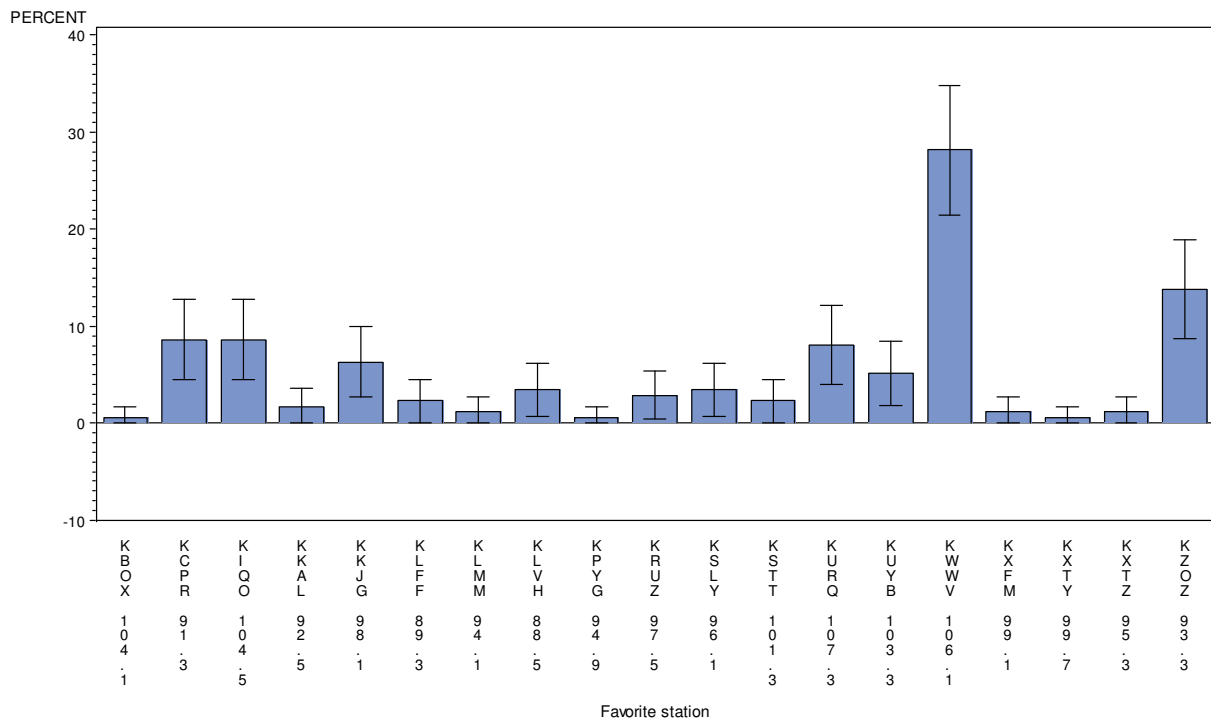
Figure 16: Bar graph of primary type of Radio Program listened to



3.2.2 Research Question #1b: To what local stations do students listen?

As you can see from figure 17, KWWV 106.1 is the most popular station on campus with 28% (95% CI:21.5%, 35.3%) of the responses. KZOZ is second with 14%.

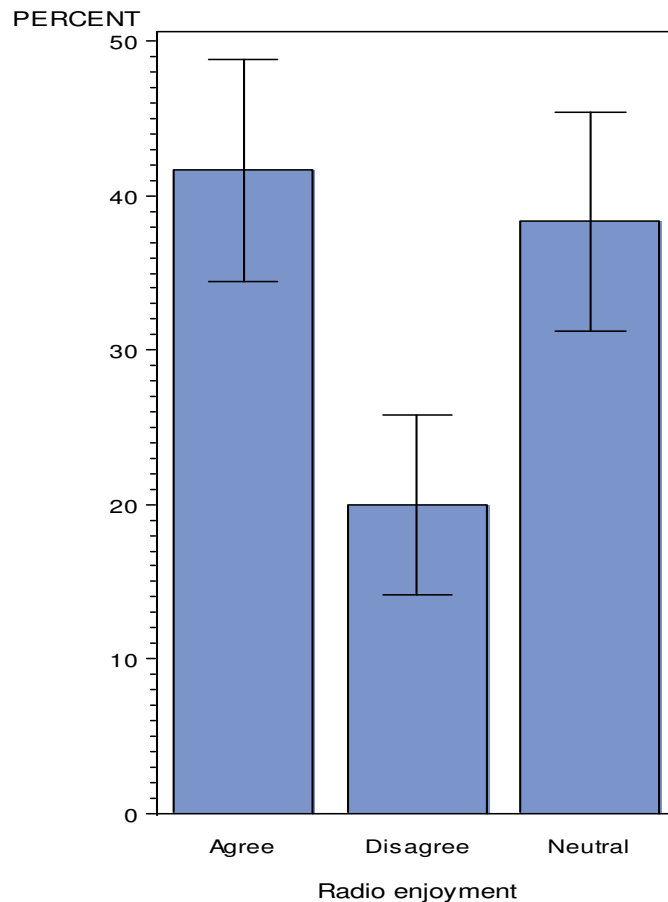
Figure 17: Bar Graph of Favorite Radio Stations



3.2.2 Research Question #1c: Do students enjoy the local radio?

Now we will address the question if students really do enjoy the radio. As we look at figure 18 which addresses this question, we can see that 35% to 50% of the students who answered that they do listen to radio also said they enjoy the local radio. Only 14% to 27% of the students said they did not enjoy the local radio.

Figure 18: Bar Graph of Radio Enjoyment.



Model 1: Logistic Regression: Radio Enjoyment = Age + Favorite Genre + Gender + Ethnicity + College

I ran a cumulative logistic regression model because the response, radio enjoyment, has a natural order to it, which makes it an ordinal response. After running a cumulative logistic regression to model radio enjoyment by age, favorite genre, gender, ethnicity and college, we come to find that adjusting for all the other variables, only favorite genre is moderately significant ($p = .0588$). For the response, “disagree” was used as the baseline reference category, and for favorite genre, “Dance” music was used as the reference. After removing the age from the model, the p-value for favorite genre dropped to .0544. I then took college out of the model, leaving gender ethnicity and favorite genre as the

explanatory variables. With this model, we can see that favorite genre becomes a significant predictor to radio enjoyment with a p-value of .0401. Now that I have a significant predictor for radio enjoyment, I calculated proper odds ratios for comparing each genre.

Tables 8 and 9: P-values and odds ratios with confidence intervals for modeling radio enjoyment

Variable	P-value
Favorite Genre	0.0401
Gender	0.7389
Ethnicity	0.3625

Confidence Intervals for odds ratios

Label	Estimate	95% Confidence Limits	
Mellow VS. Dance	2.639	1.244	5.587
Rock VS. Dance	1.695	0.854	3.367
Mellow VS. Rock	1.549	0.784	3.062

As we can see from the table of Odds ratios, Cal Poly students who enjoy Mellow music are 2.639 times more likely to tend to favor the local radio than Cal Poly students who enjoy Dance music. The other two intervals for the odds ratios comparing Rock to Dance music and Mellow music to Rock music contain 1, meaning there is possibly no difference in the odds to favoring to enjoy local radio between these specified groups. From these odds ratios, we can conclude that Cal Poly students who enjoy Mellow music tend to favor the local radio than Cal Poly students who enjoy Dance or Rock music.

3.2.2 Research Question #2: How do students listen to music these days?

Another question addressed was what devices Cal Poly students use to listen to music. We will first look at how many students own an Mp3 player. As hypothesized, a very big majority of Cal Poly students own an Mp3 player. 93%-99% of the sample replied that they did own an Mp3 player of some sort (Figure 19). This huge proportion confirms my suspicion that the Mp3 player has become a major device for musical enjoyment. This is displayed even further looking at the next graph showing the distributions of the different types of devices used for musical enjoyment. As you can see, the Mp3 player is the second most popular device used for musical enjoyment, behind the computer. Even when we condense the groups into handheld devices, “old school” devices, and radio in general on figure 20, the computer is the largest category with 39% to 52% of the responses. However, the response “computer” can be quite ambiguous, since there are many different ways to listen to music on your computer. The intention of the response was the person was listening to a library of music that was saved on their computer. More ambiguity comes into play because a very popular library to listen to music in is the Itunes library, which more than often synced to an Ipod. So with these two graphs displaying how big of a commodity an Mp3 player is, it is safe to say that the Mp3 player has taken over the musical device scene.

Figure 19: Bar Graph of Ipod Owners.

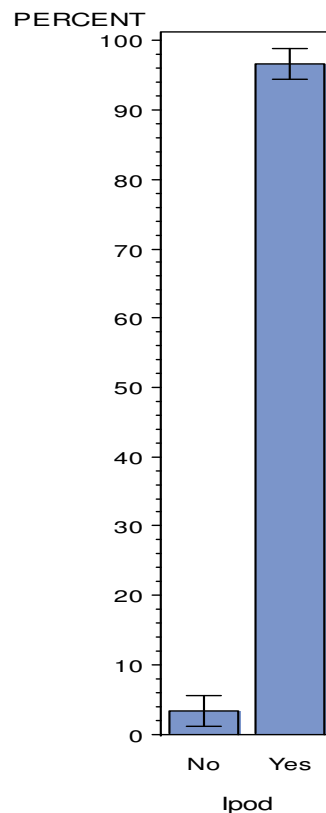
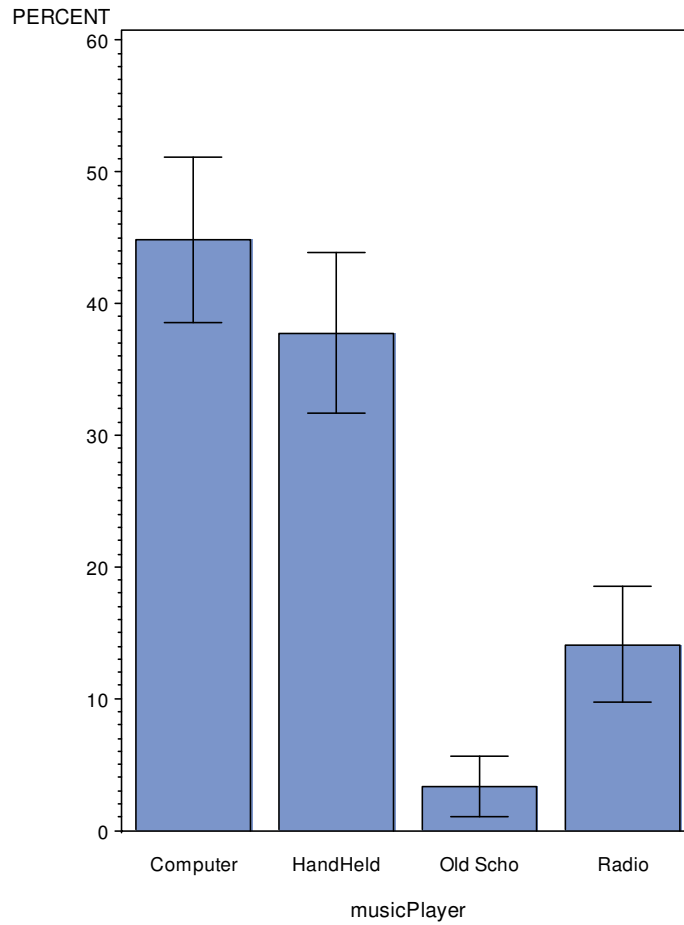
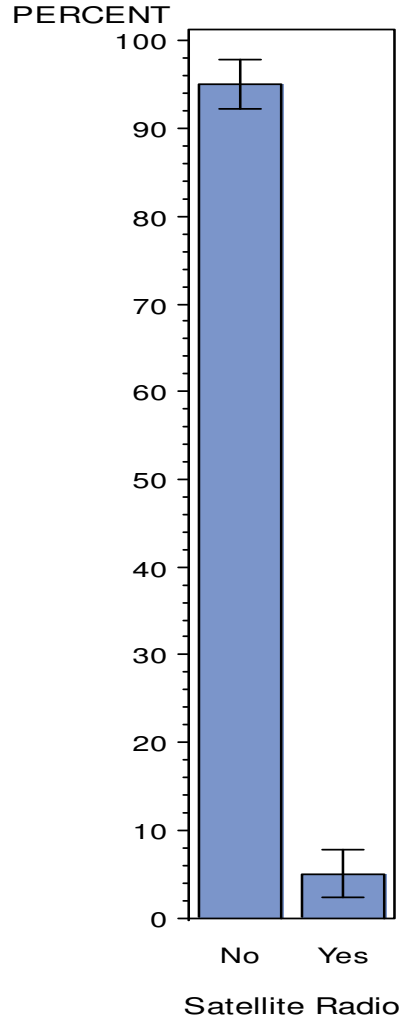


Figure 20: Bar graph of primary music player with condensed categories.



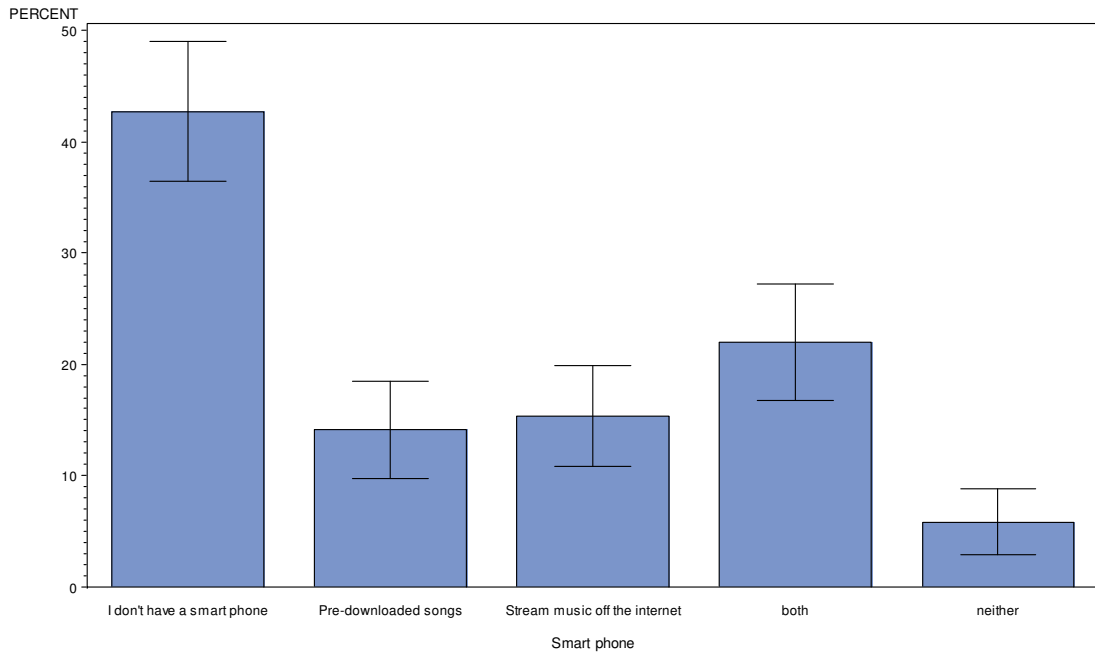
Another quick interesting note is that almost no college student has a subscription to satellite radio. Only 2% to 8% of the people who took the survey said they had a subscription to satellite radio (figure 21). Satellite radio is a very convenient way to listen to music, but it does seem like it would be too expensive or too much of a hassle for a college student to have a subscription to. So this proportion makes sense.

Figure 21: Bar graph of Satellite Radio Subscribers.



When asked how people apply their cell phone for listening to music, the largest response was humorously “I don't own a smart phone. However, out of the people who did own a smart phone, the majority of them responded that they stream music off the internet as well as listen to pre-downloaded songs. Only around 3 to 10% of the people actually responded that they didn't use their smart phone for musical enjoyment. This data is displayed in figure 22.

Figure 22: Bar graph of Smart Phone Application



3.2.2 Research Question #2a: What are the preferred genres of music of Cal Poly students?

The next graph deals with the proportion of responses for the question of favorite genre. As we can see, by the way that I grouped the genres together, the sample I collected prominently preferred Rock music over the Mellow or Dance Music group (Figure 23). The estimated proportion of people who enjoy rock music at Cal Poly is between 37% and 51%. Let us now turn our attention to the figure 24 that breaks up favorite genre by gender. As we can see from the graph, about the same proportion of females and males enjoy the music grouped into the dance genre. However, after that we can see some differences between genders. Females tend to like the genres under the Mellow category, while males tend to enjoy the rock category more. It visually looks like that the proportion of females who like the Mellow category is about double that of proportion of Males.

Figure 23: Bar graph of favorite genre, condensed categories.

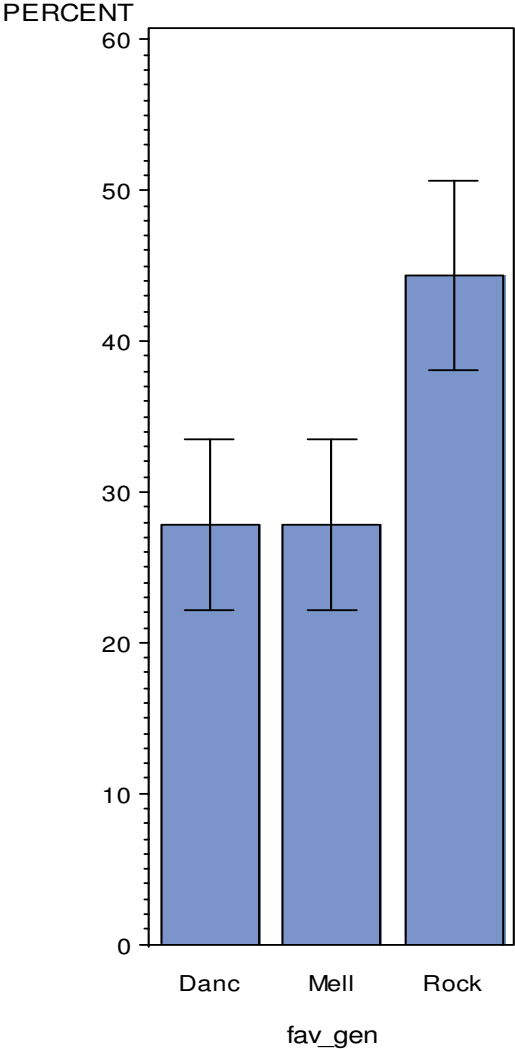
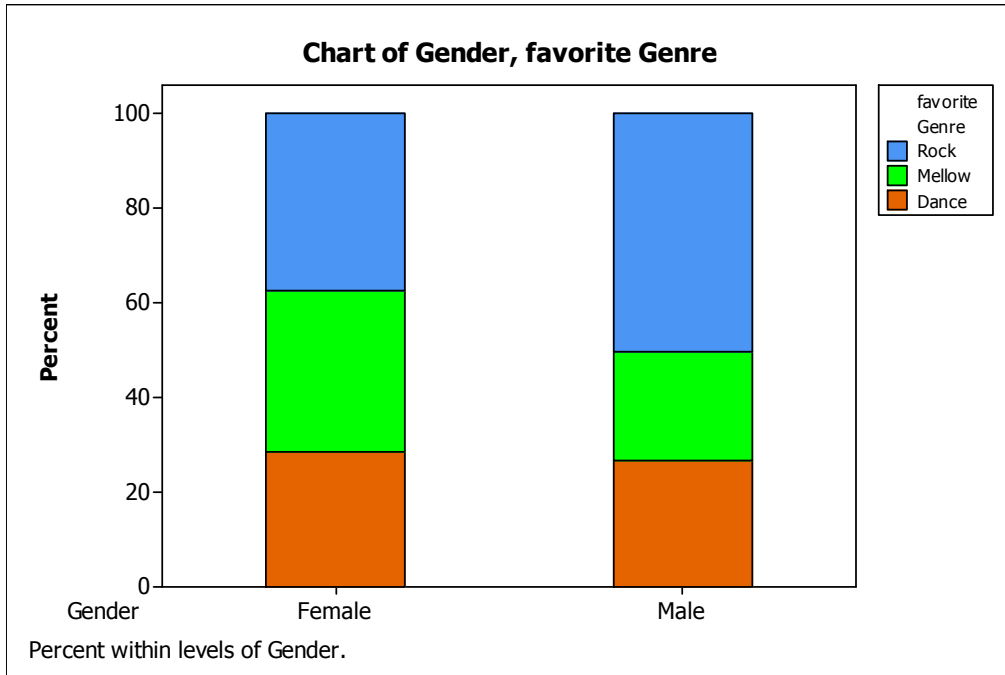


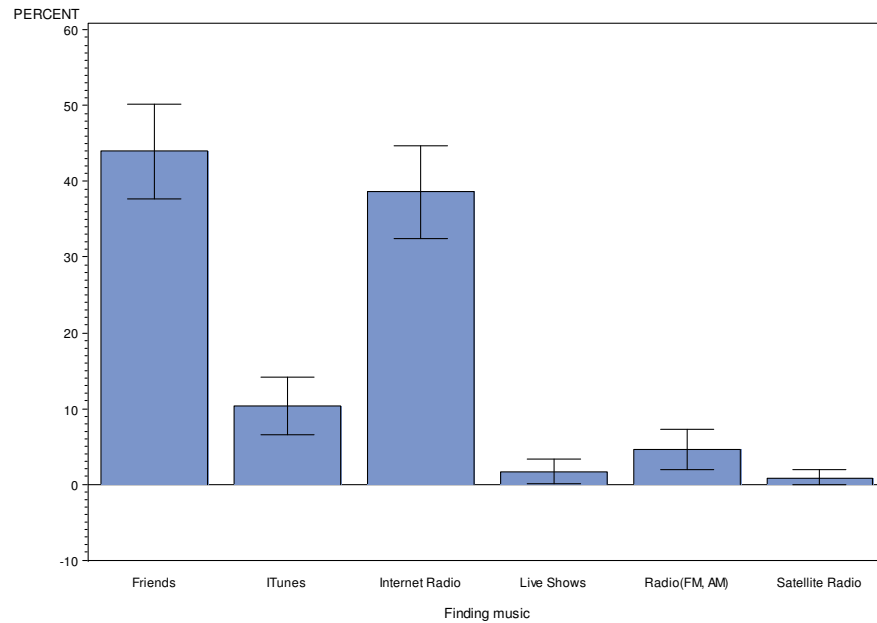
Figure 24: Bar Graph of Favorite Genre split by gender



3.2.2 Research Question #3: What sources do students use to find new music?

When asking the question of how people find new music, the biggest response was they find it through the means of their friends. Around 38% to 51% responded in this way displayed in figure 25. The second most popular response that came proportionally close to the “friends” response was finding music through internet radio with 32% to 46% of the responses. The two responses' margins of error overlap, so it is possible for these two responses to be proportionally the same.

Figure 25: Bar Graph of primary means of finding new music.



Summary:

I came into this project wanted to find out generally what kind of music Cal Poly students are in to, if they listen to the local San Luis Obispo radio, why they listen to San Luis Obispo radio and if they enjoyed the local radio. I also wanted to see what kind of devices students use to enjoy music and how they found new music. In the end, I feel I gained some good knowledge on these subjects about students on this campus.

In general, there are a good proportion of Cal Poly students who claim they never listen to the local San Luis Obispo Radio (95% CI: 19.9%, 31.2%). However, for the percentage that does listen to the radio at least a little bit tend to enjoy the local radio. Almost all Cal Poly students who listen to the radio listen for the music that is played, and not so much for talk shows or sporting events (95% CI: 90.1%, 97.3%). The highest picked favorite radio station was KWWV, which is a more Hip Hop/Pop station with KZOZ, a classic rock station right behind it proportionally. Cal Poly Students who enjoy Mellow music tend to enjoy the local radio more than students who enjoy rock or dance music. Interestingly, although students who enjoy mellow music tend to enjoy the local radio more, KWWV and KZOZ, which are Hip Hop/Pop and Classic rock stations, are the two most popular stations on campus. The Mp3 player seems to be a major musical device of choice for Cal Poly students. A major portion of Cal Poly students own an Mp3 player(95% CI: 93.6%, 98.6%), and the Mp3 player was the second highest main device proportionally. The most popular device for students for listening to music is on their computer(95% CI: 38.7%, 51.5%). For students who do own a smart phone, a good portion of them(95% CI: 83.6%, 94.3%) use it as a device to listen to music. Rock (95%CI: 37.9%, 50.7%) was the most prevalent genre compared to Mellow or Dance music. More interesting findings include that Rock music is the most prevalent genre over Mellow music and Dance music. However, we must also take into account that Hip Hop was the largest favorite genre. So students prefer Hip Hop, but overall enjoy the rock genre the most. Females tend to listen to Mellow music rather than Rock music, while it is the opposite for Males. Females and males listen to Dance music equally in proportion. The most popular way to finding new music for students is through friends(95% CI: 37.9%, 50.7%). The Second Most popular is internet radio (38.4%). FM radio looks to be obsolete for finding new music (4.5%).

This was a very fun and rewarding project and it helped me gain insight on student's attitudes towards music and radio. I'm glad I got to do a report on something I love. Thank you for reading.

Focus Group:

Along with doing this survey on campus for my Senior Project, I also agreed to help the radio station I worked at, 93.3 KZOZ, on a focus group to help them better understand what their listeners are looking for in a radio station, and how they can better the station and become more attractive to radio listeners. Some major issues that they wanted to look into was what people liked and disliked about the Jeff and Jeremy Morning show, such as the topics that they choose to talk about, their humor and antics, as well as their overall appeal. Another big issue was whether adults felt comfortable having their kids listen to their station, since their antics can become a little perverse, and some of the music they play has overtly sexual themes. The next big issue was how people perceived the station, what kind of music the station represents, and if they liked the music played on the station. Other issues were what people would like to win on contests, when they listened to KZOZ; if they enjoyed any of the weekend shows; if they enjoyed the local music scene, if they visited the new website and if so, why they visit the website, and if there was in general anything else that could be changed. The last really big issue was whether or not the KZOZ Rock Girl is an essential part of the radio station. The KZOZ rock girl might not be around for much longer, and we wanted to see if that would affect people's attitude towards KZOZ, in a positive or negative way.

The first focus group was held during the 10th week of Winter Quarter 2011. The first group was all woman listeners of KZOZ. The group was arranged accordingly. First the participants filled out a preliminary survey so we could first get a general understanding of the attitudes towards KZOZ. The survey was then collected, and Kristin, one of my lovely team members, proceeded to play 30 second clips of music for the participants, and they ranked each song on a scale of 1-7, 7 being this is the best song I've ever heard and 1 being the worst. The music was chosen beforehand. Some of the songs were songs that KZOZ already plays, some were songs that KZOZ would like to play, but didn't because of the reaction it might cause, and some of it was the questionable songs that KZOZ played, but was afraid people would turn to a different station if played. After the ranking of the music, Brett, my other teammate on this project, and myself would then come back into the room and dive deeper into subjects that were of most interest, like what music should be played, how people felt about the Morning Show, and the KZOZ rock girl. At the end of the session, we got the basic inference that the women did not mind overtly sexual themed music, as long as it wasn't violent. They did not mind their children listening to the station. And even though Jeff and Jeremy are a staple in KZOZ, and everyone agreed that the station would be nothing without them, they still did not care too much for the talk show side of the program, and only wanted to hear music while they were driving. The ladies did not

find the Rock Girl offensive, but they did find it to be more of an adolescent kind of pull towards the station. The absence of the rock girl would not affect their stance on the station. They basically said they could live with or without it. Also, the main prize that the focus group iterated was the prize of concert tickets. After the focus group, the participants were then given a tour of the American General Media building, and were served dinner courtesy of Mandarin Gourmet.

The focus group part of the project is going to be a long on-going project. I am mostly in charge of running the actual focus group rather than being part of any part of statistical analysis or result write-ups. This was a great way to learn another aspect of data collection by actually being part of it. It may be a small part of my project, but I'm glad I get to be a part of the team and broaden my horizon and experience in this area of learning about people's behaviors and tendencies.

Appendix

How often do you listen to the radio CI:

Variable	X	N	Sample p	95% CI
Sometimes	159	242	0.657025	(0.593505, 0.716643)
Everyday	22	242	0.090909	(0.057851, 0.134401)
Never	61	242	0.252066	(0.198636, 0.311679)

Program Primarily interested in:

Variable	X	N	Sample p	95% CI
Music	171	181	0.944751	(0.900745, 0.973191)
Sports	6	181	0.033149	(0.012261, 0.070752)
Talk Show	4	181	0.022099	(0.006053, 0.055614)

Favorite radio station

Variable	X	N	Sample p	95% CI
KBOX 104.1	1	175	0.005714	(0.000145, 0.031425)
KCPR 91.3	15	175	0.085714	(0.048768, 0.137431)
KIQO 104.5	15	175	0.085714	(0.048768, 0.137431)
KKAL 92.5	3	175	0.017143	(0.003549, 0.049279)
KKJG 98.1	11	175	0.062857	(0.031793, 0.109684)
KLFF 89.3	4	175	0.022857	(0.006262, 0.057487)
KLMM 94.1	2	175	0.011429	(0.001387, 0.040672)
KLVH 88.5	6	175	0.034286	(0.012684, 0.073129)
KPYG 94.9	1	175	0.005714	(0.000145, 0.031425)
KRUZ 97.5	5	175	0.028571	(0.009341, 0.065414)
KSLY 96.1	6	175	0.034286	(0.012684, 0.073129)
KSTT 101.3	4	175	0.022857	(0.006262, 0.057487)
KURQ 107.3	14	175	0.080000	(0.044426, 0.130584)
KUYB 103.3	9	175	0.051429	(0.023783, 0.095380)
KWWV 106.1	49	175	0.280000	(0.214874, 0.352743)
KXFM 99.1	2	175	0.011429	(0.001387, 0.040672)
KXTY 99.7	1	175	0.005714	(0.000145, 0.031425)
KXTZ 95.3	2	175	0.011429	(0.001387, 0.040672)
KZOZ 93.3	25	175	0.142857	(0.094632, 0.203623)

I enjoy the music on the radio

Variable	X	N	Sample p	95% CI
Agree	76	181	0.419890	(0.347076, 0.495371)
Disagree	36	181	0.198895	(0.143363, 0.264564)
Neutral	69	181	0.381215	(0.310176, 0.456214)

Devices:

Variable	X	N	Sample p	95% CI
Do you own an MP3/Ipod	234	242	0.966942	(0.935904, 0.985622)

Variable	X	N	Sample p	95% CI
Satellite Radio	12	242	0.049587	(0.025881, 0.085016)

Variable	X	N	Sample p	95% CI
Cassette	1	242	0.004132	(0.000105, 0.022807)
Cd Player	1	242	0.004132	(0.000105, 0.022807)
Computer	109	242	0.450413	(0.386612, 0.515444)
FM Radio	7	242	0.028926	(0.011707, 0.058687)
Internet Radio	24	242	0.099174	(0.064581, 0.143964)
MP3 Player	69	242	0.285124	(0.229125, 0.346473)
Satellite_Radio	3	242	0.012397	(0.002564, 0.035799)
Smart Phone	22	242	0.090909	(0.057851, 0.134401)
Vinyl	6	242	0.024793	(0.009152, 0.053181)

Smart Phone

Event = 1

Variable	X	N	Sample p	95% CI
both	53	242	0.219008	(0.168568, 0.276473)
neither	14	242	0.057851	(0.031985, 0.095160)
Pre-downloaded songs	34	242	0.140496	(0.099300, 0.190759)
Stream music off the int	37	242	0.152893	(0.109992, 0.204531)
I dont have a smart phon	104	242	0.429752	(0.366518, 0.494728)

Finding new music

Variable	X	N	Sample p	95% CI
Friends	107	242	0.442149	(0.378562, 0.507170)
Internet Radiol	93	242	0.384298	(0.322702, 0.448764)
iTunes	25	242	0.103306	(0.067977, 0.148716)
Live Shows	4	242	0.016529	(0.004521, 0.041778)
Radio (FM, AM)	11	242	0.045455	(0.022906, 0.079874)
Satellite Radio	2	242	0.008264	(0.001002, 0.029534)

Favorite Genre

Variable	X	N	Sample p	95% CI
Dance	67	242	0.276860	(0.221466, 0.337810)
Mellow	68	242	0.280992	(0.225293, 0.342145)
Rock	107	242	0.442149	(0.378562, 0.507170)

Chi Squared Tests

Statistics for Table of Gender by College

Statistic	DF	Value	Prob
Chi-Square	5	31.1026	<.0001
Likelihood Ratio Chi-Square	5	32.3602	<.0001

Sample Size = 241

Statistics for Table of Gender by musicPlayer

Statistic	DF	Value	Prob
Chi-Square	3	10.8518	0.0126
Likelihood Ratio Chi-Square	3	11.4505	0.0095

WARNING: 25% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Sample Size = 241

Statistics for Table of Gender by Smart_phone

Statistic	DF	Value	Prob
Chi-Square	4	17.8080	0.0013
Likelihood Ratio Chi-Square	4	18.0932	0.0012

Sample Size = 241

Statistics for Table of radioListeningTime by College

Statistic	DF	Value	Prob
Chi-Square	10	19.9393	0.0298
Likelihood Ratio Chi-Square	10	25.0871	0.0052

WARNING: 28% of the cells have expected counts less than 5. Chi-Square may not be a valid test.

Sample Size = 241

Senior Project: Music and Radio Preferences on the Cal Poly Campus

1.) Male Female Gender:

2.) What is your Current Age? _____

3.) What is your ethnicity: **Check all that apply**

- American Indian/Native American Asian African American Hispanic/Latino
- White/Caucasian Pacific Islander Other (Please Specify) _____
-

4.) Are you a current student or faculty/staff member at Cal Poly?

- Student Faculty Staff/Administration None of the above (Skip to 7)
-

5.) To what College within Cal Poly do you belong?

- College of Agriculture, Food and Environmental Science Orfalea College of Business
- College of Architecture and Environmental Design College of Liberal Arts
- College of Engineering College of Science and Mathematics
- None of the above
-

6.) I am an avid listener to music. (**Please check one**)

- Strongly Disagree Disagree Neutral Agree Strongly Agree
-

7.) Do you own an MP3 Yes No player/Ipod?

8.) Do you have a Subscription to satellite radio? Yes No

9.) What is your **primary** source of a music player? (**Please check one**)

- | | | | | |
|-------------------------------------|-----------------------------------|--|---|-----------------------------------|
| <input type="checkbox"/> Computer | <input type="checkbox"/> Cassette | <input type="checkbox"/> Cd Player | <input type="checkbox"/> Internet Radio | <input type="checkbox"/> FM Radio |
| <input type="checkbox"/> MP3 Player | <input type="checkbox"/> Vinyl | <input type="checkbox"/> Satellite Radio | <input type="checkbox"/> Smart Phone | |
-

10.) If you have a smart phone, do you listen to pre-downloaded songs or stream music off the internet?

- | | | | | |
|---|--|-------------------------------|----------------------------------|---|
| <input type="checkbox"/> Pre-downloaded songs | <input type="checkbox"/> Stream music off the internet | <input type="checkbox"/> Both | <input type="checkbox"/> Neither | <input type="checkbox"/> I don't have a smart phone |
|---|--|-------------------------------|----------------------------------|---|
-

11.) Please **pick** and **rank** your top **three** favorite musical genres:

- | | | | |
|---|---|--|--|
| <input type="checkbox"/> Acoustic _____ | <input type="checkbox"/> Dubstep _____ | <input type="checkbox"/> Jazz _____ | <input type="checkbox"/> Reggae _____ |
| <input type="checkbox"/> Alternative Rock _____ | <input type="checkbox"/> Electronic _____ | <input type="checkbox"/> Metal _____ | <input type="checkbox"/> Religious _____ |
| <input type="checkbox"/> Blues _____ | <input type="checkbox"/> Experimental _____ | <input type="checkbox"/> Oldies _____ | <input type="checkbox"/> Rockabilly/Punkabilly/
Psychobilly _____ |
| <input type="checkbox"/> Classical _____ | <input type="checkbox"/> Folk/Bluegrass _____ | <input type="checkbox"/> Pop _____ | <input type="checkbox"/> Soul _____ |
| <input type="checkbox"/> Classic Rock _____ | <input type="checkbox"/> Hardcore _____ | <input type="checkbox"/> Progressive _____ | <input type="checkbox"/> Ska _____ |
| <input type="checkbox"/> Country _____ | <input type="checkbox"/> Hard Rock _____ | <input type="checkbox"/> Punk _____ | <input type="checkbox"/> Techno _____ |
| <input type="checkbox"/> Contemporary _____ | <input type="checkbox"/> Hip Hop _____ | <input type="checkbox"/> R & B _____ | <input type="checkbox"/> World _____ |
| <input type="checkbox"/> Dance _____ | <input type="checkbox"/> Instrumental _____ | <input type="checkbox"/> Rap _____ | <input type="checkbox"/> Other(s) (please specify)
_____ |
-

12.) What is your **primary source** for finding music you personally have not heard before? (**Please check only one**)

- | | | | |
|----------------------------------|---|---------------------------------|-------------------------------------|
| <input type="checkbox"/> Friends | <input type="checkbox"/> Internet (radio) | <input type="checkbox"/> Itunes | <input type="checkbox"/> Live Shows |
|----------------------------------|---|---------------------------------|-------------------------------------|
-

- Movie Soundtracks
 Radio (FM, AM)
 Satellite Radio
 TV Shows
 Other (Please specify) _____

13.) How often do you listen to local radio?

- Never (skip to #16)
 2 to 3 times a month
 1 to 2 times a week
 3 to 6 times a week
 Everyday

14.) To what type of program do you **primarily** listen on FM, AM or Satellite radio? (**Please check only one**)

- Music
 Talk Show
 Sports
 I don't listen to radio
 Other _____

15.) What **local** San Luis Obispo radio station(s) do you listen to? (**Check all that Apply**)

- | | | | | |
|--------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|---|
| <input type="checkbox"/> KLVH – 88.5 | <input type="checkbox"/> KZOX – 93.3 | <input type="checkbox"/> KLRM – 97.1 | <input type="checkbox"/> KSTT – 101.3 | <input type="checkbox"/> KIQO – 104.5 |
| <input type="checkbox"/> KLFF – 89.3 | <input type="checkbox"/> KLMM – 94.1 | <input type="checkbox"/> KRUZ – 97.5 | <input type="checkbox"/> KRKC – 102.1 | <input type="checkbox"/> KWWV – 106.1 |
| <input type="checkbox"/> KCBX – 90.1 | <input type="checkbox"/> KPYG – 94.9 | <input type="checkbox"/> KKJG – 98.1 | <input type="checkbox"/> KLUN – 103.1 | <input type="checkbox"/> KURQ – 107.3 |
| <input type="checkbox"/> KCPR – 91.3 | <input type="checkbox"/> KXTZ – 95.3 | <input type="checkbox"/> KXFM – 99.1 | <input type="checkbox"/> KUYB – 103.3 | <input type="checkbox"/> Other (please specify) _____ |
| <input type="checkbox"/> KBDH – 91.7 | <input type="checkbox"/> KPAT – 95.7 | <input type="checkbox"/> KXTY – 99.7 | <input type="checkbox"/> KTEA – 103.5 | |
| <input type="checkbox"/> KKAL – 92.5 | <input type="checkbox"/> KSLY – 96.1 | <input type="checkbox"/> KXDZ – 100.5 | <input type="checkbox"/> KBOX – 104.1 | |

16.) What is your favorite **local** San Luis Obispo radio station? (**Please Check One**)

- | | | | | |
|--------------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|
| <input type="checkbox"/> KLVH – 88.5 | <input type="checkbox"/> KZOX – 93.3 | <input type="checkbox"/> KLRM – 97.1 | <input type="checkbox"/> KSTT – 101.3 | <input type="checkbox"/> KIQO – 104.5 |
|--------------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|

- | | | | | |
|--------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|--|
| <input type="checkbox"/> KLFF – 89.3 | <input type="checkbox"/> KLMM – 94.1 | <input type="checkbox"/> KRUZ – 97.5 | <input type="checkbox"/> KRKC – 102.1 | <input type="checkbox"/> KWWV – 106.1 |
| <input type="checkbox"/> KCBX – 90.1 | <input type="checkbox"/> KPYG – 94.9 | <input type="checkbox"/> KKJG – 98.1 | <input type="checkbox"/> KLUN – 103.1 | <input type="checkbox"/> KURQ – 107.3 |
| <input type="checkbox"/> KCPR – 91.3 | <input type="checkbox"/> KXTZ – 95.3 | <input type="checkbox"/> KXFM – 99.1 | <input type="checkbox"/> KUYB – 103.3 | <input type="checkbox"/> Other (please specify)
_____ |
| <input type="checkbox"/> KBDH – 91.7 | <input type="checkbox"/> KPAT – 95.7 | <input type="checkbox"/> KXTY – 99.7 | <input type="checkbox"/> KTEA – 103.5 | |
| <input type="checkbox"/> KKAL – 92.5 | <input type="checkbox"/> KSLY – 96.1 | <input type="checkbox"/> KXDZ – 100.5 | <input type="checkbox"/> KBOX – 104.1 | |

17.) (Please check one) I enjoy the music on the **local** San Luis Obispo FM radio.

- Strongly Disagree
 Disagree
 Neutral
 Agree
 Strongly Agree

Code:

```

data breakdown;
set music;
if _nd_genre = "Alternative Rock" or _nd_genre = "Classic Rock"

```

```

or _nd_genre = "Hard Rock" or _nd_genre = "Hardcore" or _nd_genre = "Metal"
or _nd_genre = "Experimental" or _nd_genre = "Punk" or _nd_genre = "Blues"
or _nd_genre = "Indie" or _nd_genre = "Progressive" or _nd_genre =
"Rockabilly/Punkabilly"
then second_gen = "Rock";
else if _nd_genre = "Hip Hop" or _nd_genre = "Dubstep"
or _nd_genre = "Electronic" or _nd_genre = "Dance" or _nd_genre = "R & B"
or _nd_genre = "Rap" or _nd_genre = "Funk" or _nd_genre = "Techno"
or _nd_genre = "Pop" or _nd_genre = "Ska"
then second_gen = "Dance";
else if _nd_genre = "Country" or _nd_genre = "Acoustic"
or _nd_genre = "Reggae" or _nd_genre = "Folk/Bluegrass" or _nd_genre =
"Classical"
or _nd_genre = "Oldies" or _nd_genre = "Religious" or _nd_genre = "Jazz"
or _nd_genre = "World" or _nd_genre = "Instrumental" or _nd_genre =
"Contemporary"
then second_gen = "Mellow";

if favorite_genre = "Alternative Rock" or favorite_genre = "Classic Rock"
or favorite_genre = "Hard Rock" or favorite_genre = "Hardcore" or
favorite_genre = "Metal"
or favorite_genre = "Experimental" or favorite_genre = "Punk" or
favorite_genre = "Blues"
or favorite_genre = "Indie" or favorite_genre = "Progressive"
then fav_gen = "Rock";
else if favorite_genre = "Hip Hop" or favorite_genre = "Dubstep"
or favorite_genre = "Electronic" or favorite_genre = "Dance" or
favorite_genre = "R & B"
or favorite_genre = "Rap" or favorite_genre = "Funk" or favorite_genre =
"Techno"
or favorite_genre = "Pop"
then fav_gen = "Dance";
else if favorite_genre = "Country" or favorite_genre = "Acoustic"
or favorite_genre = "Reggae" or favorite_genre = "Folk/Bluegrass" or
favorite_genre = "Classical"
or favorite_genre = "Oldies" or favorite_genre = "Religious" or
favorite_genre = "Jazz"
or favorite_genre = "World" or favorite_genre = "Instrumental"
then fav_gen = "Mellow";

if _rd_genre = "Alternative Rock" or _rd_genre = "Classic Rock"
or _rd_genre = "Hard Rock" or _rd_genre = "Hardcore" or _rd_genre = "Metal"
or _rd_genre = "Experimental" or _rd_genre = "Punk" or _rd_genre = "Blues"
or _rd_genre = "Indie" or _rd_genre = "Progressive" or _rd_genre =
"Rockabilly/Punkabilly"
then third_gen = "Rock";
else if _rd_genre = "Hip Hop" or _rd_genre = "Dubstep"
or _rd_genre = "Electronic" or _rd_genre = "Dance" or _rd_genre = "R & B"
or _rd_genre = "Rap" or _rd_genre = "Funk" or _rd_genre = "Techno"
or _rd_genre = "Pop" or _rd_genre = "Ska"
then third_gen = "Dance";
else if _rd_genre = "Country" or _rd_genre = "Acoustic"
or _rd_genre = "Reggae" or _rd_genre = "Folk/Bluegrass" or _rd_genre =
"Classical"
or _rd_genre = "Oldies" or _rd_genre = "Religious" or _rd_genre = "Jazz"

```

```

or _rd_genre = "World" or _rd_genre = "Instrumental" or _rd_genre =
"Contemporary"
then third_gen = "Mellow";
run;

data newMusic;
set breakdown;
if Radio_listening_time = "1 to 2 times a week" or Radio_listening_time = "2
to 3 times a month"
or Radio_listening_time = "3 to 6 times a week" then radioListeningTime =
"Sometimes";
else radioListeningTime = Radio_listening_time;

if music_player = "MP3 Player" or music_player = "Smart Phone" then
musicPlayer = "HandHeld";
else if music_player = "Cassette" or music_player = "Vinyl" or music_player =
"Cd Player" then musicPlayer = "Old School";
else if music_player = "Satellite Radio" or music_player = "Internet Radio"
or music_player = "FM Radio" then musicPlayer = "Radio";
else musicPlayer = music_player;

if College = "Non Affiliated" then delete;

if radio_enjoyment = "99" then radio_enjoyment = " ";

if radio_enjoyment = "Strongly Agree" then radio_enjoyment = "Agree";
if radio_enjoyment = "Strongly Disagree" then radio_enjoyment = "Disagree";

run;

data radio;
set newMusic;
if favorite_station = "KBOX 104.1" or favorite_station = "KPYG 94.9" or
favorite_station = "KRUZ 97.5"
or favorite_station = "KSTT 101.3" or favorite_station = "KURQ 107.3" or
favorite_station = "KXFM 99.1"
or favorite_station = "KXTZ 95.3" or favorite_station = "KZOZ 93.3" then
fav_station = "Rock";

else if favorite_station = "KLMM 94.1" or favorite_station = "KUYB 103.3" or
favorite_station = "KWWV 106.1"
or favorite_station = "KXTY 99.7" then fav_station = "Dance";

else if favorite_station = "KCPR 91.3" or favorite_station = "KIQO 104.5" or
favorite_station = "KKAL 92.5" or
favorite_station = "KKJG 98.1" or favorite_station = "KLFF 89.3" or
favorite_station = "KLVH 88.5" or
favorite_station = "KSLY 96.1" then fav_station = "Mellow";

else fav_station = " ";
run;

data cumulative;
set radio;
if radio_enjoyment = "Agree" then radio_enjoyment = "1";

```

```

else if radio_enjoyment = "Neutral" then radio_enjoyment = "2";
else if radio_enjoyment = "Disagree" then radio_enjoyment = "3";
run;

proc print data = breakdown;
var fav_gen;
run;

proc logistic data = cumulative;
class College Ethnicity radioListeningTime musicPlayer Gender radio_enjoyment
fav_gen (ref="Mell") fav_station;
model fav_gen = gender age / link = glogit expb scale = none;
oddsratio gender;
run;

proc freq data = newMusic order = data;
tables Gender*College / chisq expected;
run;

proc print data = cumulative;
var age;
run;

proc freq data = newMusic order = data;
tables Radio_listening_time*College / chisq expected;
run;

```