

TOOLS FOR LISTENER ENGAGEMENT

an Interactive Qualifying Project



written by

**QUINN AVERILL, BRADFORD BONANNO,
CHRISTIAN SCILLITOE, JEFFREY WAGNER**

in collaboration with

WICN PUBLIC RADIO

December 15th, 2017

TOOLS FOR LISTENER ENGAGEMENT



Sponsored by

Amanda Carr, WICN Public Radio in Worcester, Massachusetts

Submitted by

Quinn Averill, Bradford Bonanno, Christian Scillitoe, Jeffrey Wagner

Submitted to

Professor Vincent Manzo, Worcester Polytechnic Institute

Submitted on December 15th, 2017

An Interactive Qualifying Project submitted to the faculty of Worcester Polytechnic Institute in partial fulfillment of the requirements for the Degree of Bachelor of Science by Quinn Averill, Bradford Bonanno, Christian Scillitoe, and Jeffrey Wagner.

This report represents the work of four WPI undergraduate students submitted to the faculty as evidence of completion of a degree requirement. WPI routinely publishes these reports on its website without editorial or peer review. For more information about the projects program at WPI, please see: <http://www.wpi.edu/Academics/Projects>.

Abstract

WICN, the Worcester, Massachusetts jazz radio station, is looking for new ways to distribute multimedia content in hopes of attracting a younger audience to keep the spirit of jazz alive. We explored potential strategies for delivering a variety of content to a multimedia platform by observing other radio stations' success, national statistics, and a survey administered to WPI students to affirm our research. We determined that uploading live studio recordings of artists to YouTube and sharing via Facebook would be most effective in attracting a younger audience.

Acknowledgements

We would like to acknowledge the great people who helped us complete this assignment.

Professor V.J. Manzo, you made this project feel structured, and you were an excellent guide for us whenever we ran into a difficult problem. We greatly appreciate your friendly attitude and readiness to assist us with whatever we needed help with.

Laura Robinson, without you, our research would have been much less in-depth. You taught us how to properly conduct research on a topic and gave us a ‘never give up’ attitude when it came to finding the perfect statistic.

Tom Lucci, you always asked resourceful questions that improved the targeted research we were conducting. It was a great pleasure to work with someone with so much experience in the field.

Amanda Carr, your love for WICN was clear to us when we first met with you to discuss this project. You supplied us with all of the information we needed, and the energy you brought to our meetings helped drive us. Thank you.

Table of Authorship

	Primary Author(s)	Primary Editor(s)
Abstract	Quinn	All
Acknowledgements	Christian	Jeff
Executive Summary	Quinn	Brad
1 Introduction	Jeff	Quinn
2 Background		
2.1 Who is WICN	Christian	Quinn
2.2 WICN's Current Demographics	Brad	Jeff
2.3 WICN Current Ratings	Jeff	Brad
2.4 Current State of Radio	Jeff	Brad
2.5 Trends in Radio Ratings	Quinn	Christian
2.6 Radio Stations and Multimedia Platforms	Quinn	Christian
2.7 What WICN Is Looking For	Christian	Jeff
3 Methodology	Brad	All
3.1 Objective 1: Identify Platforms	Brad	Christian
3.2 Objective 2: Determine Content Types	Brad	Jeff
3.3 Objective 3: Assemble a Plan	Brad	Quinn
3.4 Target Demographic Survey	Brad	Christian
4 Findings		
4.1 Objective 1 Findings	Quinn	Brad
4.2 Objective 2 Findings	Jeff, Christian	Quinn

4.3 Objective 3 Findings

Brad

Jeff

5 Recommendations and Conclusion

5.1 Recommendations To Accomplish Objectives

Brad

Christian

5.2 Additional Recommendations

Christian

Quinn

*After the primary editor made the first set of edits, we all went through and did a final take of edits together

Table of Contents

	Page Number
Abstract	i
Acknowledgements	ii
Table of Authorship	iii
Table of Contents	v
Table of Figures	vii
Executive Summary	viii
1 Introduction	1
2 Background	2
2.1 Who is WICN	2
2.2 WICN's Current Demographics	2
2.3 WICN Current Ratings	3
2.4 Current State of Radio	4
2.5 Trends in Radio Ratings	7
2.6 Radio Stations and Multimedia Platforms	8
2.7 What WICN Is Looking For	10
3 Methodology	11
3.1 Objective 1: Identify Platforms	11
3.2 Objective 2: Determine Content Types	12
3.3 Objective 3: Assemble a Plan	12
3.4 Target Demographic Survey	13

4 Findings	14
4.1 Objective 1 Findings	14
4.2 Objective 2 Findings	19
4.3 Objective 3 Findings	23
5 Recommendations and Conclusion	29
5.1 Recommendations To Accomplish Objectives	29
5.2 Additional Recommendations	30
References	31
Appendices	38
Appendix A	38
Appendix B	39
Appendix C	41

Table of Figures

	Page Number
Figure 1: <i>Online and over-the-air radio station revenues in the United States</i>	5
Figure 2: <i>Share of monthly online radio listeners in the United States</i>	6
Figure 3: <i>Monthly Digital Radio Listeners in the United States</i>	8
Figure 4: <i>Distribution of Digital Radio Listening in the United States</i>	9
Figure 5: <i>Music Platforms used in the United States</i>	15
Figure 6: <i>Content Platform Comparison</i>	17
Figure 7: <i>Survey Results on Social Media Platforms</i>	18
Figure 8: <i>Survey results on music-related content interests</i>	23
Figure 9: <i>TV usage in the United States</i>	26
Figure 10: <i>Peak times to upload to YouTube by day</i>	27
Figure 11: <i>Viewership by day on YouTube</i>	27

Executive Summary

Introduction

WICN, the Worcester, Massachusetts jazz radio station, is on a mission to spread the spirit of jazz to as many people as possible across new demographics. Currently, their average audience age is 65, with the standard deviation ranges decreasing over time. In proportion to the total reach of WICN's broadcast, their core listener base has remained steady. However, the station's total reach is decreasing, which indicates that the core audience is decreasing in size as well. A similar trend appears in analog radio ratings, and the opposite shows in online radio ratings. By streaming content online in tandem with their terrestrial programs, WICN can adapt to the digital age and grow a new audience.

By streaming new content online, WICN will make their content accessible to anyone, anytime, and anywhere. WICN already has an app to stream their live programs over the Internet, but they are additionally interested in expanding their options to allow viewers to consume their content in new ways in hopes of pulling in a younger, more diverse audience.

The goal of this project was to investigate the possible methods in which WICN can expand into multimedia, leveraging a variety of content types in order to engage a wider audience. To reach this goal, we identified three main objectives:

1. Identify which platforms will provide the best space for new WICN content.
2. Determine which types of content will attract and engage a new audience.
3. Assemble a plan for expansion in order to maximize success.

By narrowing down to these three main objectives, we were able to focus our efforts into the largest components of the potentially vague concept of audience engagement. To gain further insight, we administered a survey to college students between the ages of 18 and 25 years old in the Worcester area, a demographic representative of a potential new target audience for WICN. The survey and its results can be found later down in this document.

Findings

Objective 1 lead us to researching different platforms that would be viable for WICN to post content on based on their popularity and if they are easily monetizable. After comparing the pros and cons of multiple different platforms, YouTube was found to be the most viable option. It is the most popular music platform among radio listeners, easy to upload original content, and can even generate revenue if executed correctly. Based on our survey, we suggest that WICN should use Facebook as their primary news distributor to spread news of new content, utilizing additional social media outlets where possible.

In Objective 2, we looked at what types of content will provide the most extensive growth in audience for WICN. We determined four main types of content to be most viable for WICN:

- Studio Recordings of Live Music
- Music News
- Artist Interviews
- Informative/Educational Content

We also determined four main formats for content to be presented in:

- Online Radio

- Podcasts
- Live Stream Video
- Recorded Video

Out of these content types and formats, we suggest that WICN focuses on producing video of live studio recordings for their YouTube channel.

Objective 3 caused us to find when and how new content should be uploaded in order to maximize its overall success. For strategies on how to upload new content, we determined two rules of thumb for WICN to use: gaps should be left between media premiers to increase demand, and riskier content should be released between new and recurrent content. A chart of when the best times during each day are to post new content was discovered (Shown in 4.3.2), giving WICN an excellent guide for the future. As a final piece to the puzzle, our team utilized the YouTube API to calculate when WICN's possible competitors typically upload new videos (Appendix B), so it would be best to avoid uploading content during those times while also keeping in mind the chart in 4.3.2.

Recommendations

Based on our research, we recommend that WICN's first priority should be to establish a consistent schedule of uploading studio recordings of live music to attract the target demographic of college-aged students. Additionally, we recommend focusing all content hosting towards YouTube, and use Facebook as the primary social media outlet for sharing the new content. The new content should begin as live performances and artist interviews, but eventually consider creating livestreams and news clips on music related content. In order to maximize potential

viewers, we recommend WICN establish a pattern of uploading within the hours of 1PM and 3PM on Thursday and Friday, or 9AM to 11AM on Saturday and Sunday. In order to avoid cannibalization of interest among the audience, we believe at least a month should be left between establishing any new streams of content.

1. Introduction

In the roaring twenties, radio was a landmark technology that was nearly universal in households across the United States. Nowadays, it has faded into the shadow of television, and even more recently, the Internet. Local Worcester jazz radio station WICN has felt the impact of this advancement especially hard, with programming that caters towards an aging audience and no way to capture the younger crowd. WICN has previously worked with WPI to develop a smartphone app for their station, but that has shown limited success. Now, the station is looking to produce new content in addition to their existing radio show to draw in a new audience. Hopefully, additional content will engage new listeners with the regular broadcast as well.

2. Background

2.1 Who is WICN

WICN Public Radio, Inc., previously known as the Worcester Inter-Collegiate Network, is a public jazz radio station located in Worcester, MA. This station has been a vibrant presence in the cultural life of Worcester, Massachusetts for over 45 years. Founded in 1969, WICN joined together colleges throughout Worcester, such as Holy Cross and Worcester Polytechnic Institute, with its jazz related programs. As the station grew, so did its recognition. In 1980, they became a member of National Public Radio, and in 1987, WICN was accredited by the Corporation for Public Broadcasting.

Currently, WICN's main focus is making jazz accessible to the public. Alongside jazz, WICN also prescribes doses of other related genres of music such as folk, blues, acoustic, and new age. This station differentiates itself from other jazz radio stations by including a comparatively large amount of live music on air, regularly bringing in artists to play live on their radio to make their audience feel more connected to the station and to the spirit of jazz.

2.2 WICN's Current Demographics

In order to estimate which demographics they are reaching, WICN considers data from Nielsen, a company specializing in various forms of radio measurement. One such format is the Listener Behavior Report, published quarterly or biannually, which coalesces data from the listener logs of panelists in more than 225 large and small markets ("Audio | Nielsen"). Information inside includes loyalty graphs, tune-in vs. tune-out graphs, and more.

Before continuing, it is important to note the pitfalls of the Nielsen ratings. Reports are assembled off of 12 week intervals of diaries, which requires panelists to be diligent in their recordings for the duration of the survey. Additionally, Worcester is part of a smaller market, therefore there are fewer participants in the Nielsen logs year to year. The 2012, 2015, and 2016 reports that we analyzed are based off of 41, 45, and 39 diaries respectively.

An integral part of the Nielsen's report for determining which demographics are listening is the "Change In Median Age" graph. This diagram visually breaks down the median age of listeners at a given point in time and compares it to the median of the station overall. The most extreme deviations from the median, however, are likely to take place during periods of light listening (and therefore a smaller sample) according to Nielsen. Throughout the three most recent reports purchased by WICN, the median age of the station's listeners hovered around 65 years old. The deviations from this median, however, have decreased over time. In 2012, this graph spanned from -55 years to +12 years. In 2015, this shrank to a range of -30 years to +15 years. The most recent report, 2016, had this range at -20 years to +15 years, the smallest yet. Although this seems to imply that WICN is losing its younger listener base, it is also a possibility that the market containing Worcester is simply losing its' younger panelists.

2.3 WICN Current Ratings

The Nielsen reports also reveal important statistics about the reach of the station. The reports include the number of people that tune in to WICN on an average week as well as the loyalty of these listeners to the station. Loyalty is based on how many listeners choose WICN as their first

choice, i.e., if WICN is the station they listen to the most frequently whenever they listen to radio.

The most significant analysis of these figures is to look at trends over the years to see where the station is heading in terms of audience. Conveniently, the Nielsen reports contain a handful of historical graphs, containing information from the past ten to fifteen years on total listeners and loyalty. In the 2016 report, these graphs show that the number of people listening in 2016 is about a third of what it was in 2002. There is a similar decrease in the number of second-choice listeners, while the number of first-choice listeners has a smaller drop, though still significant.

On the other hand, WICN's core listener base has remained steady in proportion to the total reach. All of the historical graphs in the Nielsen report indicate a fairly consistent percentage of loyal listeners to the station. However, these percentages remaining constant while the total listeners are decreasing indicates that the core audience is decreasing in size as well.

2.4 Current State of Radio

In an increasingly digital world, analog radio is having trouble keeping up. According to the Statista dossier "Radio in the U.S.," which contains research from many firms on the status of Radio in the United States, the American radio industry has been stagnant for most of the past decade, while digital radio has shown strong upward trends. From 2010 to 2016, over-the-air radio station revenue in the United States has remained between 14 and 14.3 billion dollars. In that same time period, online radio revenue in the US has nearly doubled, from 410 million to 810 million dollars (BIA/Kelsey, n.d.).

Radio station revenues in the U.S. 2006-2016, by source

**Radio station revenues in the United States from 2006 to 2016, by source
(in billion U.S. dollars)**

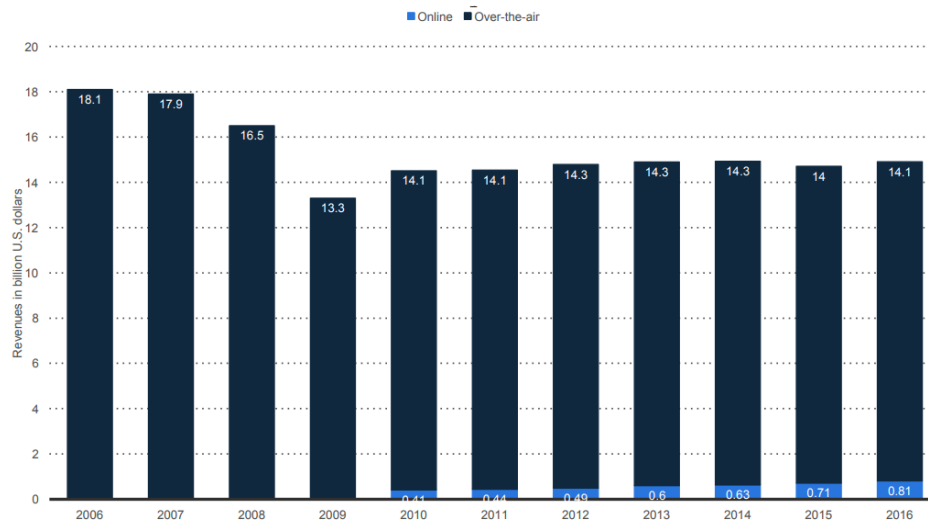


Figure 1. Online and over-the-air radio station revenues in the United States

From 2000 to 2016, the share of the US population that listened to online radio on an average month rose from 5% to 61% (Edison Research, n.d.).

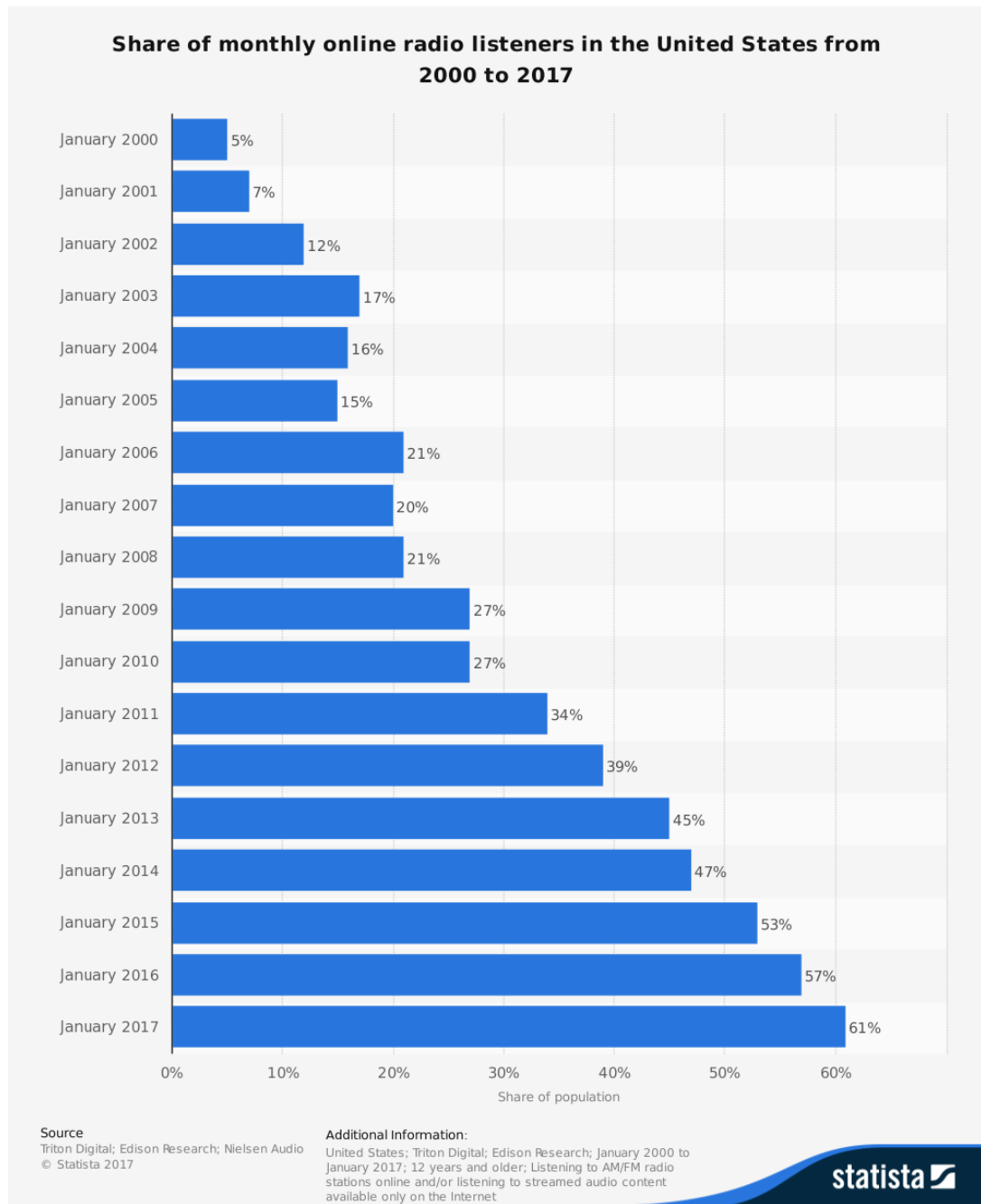


Figure 2. Share of monthly online radio listeners in the United States

2.5 Trends in Radio Ratings

With the increase of new forms of technology comes the decline of the old. Although it may seem to discontinue the obsolete and unnecessary forms of technology, sometimes the additional technology ends up creating a renewed interest for what it replaced, and that is exactly what happened to radio.

In the mid 1930's, radio was in the height of its popularity. Families would sit around the radio and listen intently to music and stories being told over the air. However, this changed in the early 1950's, when televisions started to become the preferred platform for family entertainment. One would think that this would replace the need for a radio, but instead it changed what radio meant to a listener by turning it into a solitary activity. Radio produces a purely auditory experience for the listener to intimately engage with the disembodied voice of the broadcaster. This sparked a new interest that is still relevant in radio today (Edmond, 2015).

Radio has survived through the many new formats of music, but it is losing popularity once again in the Internet age. With the Internet, one can listen to whatever they want, at any time and place. Instead of disk jockeys choosing what music we listen to, algorithms create playlists customized for the listener. People prefer to use smartphone or web applications that provide them with music, largely because of how accessible it is, unlike radio, where a box or car is necessary to listen. To adapt along with changing technology, radio stations are now transmitting over the Internet in tandem with AM or FM broadcasting and finding great success with younger audiences.

2.6 Radio Stations and Multimedia Platforms

By moving its distribution of radio content to an online platform, a radio station can increase the size of their younger audience, and allow new ways of engaging with the music via apps.

Nowadays, everyone has a device capable of transmitting music in their pockets at all times.

Instead of listening to a radio in the car or house, one can simply search for any music they want on the Internet and listen to it wherever they might be. 73% of jazz radio listeners are over the age of 45 (Radio Advertising Bureau, 2017), indicating that not many younger listeners choose to listen to jazz from the radio. If they can access it from the Internet, then they might be more interested to listen.

The number of monthly digital radio listeners from ages 18 and up in the United States has increased by 50% from 2012 to 2016 (MarketingCharts, n.d.). In May of 2016, 37.4% of digital radio listeners were between the ages of 20 and 29 (Triton Digital, n.d.).

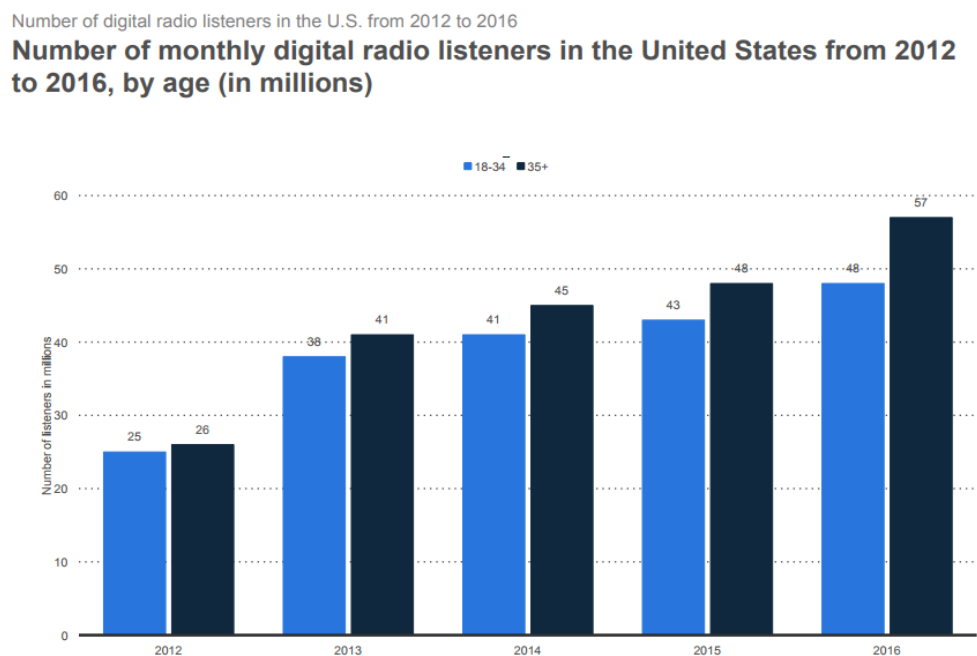


Figure 3: Monthly Digital Radio Listeners in the United States

Digital radio listening in the U.S. 2016, by age

Distribution of digital radio listening in the United States in May 2016, by age

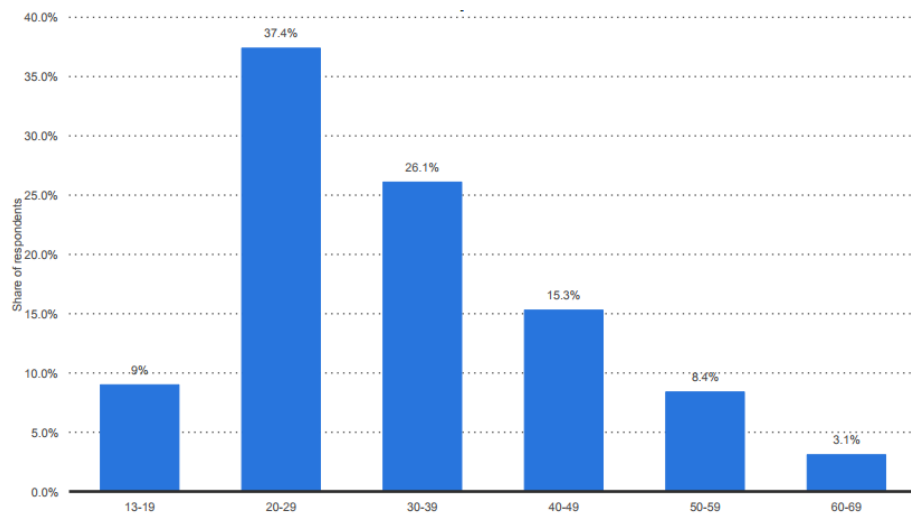


Figure 4: Distribution of Digital Radio Listening in the United States

From these trends, it can be inferred that online broadcasting will increase the number of young adults in a radio station's audience. This raises an important question: how are the listeners accessing online radio?

In September of 2016, 73% of digital radio listeners were using cell phones to tune in. (Triton Digital, n.d.) WICN already has an app to transmit radio content to their audience, but listening in to over-the-air content is definitely not the end of the road. The station envisions many new possibilities on how using multimedia platforms can expand their audience and allow new ways for a listener to get down with the hot jazz WICN has to offer.

2.7 What WICN Is Looking For

WICN is looking to expand their audience to new demographics, as well as their options for musical platforms. They want to continue to keep their current over-the-air radio audience, while additionally pulling in a younger, more diverse audience through another way of music sharing, such as YouTube. In particular, WICN is interested in uploading more broadly genred live music onto the web to attract listeners in order to ensure that they will still be profitable regardless of what happens with terrestrial radio in the future.

3. Methodology

The goal of this project is to investigate the possible methods in which WICN can expand into multimedia, leveraging a variety of content types in order to engage a wider audience. To reach this goal, we have identified three main objectives:

1. Identify which platforms will provide the best space for new WICN content.
2. Determine which types of content will attract and engage a new audience.
3. Assemble a plan for expansion in order to maximize success.

By narrowing down to these three main objectives, we are able to focus our efforts into the largest components of the potentially vague concept of audience engagement.

3.1 Objective 1: Identify Platforms

In order to identify which platforms will be best received by potential new audiences, we first seek to understand which platforms are gaining or sustaining popularity, easily monetizable, and commonly used for music or music-related content. Through the vectors of academic research focused around marketing strategies, industry research from radio experts, and current statistics regarding each user-base and monetization schemes, we will outline the benefits and detriments of several prominent platforms. Specifically, we aim to find statistics on popularity of each potential platform, as well as weight potential revenue structures, looking first and foremost to provide a monetizable platform that will enable growth.

In addition to the research discussed above, we will administer a survey to a potential target demographic for expansion partially regarding this objective. The details of this survey may be found below in Section 3.4.

3.2 Objective 2: Determine Content Types

We attempted to determine which content types will provide the most extensive growth in audience. In the saturated market of the information age, a diverse range of content formats have arisen, including traditional radio broadcasts, live-stream video, on-demand video, and podcasts. We will take a similar research strategy to Objective 1, attempting to combine industry and academic resources with raw statistics on the respective growth of each format to determine the brightest prospects. Here a large focus of our research will be into the success of other radio stations who have attempted to expand to these content-types, as well as their relative production costs. In addition, we aim to determine which content types draw in new viewers most easily.

This research will be supplemented with the survey mentioned in Objective 1, posing questions to a potential new target audience regarding these possible formats. The details of this survey may be found below in Section 3.4.

3.3 Objective 3: Assemble a Plan

Coalescing research from Objective 1 and Objective 2 to fill in the specifics of which platforms and formats to target, our team identified the most effective strategy for broadening content. We will combine resources focused from a business perspective on growth strategies for new products as well as from a marketing perspective on effective ad campaigns. We will use this to

determine how many new products should be piloted at a time and how to nurture them until they find a sustainable audience. This information will allow us to build a prospective timeline for launching specific content and show us how to prioritize advertising spending to optimize audience growth.

The second half of our research will focus on the timing of episodic content - what days and times are best to publish this content, and how to avoid competition with similar creators. Doing this will provide WICN with valuable information as to how to optimize their potential viewership for any individual video being uploaded.

3.4 Target Demographic Survey

In order to gain further insight, we surveyed college students between the ages of 18 and 25 years old in the Worcester, MA area, a demographic representative of a potential new target audience for WICN. We believe that there is room for wider surveying for wider expansion, though it is our intuition that a slower, focused approach will be a more successful one for the station. As such, there could be an advantage to gaining insight into different demographics iteratively, administering our survey to different demographics over time. The survey that was delivered can be found in Appendix A.

4. Findings

We explored each of the three objectives outlined throughout the Methodology in sequential order, highlighting specific action items to provide a clear relevance to WICN and its expanded target demographic.

4.1 Objective 1 Findings

To attract a younger audience, the data suggests that younger music listeners tend to use online streaming services instead of FM radio to consume music related content. Our first recommendation for WICN is to utilize a multimedia platform to host their content on so listeners can stream content through the website, wherever and whenever. Secondly, we suggest they use social media to share links that spread the word of new content. Our research for objective 1 dives into which platforms would best fulfill these 2 needs, and why.

Music Platform for Hosting Content

Before starting our research, we determined the qualities that a music hosting platform needs to have in order to be a successful addition to WICN:

- Commonly used for streaming music related content
- Easily monetizable
- Gaining or has a sustained popularity amongst all demographics

To choose which platforms to research, we observed the results of a study by Integr8 Research in October of 2017 that observed what music platforms radio users listened to at least once a week in the United States in October of 2017. Out of the 3,140 participants surveyed between the ages

of 15 and 39, the top platforms used was Youtube at 60%, Spotify at 43%, Pandora at 40%, and their local radio station's custom streaming service at 22%. (Integr8 Research 2017).

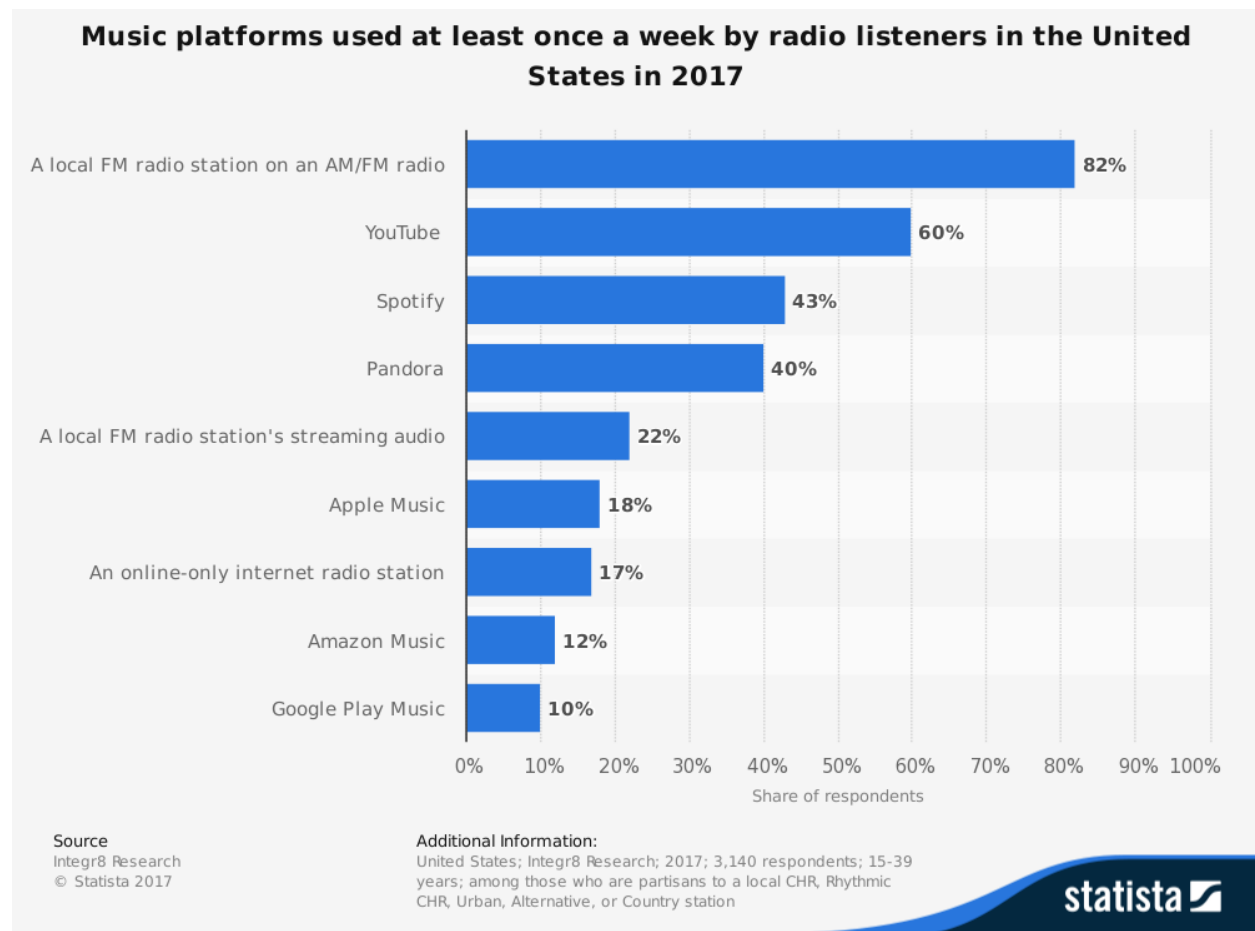


Figure 5: Music Platforms used in the United States

Since Pandora is just an algorithm choosing music for you, we removed that from our possible platforms to research, and decided to concentrate out research on Spotify, a custom streaming service, and YouTube. We looked into the pros and cons of each of these three options to see which is most feasible for WICN to use in order to increase their audience as much as possible.

After testing Spotify and its multiple services to see if it would fulfil our requirements as a platform to promote WICN and its local sounds, Spotify was the first option to be deemed not viable for WICN. Although it is widely used by many music listeners and artists, it does not make sense for a radio station to post content on. The only way to make revenue from content is if you were posting music as a single artist, which radio stations do not do. WICN could use Spotify to make playlists to share with listeners in hopes of spreading their name, but this would be redundant due to live radio performing a similar task.

A small radio station in New Orleans called WWOZ has found success in using a custom streaming service called StreamGuys to deliver content to their global audience. An article in Radio World touches on the benefits StreamGuys, and after WWOZ started using them, approximately half of their listeners now come from outside of Louisiana (Stafford, 2015). If WICN were to use StreamGuys, users pay for a subscription to WICN's channel, and then WICN would receive a portion of the revenue from each subscriber. There is also the option to insert ads to the content, which would be valuable to not just WICN, but local Worcester businesses as well. StreamGuys would be a strong competitor for increasing WICN's audience and revenue, however since it is not a widely known name, they may not gain as much new listeners as they could with other well-known services, such as YouTube (which is also free).

The last of the three platforms is YouTube, and we found it to be the best option because it is free, easy, and has a chance of generating revenue. By creating a YouTube channel, WICN could frequently upload audio and videos to build an audience online. Doing this will spread WICN's name, and through the content, WICN can spread the names of local artists just as the normal

radio programs do. If the channel eventually builds a subscriber base, then they can gain revenue from YouTube placing ads in their videos. Compared to using a subscription service such as StreamGuys, WICN would probably not make as much revenue with YouTube, but it is free for WICN and viewers, so overall it is a more feasible option for creating an online audience and potentially gaining sustainable monetization.

Here is a pro/con matrix highlighting a summary of the strengths and weaknesses of the three possible services:

	Spotify	StreamGuys	YouTube
Used for streaming music related content?	Weak, only audio	HD audio + video	HD audio + video
Revenue	N/A	Strong	Strong once a subscriber base has formed
Popularity	Strong	Not very well known	Top of the chart

Figure 6: Content Platform Comparison

Social Media Platform for Sharing Content

Now that a music distribution platform service has been secured, WICN needs outlets to spread awareness of the content. Unlike the distribution platform, WICN can make use of as many social media platforms as they would like, and the more the better. As of February 2017, the most popular social media platforms of interviewees ages 12 and up were Facebook at 95%, Twitter at 90%, and Instagram at 88% (Edison Research, Triton Digital, 2017). All of these

networks would be great places for WICN to post announcements about their new YouTube content, and we believe that all 3 should be used simultaneously to maximize distribution. Each platform allows users to share posts, which will exponentially increase the chances of viewers outside Worcester to tune in to the various forms of content WICN has to offer, whether it is videos, audio, or the actual live radio program. However, we suggest that WICN should have one primary social media outlet, and based on our survey results, we believe Facebook would be their best conduit.

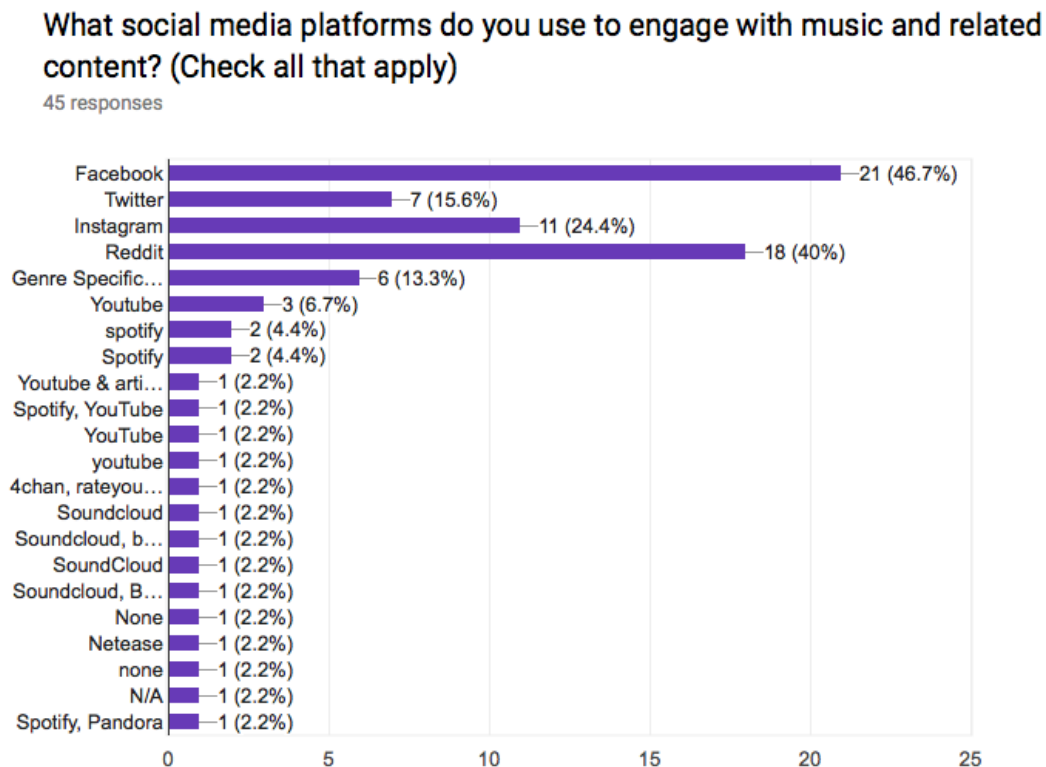


Figure 7: Survey Results on Social Media Platforms

Now that we know what platforms are most feasible for WICN to post and spread awareness of content on, what types of content would be most effective in gaining the interest of online viewers?

4.2 Objective 2 Findings

The purpose of objective 2 is to focus on the different content types WICN could create and determine which one is the best fit for the station's desired path. We determined there to be four main content types that would be viable for WICN to pursue:

- Studio Recordings of Live Music
- Music News
- Artist Interviews
- Informative/Educational Content

Studio recordings of live music would contain video and/or audio of artists in a studio setting performing their songs, recorded or streamed in professional quality. Music news would consist of video/audio content that relays information relating to upcoming album releases, upcoming live performances, and other relevant happenings in the musical world. Artist interviews would feature an artist, and they would be answering interview questions in an audio/video format.

Informative or educational content could take a variety of forms. It could include showing the story behind a song or album, exploring the history of an artist, or delving into music theory or performance techniques.

Furthermore, we determined four main formats for content to be presented in:

- Online Radio

- Podcasts
- Live Stream Video
- Recorded Video

Online radio content would likely be an online audio broadcast concurrent with WICN's existing FM radio broadcast, but containing different content (such as the types listed previously).

Podcasts are long-form audio content, usually at least fifteen minutes long, which are pre-recorded and can be listened to on-demand. Live stream video would contain audio and video content broadcast online in real time. The main draw of live streamed video over recorded video would be online interaction with other viewers through a chat window next to the video.

Recorded video would have a flexible length per video depending on the content, and would be able to be viewed on-demand, similar to podcasts.

Any of the types of content we listed here are able to be presented in any of the formats we listed, so there will be no compatibility issues between whichever of these two sets of choices are the best. Furthermore, YouTube is able to host all of the formats of content we have listed, so our choice of platform does not limit our content output either. Therefore, the content type and format must be selected by their inherent properties and how attractive they are to consumers.

Content formats are a bit easier to sort through than content types. A live radio format would be the least useful, as it would likely compete with WICN's existing over-the-air listener base.

Podcasts suffer from a similar problem: since both radio and podcasts are audio-only, they draw similar audiences. On the other hand, video content, whether live streamed or uploaded as usual, has much more appeal as active entertainment. Live streaming video has a unique draw from its

ability to make viewers feel more immersed in the experience. However, it will almost always attract a smaller audience than pre-recorded video content, simply due to the fact that not everyone who is interested will be around to watch it. Furthermore, the resources and equipment requirement to make a livestream broadcast is much steeper than that of a recorded video production of a similar quality level. For all of these reasons, pre-recorded video content wins out as the favored format.

Next to consider is which types of content would be best for WICN to upload. It is important to mention that the station should look into producing all four of these content types eventually, in order to attract as broad an audience as possible. However, for now, we will just focus on which they should start out with. WICN is looking for a strong way to hook people into the channel and get them to stick around. The best way for them to do that is to focus on one or two types of content and make them as high-quality as possible before shifting focus. Music news and informational content are not the best way to do this - this sort of content can be found in dozens of other places already, and it would be difficult to put a unique spin on it while still casting a wide net. Instead, artist performances and interviews are the way to go. With WICN's recent addition of a recording studio to their building, it would be best to take advantage of a good environment to host artists and have them perform. A brief interview preceding or following the performance would make for excellent content as well. This type of content would be effective at bringing in a larger audience by featuring local, lesser-known artists.

Collecting Data

To determine which content types will provide the most extensive growth in audience, we surveyed an audience representative of the additional demographic WICN wishes to target. We asked our target demographic to answer a series of questions related to content type. We asked them questions such as ‘What type of music-related content are you most interested in?’ and ‘What is your preferred format for music-related content?’ (See appendix-A for full survey). In tandem with the survey we conducted, we also researched the topic. According to a June 2016 survey done in Canada, 27% of all consumers use a website and/or an app to stream music videos, whereas only 6% are streaming live broadcast radio, and 1% are streaming live concerts or festivals (FYI Music News & Nielsen). Given what we found in objective 1, which was that YouTube is the most popular service to currently stream music from, it is safe to conclude that the focus of WICN’s content should be on recorded media rather than live streams.

Conclusion

Based on our results, we can confidently conclude that WICN should focus on posting studio recordings of live music. It makes the most sense statistically and strategically. The data all points towards this content type being the most popular among WICN’s target demographic, both in research and in our own survey, shown below.

What type of music-related content are you most interested in?

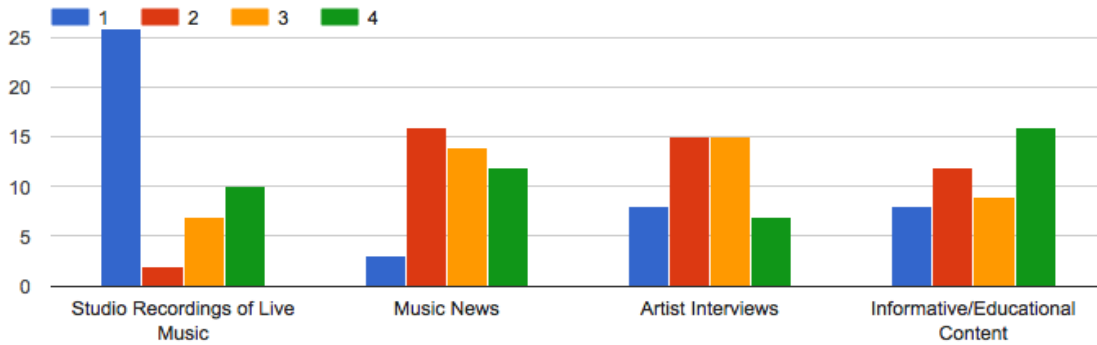


Figure 8: Survey results on music-related content interests

Furthermore, WICN already has infrastructure in place for creating such content. Although we do not expect this conclusion to be a surprise for the people at WICN, it is reassuring to know for sure that uploading studio recordings of live music is the most optimal path to success.

4.3 Objective 3 Findings

Combining our intuitions about supply and demand with a colloquial knowledge of topics like “prime time television”, we turned to similar industries to radio in order to apply these concepts to WICN expansion. Using resources pertaining to the movie, television, and online media industries, it is possible to establish platform and content agnostic strategies to maximize the reach of new media. We divide this strategy into two parts: effectively launching new content and effectively posting recurrent content.

Launching New Content

In order to understand the implications of media release timing, the movie industry provides a substantial amount of data with a few favorable properties. Firstly, it is clear that this industry puts substantial thought into release dates, as shown by a TIME Magazine analysis of movie themes throughout the year (Rebala & Wilson 2014). Secondly, it can be observed that movies tend to cluster around certain times of year, typically holiday season (Einav, 2003). Thirdly, at any given time, several films are being in theaters that could vie for a single moviegoer. These combined make the film industry a useful parallel to the WICN multimedia expansion.

Looking specifically at any given movie cluster, it is possible to discern an inversely proportional relationship between number of movies and ratings for any given movie. Looking at *Not All Rivals Look Alike: Estimating an Equilibrium Model of The Release Date Timing Game*, written by Liran Einav, we see that it is possible to model this relationship using probability theory. Though the paper describes this model, as well as a comprehensive analysis of its implications on movie release, there are two major takeaways. Firstly, supply and demand is ever-present in media; with too many movies in a cluster, a lack of demand causes each movie to suffer, implying that there is a limit to the draw of new content. Secondly, and somewhat intuitively, lower quality content hardly affects the demand for higher quality content. It is no great leap to infer that higher quality content will poach viewership from its lower quality competitors.

Applying these two takeaways to WICN, we can conclude two rules of thumb. Firstly, rapid release of several new types of content will create competition amongst your own content; as

such, a gap should be left between media premieres. Secondly, riskier content that may be viewed as “lower quality” to the core of the WICN listenership (and therefore potentially content aimed at expanding it) should be timed even more carefully, not only between premiers but between recurrent established content that may poach engagement.

Recurrent Content Timing

Whether it be artist interviews, live performance recordings, or an educational broadcast, we can expect that WICN will release recurrent or episodic content to its multimedia network. As such, there is an important analysis of release timing. More specifically, we aim to find the best times to release content to a multimedia network.

First, we began looking for potentially untapped markets in terms of demand for media. This took us to the Nielsen *Advertising and Audiences* report published in 2013, examining in part the television habits of American households (Nielsen State of the Media, 2013). This report established two useful statistics; The majority of television viewership still occurs during prime time - when there is the largest supply of content - however they daytime hours of 10:00 AM to 4:00PM come in right behind. The difference between these two partitions is only an average of 12 minutes of watching per home, suggesting a potentially untapped market for content.

P2+ TV USAGE DURING SELECT PARTS OF THE DAY

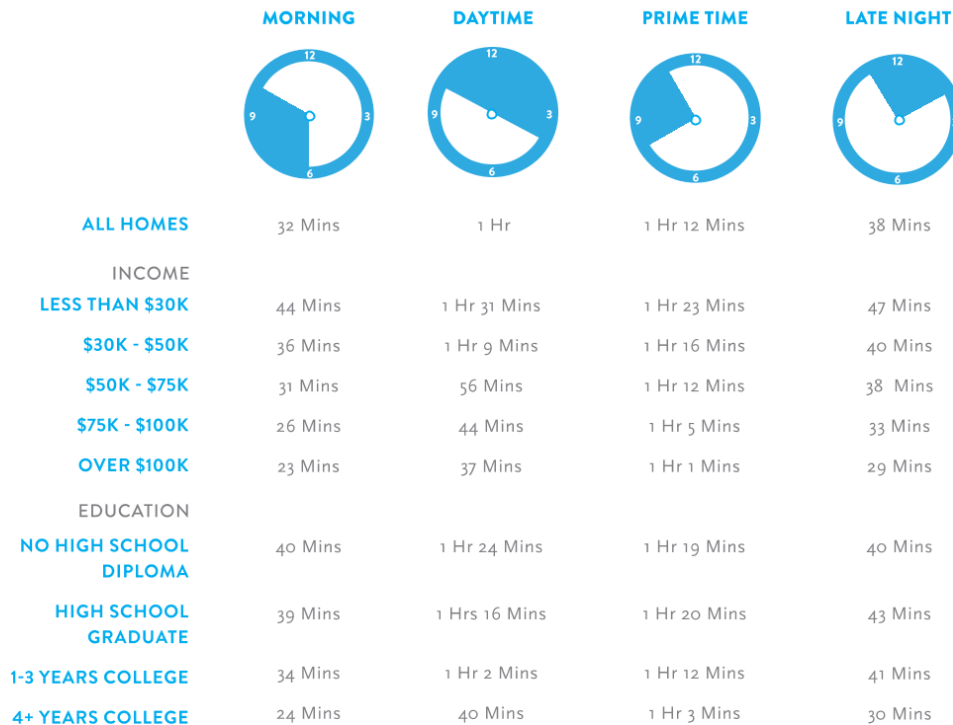


Figure 9: TV usage in the United States

Secondly, an increasing number of households participate in “timeshifting,” or watching content later than it is premiered, suggesting a need for more on-demand content. Though Nielsen specifically examines television, this demand for entertainment could easily be pivoted to a multimedia platform.

Next, we searched for a source to attempt to narrow this broad window of daytime hours. Looking specifically in the online space, we turned to an article written by the Director of Programming and Audience Development at Frederator, an American animation studio, Matt

Gielen (Gielen, 2015). Analyzing the YouTube channels which he runs, Gielen compiled a table of the best times of day to post online content throughout the week.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
2p - 4p	2p - 4p	2p - 4p	12p - 3p	12p - 3p	9a - 11a	9a - 11a

Figure 10: Peak times to upload to YouTube by day

In addition to the above chart, Gielen also analyzed which days of the week were best for uploading, though notes that this insight may vary with a different audience.

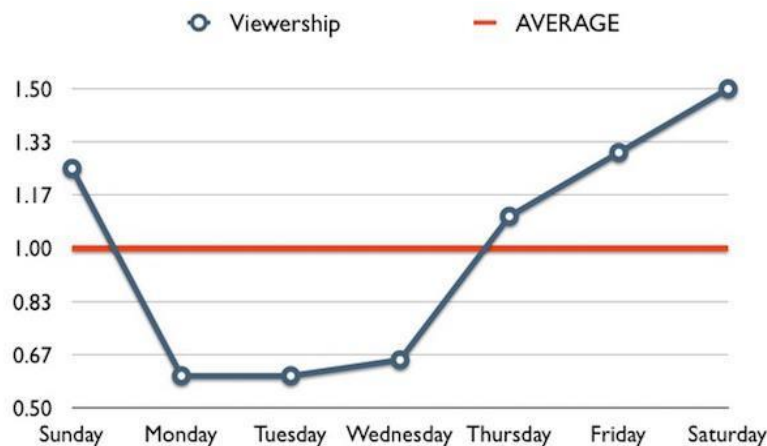


Figure 11: Viewership by day on YouTube

We believe that utilizing these charts, WICN can effectively experiment with times in order to optimize for their own audience while using these recommendations as a guideline.

Finally, we believe that it is intuitively true that the final piece to this puzzle is to avoid competing content when possible while still posting within optimal times. In order to get a sense

of when competitors upload, our team utilized the publicly available YouTube API to discern exact upload times and dates for a small random sampling of videos from other radio channels. The full results of this endeavor can be seen in Appendix B. Looking at radio station channels like BBC Radio 1 and WNYC, little care is taken to adhering to any sort of peak time, with posts ranging between 7:00AM and 6:00PM. Radio station KEXP, however, predominantly keeps a strict upload schedule of 12:00PM. As such, we suggest posting within the peak times stated above, but avoiding this time to prevent competition.

5. Recommendations and Conclusion

In order to provide a direct and concise plan for WICN content expansion to target new demographics, we convert the findings from throughout [Section 4](#) into direct actions to be taken in [Section 5.1](#). We provide secondary insights not critically essential to completion of our objectives that were determined by survey results throughout [Section 5.2](#).

5.1 Recommendations To Accomplish Objectives

Based on our research and survey results, we believe that the first and foremost priority in terms of diversifying content should be to establish a stream of studio recordings of live music to attract the target demographic of college-aged students. Additionally, we recommend focusing all content hosting towards YouTube in order to maximize discoverability on a platform with established monetization options. With these two preferences in mind, the scheduling of these regular uploads is of equal importance. In order to maximize potential viewers, we recommend WICN establish a pattern of uploading within the hours of 1PM and 3PM on Thursday and Friday, or 9AM to 11AM on Saturday and Sunday. These are within peak viewing hours for the platform while avoiding the regular upload time of a possible competitor, KEXP.

Following the addition of studio recordings of live music into the WICN repertoire, we believe that at least a month should be left between establishing any new streams of content, in order to avoid cannibalization of interest amongst your own audience. Though no clear second place was found in our survey in terms of content-types, artist interviews may be an easy route for further expansion, due to the presence of artists in the WICN studio to record for the content stream.

5.2 Additional Recommendations

A key point in our strategy to consider is using social media as a conduit for WICN's target demographic. Although many social media outlets exist, our findings, specifically Objective 1, point towards Facebook as being the optimal social outlet for sharing musical content. We recommend that WICN should notify its listeners on Facebook whenever they upload new content to YouTube. This will allow WICN to maximize their growth on the multimedia platform. It is critical that WICN develop a strong following on social media, because this will build a strong foundation for the YouTube channel to grow from. Having a group of followers on social media that will always come to watch new videos will make WICN grow faster on YouTube.

References

About Us | WICN Public Radio. Retrieved from <http://www.wicn.org/about-us>

Advertising & audiences (2013). Nielsen.

Airoidi, M., Beraldo, D., & Gandini, A. (2016). *Follow the algorithm: An exploratory investigation of music on YouTube* doi://doi.org/10.1016/j.poetic.2016.05.001

Audio | Nielsen. Retrieved from

<http://www.nielsen.com/us/en/solutions/capabilities/audio>

Barber, S. (2010). Smooth jazz: A case study in the relationships between commercial radio formats, audience research and music production. *Radio Journal: International Studies in Broadcast & Audio Media*, 8(1), 51-70. doi:10.1386/rjao.8.1.51_1

BIA/Kelsey. (n.d.). Radio station revenues in the United States from 2006 to 2016, by source (in billion U.S. dollars). In *Statista - The Statistics Portal*. Retrieved September 30, 2017, from <https://www.statista.com/statistics/253185/radio-station-revenues-in-the-us-by-source/>

Cressman, D. (2016). Listening, attentive listening, and musical meaning. In D. Cressman (Ed.), *Building musical culture in nineteenth-century amsterdam* (pp. 29-48) Amsterdam University Press.

Edison Research. (n.d.). Share of U.S. population who have used YouTube to watch music videos or listen to music as of February 2017, by occurrence. In *Statista - The Statistics Portal*. Retrieved November 28, 2017, from <https://www.statista.com/statistics/291018/us-users-who-use-youtube-to-watch-or-listen-to-music/>

- Edison Research. (n.d.). Social media awareness in the United States as of February 2017. In *Statista - The Statistics Portal*. Retrieved December 12, 2017, from <https://www.statista.com/statistics/410793/us-social-media-awareness/>
- Edmond, M. (2015). All platforms considered: Contemporary radio and transmedia engagement. *New Media & Society*, 17(9), 1566-1582. doi:10.1177/1461444814530245
- Einav, L. (2010). Not all rivals look alike: Estimating an equilibrium model of the release date timing game. *Economic Inquiry*, 48(2), 369-390. doi:10.1111/j.1465-7295.2009.00239.x
- FYI Music News & Nielsen. (n.d.). Percentage of consumers using selected sources for music listening in Canada as of June 2016. In *Statista - The Statistics Portal*. Retrieved December 4, 2017, from <https://www.statista.com/statistics/570279/share-canadians-using-selected-music-sources/>
- Gielen, M. (2015). Want to know the best days and times to post YouTube videos? here's A yearly calendar. Retrieved November 28, 2017, from <http://www.tubefilter.com/2015/01/12/best-days-times-to-post-youtube-videos-yearly-calendar/>
- Hiebner, G. (2014). *Social media for musicians: YouTube* Course Technology PTR.
- Ignatiev, N. (2017). *Music radio stations from the "On air" to the online : Identifying media logics in the content and formats of radio FIP on its digital platforms* Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:uu:diva-325169>
- Infinite dial: Radio's quiet competitor is YouTube. (2014,). *Radio and Television Business Report (RBR+TVBR)* Retrieved from <http://libraries.state.ma.us/login?gwurl=http://go.galegroup.com/ps/i.do?p=ITOF&sw=w&u=m>

lin_c_worpoly&v=2.1&it=r&id=GALE%7CA377201630&sid=summon&asid=7444b3d39938
d18f9fbdc42a3824a541

Infographic: Online radio has yet to conquer the car. Retrieved from

<https://www.statista.com/chart/1504/radio-listening-in-the-united-states/>

Integr8 Research. (n.d.). Music platforms used at least once a week by radio listeners in the United

States in 2017. In *Statista - The Statistics Portal*. Retrieved December 12, 2017, from

<https://www.statista.com/statistics/253411/reasons-for-subscribing-to-streaming-music-services/>

Jarboe, G., & Reider, S. (2009). *YouTube® and video marketing: An hour a day*. Sybex.

Jones, A., & Bennett, R. J. (2015). *The digital evolution of live music*. Chandos Publishing.

Kamalzadeh, M., Baur, D., & Möller, T. (2016). Listen or interact? A large-scale survey on music

listening and management behaviours. *Journal of New Music Research*, 45(1), 42-67.

doi:10.1080/09298215.2015.1133655

Kjus, Y. (2016). Reclaiming the music: The power of local and physical music distribution in the age of global online services. *New Media & Society*, 18(9), 2116-2132.

doi:10.1177/1461444815580414

Klein, B. (2009). Contrasting interactivities: BBC radio message boards and listener participation.

Radio Journal: International Studies in Broadcast & Audio Media, 7(1), 11-26.

doi:10.1386/rajo.7.1.11/1

- Liikkanen, L. A., & Salovaara, A. (2015). Music on YouTube: User engagement with traditional, user-appropriated and derivative videos. *Computers in Human Behavior*, 50, 108-124.
doi://doi.org/10.1016/j.chb.2015.01.067
- Lingel, J., & Naaman, M. (2012). You should have been there, man: Live music, DIY content and online communities. *New Media & Society*, 14(2), 332-349. doi:10.1177/1461444811417284
- MarketingCharts. (n.d.). Number of monthly digital radio listeners in the United States from 2012 to 2016, by age (in millions). In *Statista - The Statistics Portal*. Retrieved September 30, 2017, from <https://www.statista.com/statistics/191657/us-weekly-internet-radio-listeners-since-2009/>
- Nielsen. (n.d.). Average daily time spent listening to the radio per adult in the United States from 1st quarter 2015 to 1st quarter 2017 (in minutes). In *Statista - The Statistics Portal*. Retrieved September 30, 2017, from <https://www.statista.com/statistics/761889/daily-time-spent-radio/>
- Pandora. (n.d.). Cumulative time spent using music streaming service Pandora from 2008 to 2016 (in billion hours). In *Statista - The Statistics Portal*. Retrieved September 30, 2017, from <https://www.statista.com/statistics/190975/listener-hours-of-music-streaming-service-pandora-since-2009/>
- Pandora. (n.d.). Pandora's sales and marketing spending from 2009 to 2016 (in million U.S. dollars). In *Statista - The Statistics Portal*. Retrieved September 30, 2017, from <https://www.statista.com/statistics/290437/pandora-marketing-spending/>
- Pham, A., & Appel, R. (2013, November 16). Radio youTube: broadcast radio tunes in online video and wins new listeners. *Billboard*, 125(44), 12. Retrieved from

http://link.galegroup.com/apps/doc/A351945199/AONE?u=mlin_c_worpoly&sid=AONE&xid=a46468cf

Radio Advertising Bureau. (n.d.). Audience of various radio formats in the United States in 2016, by age. In *Statista - The Statistics Portal*. Retrieved September 30, 2017, from <https://www.statista.com/statistics/252222/radio-format-audience-shares-in-the-us-by-age/>

Radio in the U.S. Retrieved from <https://www.statista.com/study/13621/radio-in-the-us-statista-dossier/>

Rebala, P., & Wison, C. (2014). Inside the secrets of hollywood's calendar. Retrieved from <http://time.com/3084046/movie-themes/>

Ruth, N., Spangardt, B., & Schramm, H. (2017). Alternative music playlists on the radio: Flow experience and appraisal during the reception of music radio programs. *Musicae Scientiae*, 21(1), 75-97. doi:10.1177/1029864916642623

Stafford, D. (2015). WWOZ gets its groove online: Big easy broadcaster gets significant web presence with StreamGuys. *Radio World*, 39(29), 22.

Stark, B., & Weichselbaum, P. (2013). What attracts listeners to web radio? A case study from germany. *Radio Journal: International Studies in Broadcast & Audio Media*, 11(2), 185-202. doi:10.1386/rjao.11.2.185_1

Statistics Norway. (n.d.). Average daily time spent listening to radio in Norway from 2005 to 2015 (in minutes). In *Statista - The Statistics Portal*. September 30, 2017, from <https://www.statista.com/statistics/588090/average-daily-time-spent-listening-to-radio-in-norway/>

Statistics Norway. (n.d.). Share of individuals who have listened to online radio on an average day in Norway in 2007, 2012 and 2015, by age group. In *Statista - The Statistics Portal*. Retrieved September 30, 2017, from <https://www.statista.com/statistics/616072/share-of-individuals-who-have-listened-to-online-radio-in-norway-by-age-group/>

Statistics Norway. (n.d.). Share of population listening to radio daily in Norway from 2005 to 2015, by age group. In *Statista - The Statistics Portal*. Retrieved September 30, 2017, from <https://www.statista.com/statistics/588072/share-of-population-listening-to-radio-daily-in-norway-by-age-group/>

Triton Digital. (n.d.). Distribution of digital radio listening in the United States in May 2016, by age. In *Statista - The Statistics Portal*. Retrieved September 30, 2017, from <https://www.statista.com/statistics/588783/radio-listening-age-usa/>

Triton Digital. (n.d.). Distribution of digital radio listening in the United States in September 2016, by channel. In *Statista - The Statistics Portal*. Retrieved September 30, 2017, from <https://www.statista.com/statistics/378733/radio-listening-distribution-by-channel-usa/>

Viljakainen, A. (2013). Show me the money! the quest for an intermedia currency in the nordic countries. *Journal of Media Business Studies*, 10(3), 41-63. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=94734067&site=ehost-live>

Wall, T., & Dubber, A. (2009). Specialist music, public service and the BBC in the internet age. *Radio Journal: International Studies in Broadcast & Audio Media*, 7(1), 27-47.
doi:10.1386/rajo.7.1.27/1

- Warhurst, S., McCabe, P., & Madill, C. (2013). *What makes a good voice for radio: Perceptions of radio employers and educators* doi://doi.org/10.1016/j.jvoice.2012.08.010
- Whitaker, J. A., Orman, E. K., & Yarbrough, C. (2014). Characteristics of “Music education” videos posted on YouTube. *Update: Applications of Research in Music Education*, 33(1), 49-56. doi:10.1177/8755123314540662
- Wrather, K. (2016). Making ‘Maximum fun’ for fans: Examining podcast listener participation online. *The Radio Journal – International Studies in Broadcast & Audio Media*, 14(1), 43-63. doi:10.1386/rjao.14.1.43_1

Appendices

Appendix A: Target Demographic Survey

How often do you intentionally listen to music per week? _____ hours/week(round to the nearest hour).

How do you typically listen to music?

(Rank them 1-5 with 1 being the most common)

1. Online Radio (Pandora, Spotify Radio)
2. Music Streaming Services (Spotify, Apple Music)
3. Personal Music Library (iTunes, CDs, foobar2000)
4. AM/FM/Satellite Radio
5. YouTube

What type of music-related content are you most interested in?

(Rank them with 1 being the most interested)

1. Studio recordings of live performances
2. Music news
3. Artist interviews
4. Informative/educational content

What is your preferred format for music related content?

(Rank them with 1 being the most interested)

1. Live radio
2. Podcasts
3. Live stream video
4. Recorded video

What social media platforms do you use to engage with music and related content?

(Check all that apply)

1. Facebook
2. Twitter
3. Instagram
4. Reddit
5. Genre-specific news sites
6. Other : _____

Appendix B: Radio Station YouTube Analysis

BBC Radio 1

Date	Time
11/27/2017	9:34:47 AM
9/22/2017	7:00:02 AM
8/24/2017	12:22:21 PM
5/28/2017	12:19:36 PM
11/12/2013	8:58:56 AM

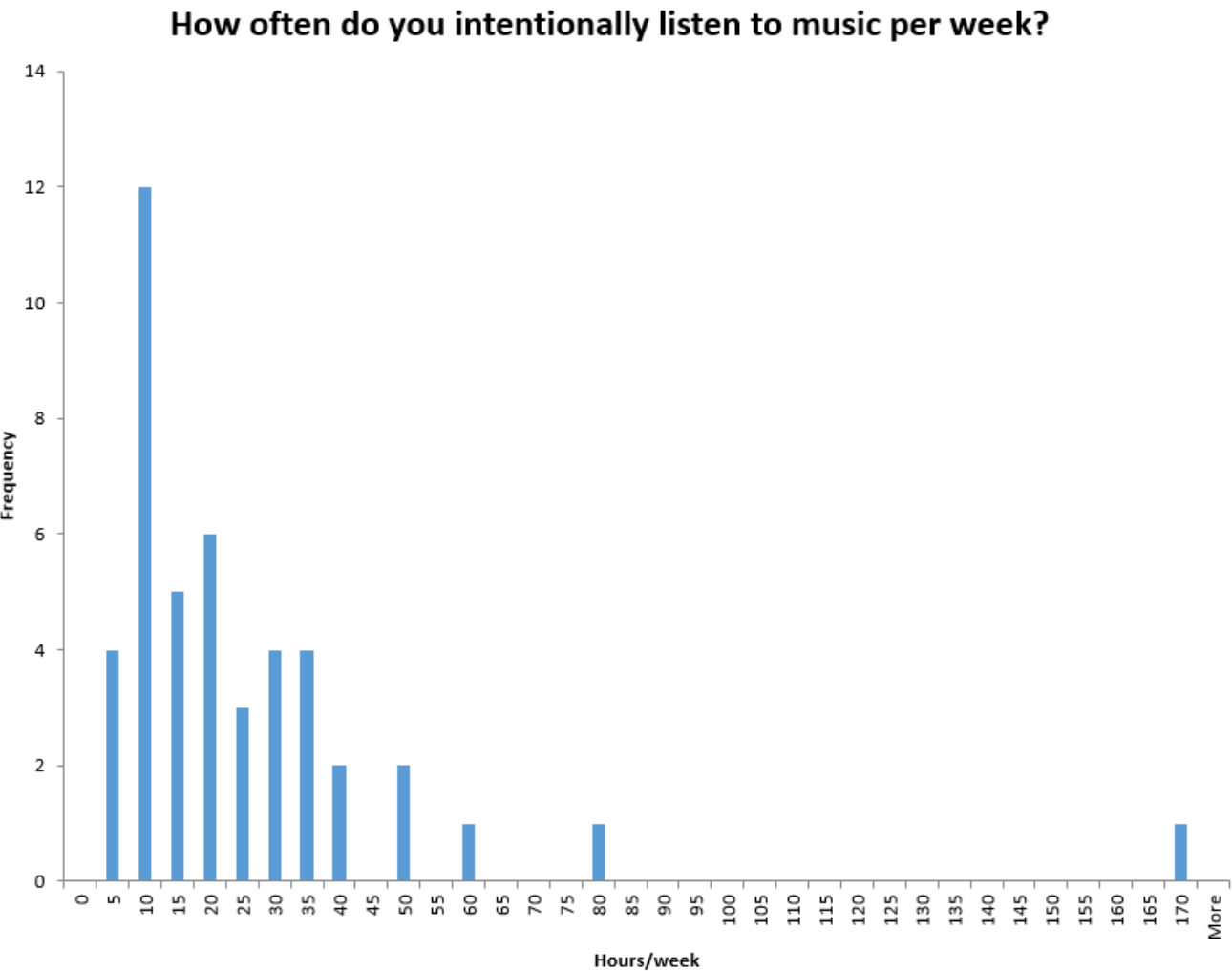
WNYC

Date	Time
9/21/2017	4:45:58 PM
8/17/2017	5:48:04 PM
6/23/2017	11:58:18 AM
5/5/2017	5:04:49 PM
6/14/2012	5:33:53 PM

KEXP

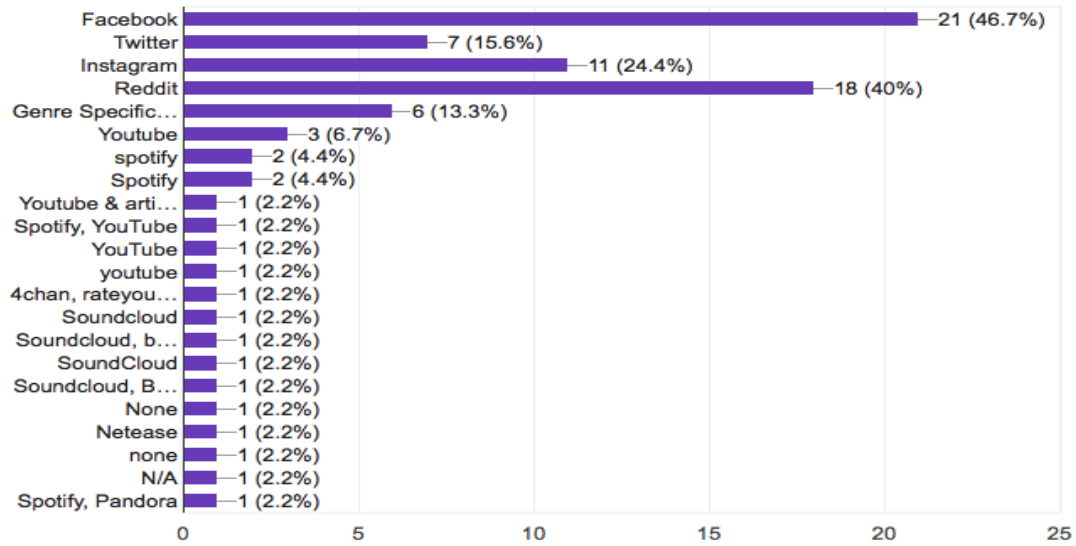
Date	Time
11/22/2017	12:00:03 PM
11/15/2017	12:00:00 PM
9/22/2017	12:00:01 PM
6/20/2017	12:00:04 PM
11/21/2011	1:23:02 PM

Appendix C: Survey Results

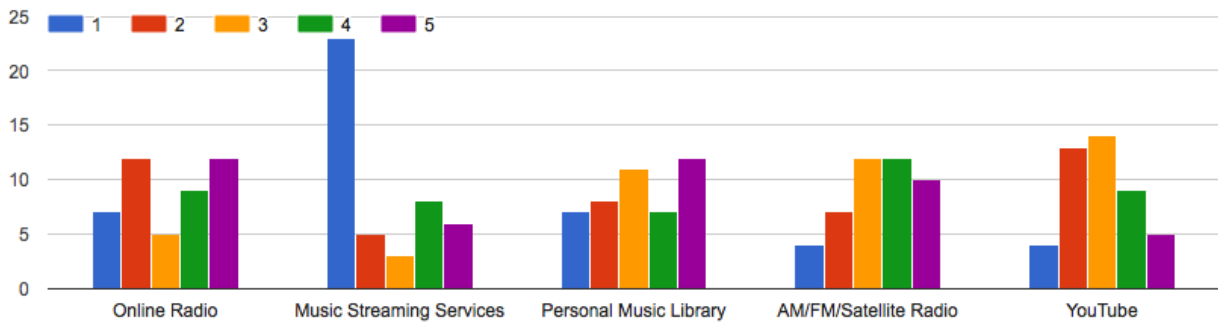


What social media platforms do you use to engage with music and related content? (Check all that apply)

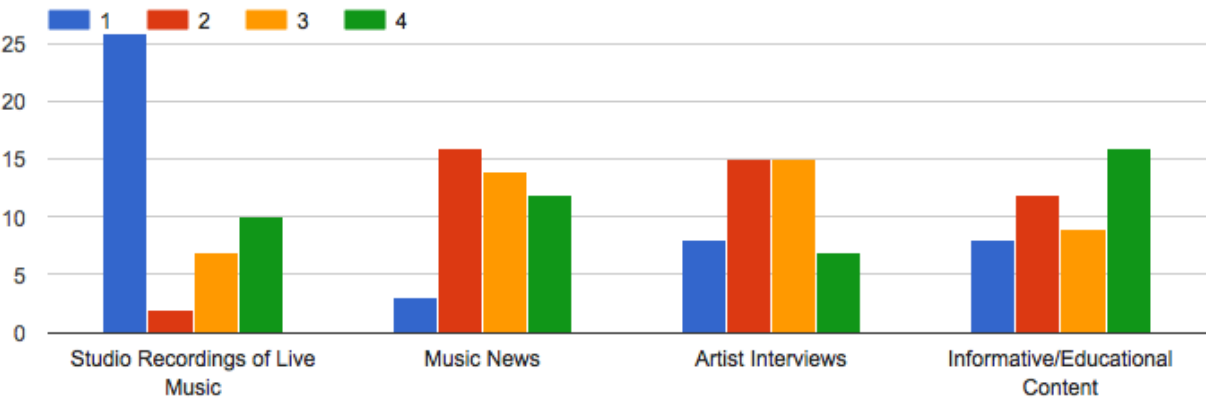
45 responses



How do you typically listen to music?



What type of music-related content are you most interested in?



What is your preferred format for music-related content?

