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Analyzing Qualitative Data at Museum Victoria

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Analyzing Qualitative Data at Museum Victoria



Submitted by:

Jamal James Akid, Tyler Greff, Sydney Tucker

15 December 2014



Analyzing Qualitative Data at Museum Victoria

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

On 15 December 2014

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Abstract

The rate of Australian citizens who have experienced racial discrimination has steadily increased in the past decade. To combat this issue Museum Victoria, our sponsor, created the Talking Difference Portable Studio that aims to facilitate dialogue about cultural difference and to promote diversity. Our goal was to develop a preferred methodology for analyzing the qualitative data generated from the studio. We interviewed professionals in the field to determine a preferred methodology including theoretical approaches, appropriate themes, and the optimal data analysis software. Our designed methodology for the Talking Difference data will aid in an efficient analysis to uncover patterns of racism that may be used for further research or to educate the public on this issue.

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Executive Summary

Melbourne, the second largest city in Australia, is home to a considerably diverse population with nearly 40% of its residents born overseas, overshadowing Australia's national average of 23%. Unfortunately, as the percentage of minorities increase, experts have shown a directly correlating rise in racial discrimination. In a National Social Cohesion Survey, the percentage of Australians who have experienced racial discrimination jumped from 9% to 19% between 2007 and 2013. If not addressed correctly, this issue will continue affecting the lives of many and the consequences regarding basic human rights may become severe.

Several community organizations have begun to recognize the negative effects of racial discrimination in Victoria and have established efforts to curb the issue. One of these organizations is our sponsor, Museum Victoria, Australia's largest public museum organization. Museum Victoria offers great contributions to the community's understanding of the world, using interactive and engaging exhibits to draw appeal towards bigger social issues.

Museum Victoria created the *Talking Difference* Portable Studio, a computer-based Interactive, to produce a running dialogue of racial discrimination and cultural diversity throughout Victoria. The *Talking Difference* Interactive is a computer program, designed to engage users and record data to produce immediate results on its' findings. *Talking Difference* is generally placed at libraries and public schools in different communities throughout Victoria and draws in a diverse population of people. The participants can search through and choose to answer any of the various questions generated by the community about topics of racism, identity, and cultural diversity. They can also view the responses of other participants. The goal of this studio is to have participants leave with a greater perspective and understanding of the issues of racism and discrimination, as well as a feeling of belonging in the quest to tackle such a devastating problem. The *Talking Difference* Portable Studio has now entered its sixth year of touring and the generated data has yet to be properly analyzed. This analysis could potentially reveal many important findings that can contribute greatly to the fight against discrimination.

The goal of our project is to develop and apply a preferred methodology for analyzing the qualitative data generated from Museum Victoria's *Talking Difference* Portable Studio. To accomplish this goal we completed the following objectives:

1. **Gain an understanding of different theoretical approaches available to analyze qualitative data.**

To achieve this, our team interviewed various professionals with expert experience in analyzing qualitative data. During these interviews we discussed the specifications of the data that we would be analyzing and debated which theoretical approaches and which software programs would be most efficient.

2. **Understand the data collections we would be analyzing.**

This included expanding our understanding of the role *Talking Difference* may play in combating racial discrimination, as well as the data generated from the Interactive. Our team interviewed multiple professionals to further understand the subject of racism and diversity in Victoria as well as the various efforts that have or have not been made to resolve the widespread issue of discrimination.

3. **Identify and develop a preferred methodology for analyzing the qualitative data set.**

Using the findings from Objective 1, our team conducted various tests on the efficiency of our possible theoretical approaches and software applications. From the results, we decided on which would work best for analyzing the data generated from *Talking Difference*.

Incorporated in our designed methodology are a series of steps to determine the necessity of transcribing various audio and video files in order to simplify the process of analyzing the data.

4. **Analyze the data generated from the *Talking Difference* using our developed methodology.**

We applied the method that we created through Objective 3 to a small sample of the *Talking Difference* data. With a more in-depth understanding of racism and cultural diversity in Victoria, our team was able to draw conclusions from the emerging themes of our analysis and form patterns that are significant in addressing issues of racial discrimination.

5. Provide Museum Victoria sufficient information for the continuation of data analysis using the preferred methodology.

We provided Museum Victoria with our preferred methodology for creating themes, our software choice, and an analysis of the small sample of *Talking Difference* data that we were given. This information was presented to the faculty of the museum.

Throughout the project our team was able to draw multiple conclusions from extensive background research, interviews, and testing. From interviewing experts in the field of racism to better understand the data, we found that racial discrimination is not addressed properly in institutions, specifically the government and local school systems. The government's way to address racial discrimination is to push Multiculturalism, a policy platform that encourages cultural diversity. This policy fails to properly address the causes of racial discrimination or to educate people on the background of various cultures. Similarly, in many local school systems, teachers are often unsure how to teach cultural acceptance or how to effectively address issues of racial discrimination. Helping teachers find the best way of addressing this issue with their students is the first step towards reducing social issues, as teachers help shape the minds of Australian youth.

Next, our team found, with the advice of the professionals we interviewed, that combining the "Grounded Theory" and "Constant-Comparative Analysis" approaches would provide the best analysis. The "Grounded Theory" approach allows themes to emerge from the *Talking Difference* data, while the "Constant-Comparative Analysis" approach insures proper categorization of the *Talking Difference* data. To complement our analysis and create a more efficient process, our team chose to use NVivo 10 for Windows, a qualitative analysis software application. NVivo had the ability to code video, audio, text, and drawings as well as provide an easy-to-use platform to code and analyze the data.

We also had to decide whether it was necessary to transcribe audio and video files in regards to NVivo's accuracy. In a time test of coding with and without transcriptions of various file lengths, we found that there were not enough errors to justify transcribing audio and video files in the 0-20s range. Any files exceeding 20 seconds were found to require transcribing to increase the accuracy of coding.

When coding the data, we found that using the questions generated by the public for *Talking Difference* to create major themes was more beneficial than creating themes solely from the responses. Creating themes from the responses led us to be too specific, making the analysis very difficult because no patterns were able to form that could provide information regarding social trends. When the themes were created from the questions, we had fewer and broader themes, allowing us to see emergent patterns with more clarity, while still being able to dive into the smaller details of the responses through sub-themes.

Our team has developed recommendations for our sponsor to ensure the effective utilization of our preferred methodology and to perform an efficient analysis of the data generated from the *Talking Difference* Portable Studio. We recommend that Museum Victoria:

1. Analyze the data generated from the Talking Difference Portable Studio using the “Grounded Theory” and “Constant-Comparative Analysis” approaches.
2. Use the MS Windows platform of NVivo 10 for the automation of certain processes in the analysis of the Talking Difference Portable Studio data.
3. Transcribe certain audio and video files, dependent upon length, using our regulated process via Transcribe by Google and Switch Sound File Converter.
4. Develop a more consistent and efficient method of recording and extracting demographics from the participants of the Talking Difference Interactive.
5. Use their best judgment to create and define new sub-themes.
 - a. Create new themes for topics that continually appear (more than three times).
 - b. Write a description for each theme created.
6. Avoid coding single phrases; code entire relevant statements that pertain to the specific theme.

The data collected from *Talking Difference* has the potential of becoming a key resource in social reform and cultural acceptance of diversity. This Interactive gives all of its participants an equal voice and a chance to share their experiences. During our analysis of the responses, we found some interesting patterns and themes. For example, the majority of those who have been stereotyped claim it was because of their accent, as opposed to their looks or background. Another interesting idea that we noticed was that many participants said the best thing about

living in such a diverse community is being exposed to the cuisine of different cultures. When Museum Victoria analyzes the rest of the data, they will hopefully continue finding patterns and themes that can be used to better their efforts against racial discrimination.

Authorship

The list below shows the author(s) of each section. The editors were the remaining team members.

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1. Introduction

Melbourne is the second largest city in Australia, known for its flourishing and diverse population, with residents from more than 140 countries (Multicultural Communities, 2014). The average number of residents in Melbourne born overseas is just under 40%, compared to the national average of 23% (Markus, 2011). The percentage of the minority and immigrant population is rapidly growing and, unfortunately, so is racial discrimination. Residents of Melbourne are experiencing acts of discrimination that oftentimes make them feel unwelcome in their new home, and for many, where they have lived their entire lives (Marriner, 2014). “Racism is individual, institutionalized, and systematic” (Mauri & McFadzean, 2013, pg. 4). It can occur anywhere, such as schools, the workplace, social media, etc., and tends to negatively impact a person’s health, well-being, future life changes, and social cohesion. If racial discrimination is not recognized and addressed effectively, the consequences will affect the lives of many, breaching their human rights (Mauri & McFadzean, 2013). Recognizing this issue is difficult because oftentimes the negative effects of racial discrimination go unnoticed by both the discriminator and bystanders alike. Seeing the negative effect of their hurtful actions may lead them to be more aware of racial discrimination and take action to prevent it. However, several communities are unable to find effective ways to address and reduce the issue and promote diversity (Paradies et al., 2009).

As an attempt to change the state of racial discrimination in Melbourne, several influential non-profit organizations throughout the city have been working to encourage discussions about racism, understanding of different cultures, and acceptance of newcomers. A few of these organizations include the Victorian Equal Opportunity and Human Rights Commission, VicHealth, and Museum Victoria (Victorian Equal Opportunity and Human Rights Commission, 2014). These influential organizations have the greatest ability to raise awareness of Australia’s cultural diversity with the goal of lowering levels of racial discrimination in Melbourne, and more broadly, Victoria.

Museum Victoria is a highly distinguished organization with a major focus on working towards greater acceptance of diversity. The organization facilitates three separate museums in Melbourne: Melbourne Museum, Immigration Museum, and ScienceWorks. Museum Victoria strives to contribute to the community’s understanding of the world using innovative exhibitions

and programs that engage and educate visitors. Moreover, the Immigration Museum has a goal of facilitating discussions regarding cultural difference and promoting diversity through various forms of digital media, which can create “a thought-provoking and moving experience” (Museum Victoria 1, 2014). To help achieve this goal, they have developed a portable Interactive called *Talking Difference*. An Interactive is a computer program that involves the actions or input of a user, especially allowing two-way electronic communications. The *Talking Difference* Portable Studio travels to different communities across the state gathering responses from the residents through various questions relating to their experience with racial discrimination. This Interactive will help raise awareness of the social issues that occur in the community of Victoria and lead to find ways of tackling the issue. To participate, a person sits



Figure 1: *Talking Difference* outer & inner view

in a semi-enclosed studio (seen in Figure 1)¹ selects a question they wish to answer on the *Talking Difference* desktop and responds to the question. Their responses are recorded in the form of digital media, which include video, audio, text, and drawings. The participants have the ability to view other real-time responses from other people before

or after they record their own response. This allows the participant to gain a better understanding of different perspectives that have been brought out by the array of questions. This process creates a more conversational setting which can allow the participant to feel as if they are talking to an audience and truly contributing, rather than simply talking into a microphone and becoming just another statistic of the Interactive.

One challenge Museum Victoria has yet to overcome is creating a definitive process and manner in which they will give the six years’ worth of collected data of the studio back to the public. To date, no decision has been made on what the museum plans to do with the rapidly growing quantity of data generated from *Talking Difference*. The general consensus is that the data will be used for research purposes. Therefore our goal is to organize and analyze the data with the idea that researchers must be able to very easily maneuver through the vast quantity of responses to find inherent trends amongst themes. To do this, we researched and tested different

¹ Image provided by Museum Victoria

qualitative data analysis (QDA) approaches, as well as interviewed professionals that have experience in this field. We tested our preferred methodology on a sample of the data given to us by the museum. Through research, advice from our interviews, and the results of our tests, we found a methodology that is best -fit for sorting and analyzing the data. The methodology and findings of our project is critical for the museum to expand and enhance *Talking Difference's* influence on the community. Moving forward, Museum Victoria can continue analyzing the remaining data from the Interactive and apply our methodology to other programs and projects within the organization.

The background research and literature review for this project can be found in Chapter 2 of this proposal. We explain the background of the data, which involves the prevalence of racial discrimination in Australia and prior efforts to combat the issue. We also explain how Museum Victoria raises awareness through *Talking Difference* and their current struggle with organizing six years' worth of data. Next, our team describes the process of QDA, perspective models, and helpful QDA approaches that will help organize that data. Chapter 3 is the methodology section of our project. First, we explain the objectives our group has created to assure the successful completion of our project. Then we outline potential obstacles we have faced during this project. In Chapter 4, we will discuss the project deliverables that we presented to Museum Victoria's staff at the conclusion of our project, detailing our developed methodology for analyzing the *Talking Difference*. Lastly, in Chapter 5 we will present detailed recommendations for Museum Victoria to move forward with the *Talking Difference* Portable Studio that include the proper use of our developed methodology and other steps to take that will enhance the efficiency of analyzing the data.

2. Background

Racial-discrimination is on the rise in Australia (Su, 2014). Community facilitators, such as schools, local governments, and museums are realizing this change and are striving to help alleviate the issue. Our sponsor, Museum Victoria, is a popular participant in the community and believes that “contributing to their community’s understanding of the world” (Museum Victoria, 2014) will help to end racial-discrimination. Museum Victoria wants to use their available resources, such as engaging innovative exhibitions and programs, to achieve their goal and better the community’s social environment.

2.1 Racial Discrimination in Australia

Discrimination in Australia is negatively impacting the lives of thousands of individuals who all possess the same rights. “When you’ve lived here most of your life, not getting a job interview because of your Middle Eastern-sounding name, or missing out on a rental property because of your skin color” is a common struggle various minorities in the country are going through (Marriner, 2014). This is just one example of what many individuals in Australia have to deal with, including those who in some cases are native Australians. The Australian Social Cohesion Survey found that more than 40 percent of people from Asian countries suffered from discrimination last year in Australia and noted that people with Middle Eastern backgrounds are most likely to experience discrimination (Markus, 2013). Today, discrimination in Australia is arguably affecting every group who is perceived to be different and it is still rising even with numerous organizations and government programs dedicated to bringing such a serious matter to an end (Marriner, 2014).

Racial discrimination has proven to be difficult to define and several scholarly papers make every effort to do so. It is often defined as the “unjust or prejudicial treatment of different categories of people or things, especially on the grounds of race, age, or sex” (Oxford 2014, pg 1) Many of the negative effects of discrimination have been overlooked for many years. During the early 1900’s, the White Australia policy was established, comprised of various guidelines that favored immigration into Australia from predominantly white European countries, especially Britain. The policies had detrimental effects on the country, effects that caused Australians to limit their global perspective, reject the foreign, and slow advancements in cultural understanding, trade, religion, and new technology. Between 1949 and 1973, this

movement slowly lost support, which led to a need to reevaluate their national image (Institute of Public Affairs, 2006). The government soon after initiated a campaign of “Multiculturalism”, which is the idea of having a country with diverse communities in an attempt to promote social acceptance. This idea was first introduced to Australian politics in 1973 by Al Grassby, the Minister for Immigration to the Whitlam Labor government (Brett 2011). This campaign led to the Enlightenment period, a time where the Australian government tried to repair the injustices of overtly racist policies. The government decided that grouping different races in one location would promote racial identity, but in reality, isolating these different races defeated the purpose of social integration, promoting discrimination (Anderson, 1990).

2.2 Bringing Racial Discrimination to an End

In efforts to bring Australia’s discrimination and racism to a halt, lawmakers passed the Racial Discrimination Act of 1975 with the goal of promoting equality regardless of race, color, or national/ethnic origin. The act made any discrimination on these bases unlawful and was passed with high hopes that it would assist in the elimination of racial discrimination in Australia, but that proved not to be the case. Though instances of discrimination were punishable by law, it was difficult to prosecute cases unless they were extreme. Small daily acts often go unseen by the general public, but nevertheless cause negative effects on the lives of those victims. Commonwealth and State laws not only make it illegal to discriminate, but also encourage, permit, or allow acts of racism to occur (Australian Human Rights Commission, 2010). It can be argued that the most effective way to bring discrimination to an end is through education and the spread of knowledge regarding various cultures. By listening to people’s stories, one can build compassion and empathy, becoming less prone to participate in acts of discrimination in the future (Gaze, 2005).

Though many see diversity as a virtue of the country, some see it as the marginalization or diminishing of Australia’s British heritage (Brett, 2011). Stereotypical views of race and cultural diversity have been deeply infused into Australians’ subconscious through the news and their social environment. Changing these “deep seated” ideas of racial exclusion is not easy. The present doctrine in Australian Racial Discrimination law suggests that racism has become a normal part of Australian society, making only extreme cases of racial discrimination recognized (Gaze, 2005). Today, Australian law requires individuals and schools to take

responsibility in preventing and combating racism as well as spreading the acceptance of diversity and equality. There are numerous programs and organizations dedicated to the spread of diversity and equality for all, with a major focus on Australia's minority population.

2.3 Institutions against Racial Discrimination

There are countless institutions that maintain the goal of changing society's perception of racial discrimination. They attempt to do so by educating the public about the ignorance that fuels discrimination and the need to relate to all people as individuals rather than categorizing any specific group.

A few of these institutions include schools, local governments, universities, art-based organizations, and museums. Schools can provide inter-cultural learning and understanding at an early age, which can hopefully change the children's attitudes and behaviors towards cultural difference. Local governments have the power to change policies that will decrease isolation and encourage connections within and between communities. These connections will lead Australia in the right direction of an inclusive and healthy society. Universities are able to complete research on communities for evidence of racism in Australia and the effects of anti-racism programs (Mauri & McFadzean, 2013, pg. 3-4). For example, the 'Challenging Racism Project' is a project that assists in counteracting the existence of racism. The project is a collaboration between University of Western Sydney, Macquarie University, Melbourne University, and Murdoch University. The team working on this project realized that there is a lack of knowledge on the nature of racism in Australian society, pushing them to generate "comprehensive and defensible" data regarding society's experiences with the topic. In an effort to bring racial discrimination to an end, the team has compiled a list of practical anti-racism initiatives that local governments, as well as any other institution, can access for use in their communities. A few of the initiatives that have been put together include: 'Celebrations of cultural diversity', 'Providing accurate information to dispel false beliefs', and 'Engaging local residents in conversation and consultation'. Each has their own purpose, description, and goal making it easy for any organization to follow and conduct in their own way. For example, 'Celebrations of cultural diversity' was designed so local governments or organizations can host vibrant cultural festivals bringing together different races of the community to display the benefits of cultural diversity and the need for different races to become a norm. Along with the description is a web page showing what other communities have done with this initiative, and a

few suggestive steps and ideas on how to promote the event (University of Western Sydney, 2014).

Organizations may also tackle the issues of racism through the arts. One example is VicHealth with their program titled ‘Arts about Us’. The goal of the program is to display artworks of different cultures that will initiate conversations on topics such as cultural diversity, the harm in discrimination, and racism in Australia (VicHealth, 2014).

2.3.1 Museums

Museums are contributing to community conversations about challenging issues and pushing towards a more socially accepting community. Furthermore, museums are places where ideas can be explored, stories told, and emotions and voices expressed. Those aspects are all crucial to a fight for human rights, equality, and respect (Mauri & McFadzean, 2013, pg. 51). An example of a museum that uses some of these aspects to fight for human rights, equality, and respect is the ‘World Against Racism Museum’. This museum is an online exhibit containing video galleries focused around what racism is and the steps necessary for creating a more socially accepting country. The informative videos are dedicated to changing minds for the social betterment of the community (WARM, 2010).

The progress towards a more interactive environment is becoming more prevalent with time and the advancements in technology. For past centuries, museums have been a place that displayed an artifact with a description, which is a very straightforward deliverance of information. As technology becomes more advanced, looking at artifacts with their description became available online, meaning people do not have to physically go into a museum to view them. To sustain the flow of visitors and funding, museums feel obligated to progress with those advancements. The youngest generations are considered “the touch-screen generation” (Rosin, 2013) and are heavily reliant on technology such as iPods, Xbox, laptops, etc. For the kids to leave that environment and come to a museum that is solely displaying objects and descriptions might have little to no impact on their understanding of the subject because this mode may lack interest. “It is not enough that an exhibit has a culminating point or experience that is rewarding to visitors; every intermediate step in the visitors’ experience must be sufficiently motivating that they make the choice of continuing to invest time and attention there” (Allen, 2003). Museums are facing a major struggle of how to continue to capture the attention of visitors. For

this reason, the need for a more interactive environment has fueled museums around the world to revamp programs, galleries, and exhibitions (Allen, 2003).

Over the past ten years museum culture has slowly shifted to communicating with their visitors rather than just focusing on displaying their collections. Museums are becoming a more active learning institution that places their visitors at the center of activities (Chang, 2006). This includes museums building relationships with their communities, investing into resources that attract diverse visitors, and applying new ideas and methods for engaging and educating visitors. Museums today direct their focus towards what the public finds interesting, which makes audience-based research necessary to create effective and popular institutions. The American Association of Museums provided several research reports that suggested museums are striving to become a public educational institution, to be more inclusive in a democratic society, and to reflect the diversity of their nation. Thus, museums are expected to respect different cultures and backgrounds of their visitors and help others do the same. With this shift in museums' focus, their educational role, capacity for relationships with visitors, and potential to create social change for the betterment of the community has grown significantly (Chang, 2006).

The Immigration Museum, located in Melbourne, Victoria is one example of a museum that uses interactive aspects of technology to fight for equality and respect. A few of the goals of the 'Immigration Museum' are to reflect society as it is and to emphasize diversity in all forms. One example is a simulated tram ride that displays varying opinions on a discriminatory act. Participants sit in front of a screen that displays a scene where a white male shows outward distaste for another man on the tram speaking a foreign language. At the end of the screen, the participants have the option to replay the scene while displaying varying patrons point of views. "After watching the video, it really opens your eyes to racial discrimination that occurs in Australia, among general society" (Museum Victoria, 2014). A successful exhibit in the museum that is specifically geared towards racial and cultural diversity within Australia is the 'Identity' exhibit. The exhibit displays a variety of backgrounds in which people grow up and how they can lead to discoveries, confusion, prejudice, and understanding of their own and others' culture. Overall, the exhibit challenges racist attitudes and promotes positive change, but what makes the 'Identity' exhibit successful is its ability to make social change within the community (Mauri & McFadzean, 2013).

Using museums to counter racism and increase acceptance of diversity among young people will hopefully strengthen the community's understanding of the effects and the need to bring racial discrimination to an end. Educating the public of the negative impacts racism is believed to cause a change in human thought patterns because people are more likely to change if they know just how devastating it can be for others. Museum Victoria, in conjunction with the Immigration Museum, has created *Talking Difference*, as explained in the Introduction of this report. Participants can read questions posted by members of the community and see other people's responses to questions, as well as respond themselves through video, audio, drawing, or text. The questions generated for the Interactive are specific to each location. About a week before the arrival of the Interactive, museum staff come into the community and discuss a variety of racial topics with participants. With the data collected during the workshop, staff is able to put together major themes and form questions that would be most applicable to the discovered topics. Questions can be different for all locations, but they are always tied back to racial discrimination. The goal of the Interactive is to facilitate discussion about cultural difference and promote diversity through new and contemporary means. In another perspective, the Interactive challenges race-based discrimination 'through the arts' (VicHealth, 2014).

The responses from *Talking Difference* are in the form of video, audio, drawings, and text, representing collections of qualitative data. The Interactive has been in use for 6 years and has been constantly accumulating these responses that have been collected and "stored" in a database. This data set presents challenges for organization and cataloging in order to make it available and effectively useful to the public. Museum Victoria has been facing these challenges and has asked us to help them determine the best theoretical approach for qualitative data analysis (QDA) for organizing and categorizing their multi-media collection. Doing this will make the data easily manageable and presentable for future uses, which is important because much insight about discrimination come from those who have experienced it first hand. The next section will detail the available options and best practices from our preliminary research for analyzing large collections of qualitative data.

2.4 Qualitative Data Analysis

Qualitative data, often referred to as categorical data, is information presented as forms of description other than numerical figures. Qualitative data describes observations through

language and other similar models, rather than defining the observation numerically (John Adams, 2014). This data can be useful for authenticating social patterns observed in everyday life, such as discrimination or the loss of culture.

There are a number of narrative data types that we may encounter while analyzing data at the museum. Some of the data types may include, but are not limited to; individual or (focus) group interviews, journals or diaries, field observations, questionnaires, reports, and personal experiential stories (Powell, 2003). A majority of the data at the museum will be digital media in the form of text, audio, or video files. As most qualitative data can be analyzed in a similar fashion, different data types do not complicate the analysis. Multiple approaches are available for analyzing qualitative data, often involving several steps. The general procedures are outlined below. For each step, *Section A* will describe the tasks, *Section B* will describe helpful ideas, and *Section C* will describe the outcomes expected for each step.

2.4.1 Step One: Understanding and Cleaning Data

Section A: The first step entails becoming familiar with the data. Each item needs to be examined and any possible theme or category tagged or noted (Powell, 2003). Additionally, the opinions of the participant and the number of times a theme appears must also be noted. One option is noting if the quote is memorable; this might be helpful for deciding which datum is best to represent their theme.

Section B: Themes of no value do not get coded. Some cases include when an item has no material to analyze (i.e.: a silent audio recording) or when an item is completely off topic (i.e.: a person talking about the weather when the question was asking what school they attend). Also re-reading, watching, and listening are crucial until the message of the author and all possible themes are fully understood (Powell, 2003).

Section C: Each datum will have tags of all the themes they correlate to. These themes are the codes that will be used for the rest of the data analysis process (Powell, 2003).

2.4.2 Step Two: Focus on the Analysis

Section A: The second step is to determine the main message that should be displayed by the data. To begin this step, we must identify key questions that the analysis should uncover. For example, if the main message of a QDA project displays why students should or should not

live on campus while attending college, then some key questions will be “*Why are you living on campus?*”, “*Why are you living off campus?*”, “*What are the positives of living off campus?*”, etc. The answers to these questions will reveal the necessary information to answer the main question, or message, of the analysis (Powell, 2003).

Section B: There are two common approaches to this next step. First, data can be organized by question, topic, time period, or event. Categorizing the data by key questions is a form of this approach. Another example would be categorizing diary entries into different years of the author’s life. The second approach to this step is organizing the data by individual, group, or case. This approach gives an overall viewpoint of specific individuals, groups, or cases. An example of this instance such as with “*Why students should live on or off campus?*” is that the data can be categorized by academic year or by the students who are currently living on campus.

Section C: Categorizing the data into these groups is the start of seeing patterns within the data. Similarities and dissimilarities can be seen between and within the groups; conclusions can be drawn from those connections (Powell, 2003).

2.4.3 Step Three: Categorizing Information

Section A: The third step consists of recognizing sub-themes and defining the established themes. Sub-themes, which are themes within the major groups established in the previous step, are very important. A standard way of defining the themes is crucial to an effective analysis of the data. Each theme needs to be named appropriately and defined with specific inclusions and exclusions (Powell, 2003).

Section B: There are two approaches to this step: creating preset themes or using emergent themes. When analyzing, most researchers prefer an *emic* focus, which uses the participant’s terms and insight to define themes and categories (John Adams, 2014). As an example, a marine biologist that uses an emic perspective will establish his or her own class of species if necessary to properly define a new finding that may not fit well in any existing category. This process can be described as a “code-as-you-go” structure that bases its analysis on constant comparisons. Other researchers, however, utilize an *etic* focus, which entails the definition of constructs prior to the investigation and subsequent filing of the data into preconceived themes (John Adams, 2014). To clarify, a pharmacist that has created a new drug

for reducing swelling in the body will define their creation using the pre-existing category anti-inflammatory drug, rather than adopting their own category at the risk that the drug does not fit properly into any existing label. These focuses can also be described as inductive or deductive reasoning, respectively (Thorne, 2000).

Section C: This step can be very time-consuming and difficult. It is crucial, however, because more sub-themes increase the possibility of finding significant and interesting topics due to differentiation within the data (Powell, 2003). Also, themes change often during the course of this step. We will use the differentiation and themes in the next steps.

2.4.4 Step Four: Patterns and Connections Within and Between Categories

Section A: Step four is to establish the connections between the major themes and sub-themes within and between responses. Then we must present a summary of the findings noting which theme or idea appears more times and seems more important (Powell, 2003).

Section B: A recommended way of showing these relationships is through a visual diagram. The visual aspect will allow a better view of whether categories and connections need to be added, removed, or modified (Berkowitz, 1997). Examples of visual aspects are shown

here using the previous example of "Why should students live on or off campus?" The following data, which was collected by a news business reporter Stephen Watson, are opinions from a few students and staff at the University at Buffalo (Watson, 2012).

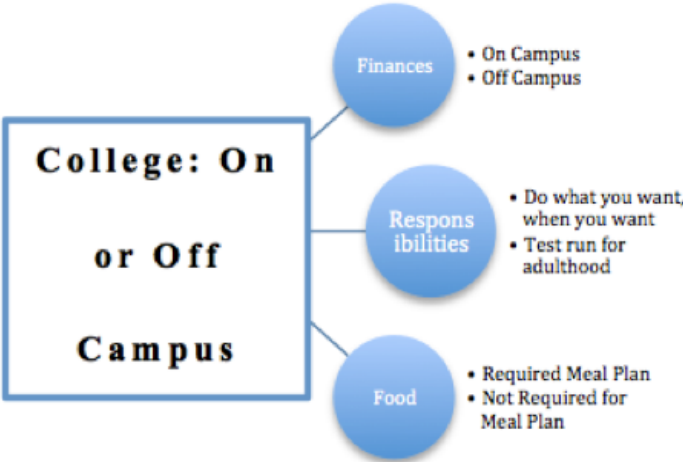


Figure 2: Comparison of on and off campus finances, responsibilities, and food (Watson, 2012)

Figure 1 shows the main analysis and its major themes. Each major theme has multiple sub-themes. Figure 2 shows the relationships of different subcategories under the main theme or category. There is color coordination used to display the relationships of ideas in different subcategories.

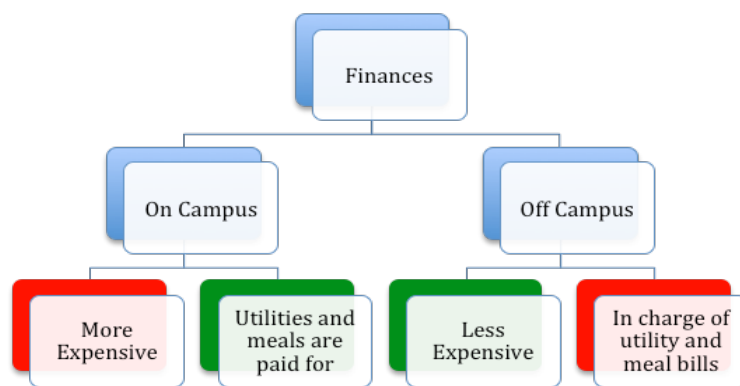


Figure 3: Comparison of on campus finances and off campus finances (Watson, 2012)

Green represents a positive response and red represents a negative response. The visuals can be displayed in multiple ways and allow for easier interpretations of varying themes (Berkowitz, 1997).

Section C: Relationships between and within the major themes and subcategories are all drawn in this step. The relationships are clearly defined at the end of this step (Berkowitz, 1997).

2.4.5 Step Five: Interpretation

Section A: The final step is to interpret the connections and relationships that were drawn from the previous step. This provides clarification, understanding, and explanations of the data. Putting interpretations, connections, and relationships into an outline helps to develop the main finding (Powell, 2003).

Section B: When interpreting the data, the meaning of a specific connection or relationship is added (Powell, 2003). Looking over the data several times may be necessary to verify our emerging themes (Berkowitz, 1997). The researchers must write down comments, tentative interpretations, and initial hypotheses. These can become either very useful or sometimes worthless (Berkowitz, 1997). Real data examples are excellent support for the presentation of the analysis and give a sense of how we came to our conclusion. Quotations must be properly sized to include all relevant information while still providing a means of analysis. The quote always requires an explanation of how it supports the purpose of that claim.

Section C: At the end of this step, there will be a presentation of the main findings. The results of the analysis must be useful to the audience. It will also be important to mention any gaps in the interpretation as they can be used for future research (Powell, 2003).

2.5 Qualitative Data Analysis Models

There are a multitude of different models used for analyzing qualitative data, yet every study will use a different adaption of these theoretical approaches. This is due to the large diversity in qualitative data as well as the anticipated results. The results of the data are heavily dictated by the approaches used and each have their benefits and downfalls regarding how insightful and relevant the findings are. Choosing the correct approach for our data is crucial because there is a large amount of data and the analysis must not overgeneralize due to the sensitivity of the subject. Efficiency is a key factor for the large amount of data, and the visibility of connections and relationships within the data can also present the possibility of overgeneralizing. First, however, we must look at how researchers choose to create the themes and codes that will dictate results.

2.5.1 Grounded Theory

A widely used model by social scientists is the “Grounded Theory” approach. This approach uses a constant comparison-like process and involves “building up inductively a systematic theory that is grounded in, or based on, the observations” (John Adams, 2014). This approach suggests that the main theory of the analysis will be developed from observing the data rather than having a main theory developed beforehand and characterizing the data to support that theory (Connelly, 2013). There are generally three recurring steps involved with the “Grounded Theory” approach. These steps include:

1. Summarizing the data into conceptual themes.
2. Testing the concepts using more observations gathered during the coding process.
3. Refining the concepts and themes accordingly through the progression of the study to develop a grounded theory.

2.5.2 Constant Comparative Analysis Approach

The “Constant-Comparative Analysis” approach is an analysis that involves taking one relevant data entry and comparing it with all others in the set. This set for our project can be

determined by the date of the entry, the question the data is responding to, the issues the data addresses, etc. These data entries within the set may be either similar or different from the original entry. This approach allows the researchers to develop conceptualizations of the relationships between various data entries for categorization purposes (Thorne, 2000). In addition, researchers are able to compare and contrast different pieces of information and determine the relevance to the project and where the pieces may best fit in regards to the end-result. For our project, the different pieces of information must relate to racial diversity of Victoria and must be positioned in the analysis to the type of social concept they address.

2.5.3 Narrative Analysis

The “Narrative Analysis” approach aims to analyze stories and life events told in various ways. This model allows analysts to focus on how a participant “imposes order on the flow of experience in their lives and thus makes sense of the events/actions of their life” (John Adams, 2014). Finding order among the vast quantity of data will make developing relevant themes within the data faster and more efficient.

There are four distinct “tales” this approach searches for to help the researcher understand the participant and how the story is told. This understanding can describe the uniqueness of each datum, which may turn into an emergent theme or category for the analysis. Additionally, the tales are useful for describing components of video, audio, and drawings that are not applicable to text. The “tales” include action, expressive, moral, and rational tales. Action tales indicate that the author is attempting to represent himself as “acting within parameters of taken-for-granted assumptions regarding expectations” (John Adams, 2014). The author acts beyond what their normal life generally requires. A series of intense and adventurous events filling up what should otherwise be an ordinary day is a general outline of an action tale. A story of severe discrimination in a single day can often be described as an action tale when the author is at the helm of the situation.

“Expressive tales” are meant for the author to convey strong emotions regarding an influential event to their story (John Adams, 2014). “Moral tales” generally include the author describing certain external forces that shaped their behavior and thought-process as well as that of others (John Adams, 2014). A recounting of a schoolboy standing up to a bully by defending himself physically and/or emotionally and ultimately winning is a classic example of a “moral tale”. “Rational tales” are similar in that the author discusses their thought-process behind the

rational decisions they have made in the story. The author also scrutinizes his thoughts and actions during the experience (John Adams, 2014). A hiker lost in the woods is forced to utilize his limited supplies and the environment to survive and make it to safety is an example of a rational tale.

By identifying the form of each tale, our group will be able to approach the analysis of the data by creating a “big picture” from the story. Our group will be able to highlight the goals and intentions of our storytellers, which will “make individuals, cultures, societies, and historical epochs comprehensible as wholes” (John Adams, 2014).

Four stylistic dimensions found in Calvin Morrill et al.’s narrative analysis study complement the four distinctions in storytelling described above:

1. Plot structure: dictates how the story will unfold and in what order the events will take place in the retelling.
2. Dramatic tension: distinguishes how the central opposition and conflict are represented, whether it is calm and mellow-dramatic or intense and emotional.
3. Dramatic resolution: how dramatic tension is resolved, which can vary immensely between the four distinctive story types.
4. Predominant outcomes: results of the conflict resolution and brings the story to a close (Morrill et al., 2000).

2.6 Conclusion

The *Talking Difference* Interactive started six years ago, and throughout this time, numerous videos, audio recordings, drawings, and text responses have been collected and stored in a database. Using theoretical approaches for qualitative data analyses, we plan to organize a small sample of the media bits into specific categories based on specific words, pictures, and any other context we can extract. Once the data has been categorized, we plan to test the different processes and approaches for QDA that have been explained above using the sample of data generated from *Talking Difference*. Once we have decided the best means of analyzing, we will apply that to the rest of the data. We believe this will allow Museum Victoria to expand their options to display the information and to continue spreading knowledge on the issues associated with racial discrimination. In our next chapter, we will go on to explain how we will apply these approaches of QDA to our project.

3. Methodology

The goal of this project was to develop and apply a preferred methodology for analyzing qualitative data generated from Museum Victoria's *Talking Difference* Portable Studio. The analysis will aid in the initiative to raise awareness against racial discrimination as well as promote a sense of social equality in Victoria. The developed methodology will also assist future research and could conceivably be applied to other forms of qualitative data from the museum. We have developed the following objectives to assure the completion of our project goal:

1. Gain an understanding of different theoretical approaches available to analyze qualitative data.
2. Understand the data collections we will be analyzing.
3. Identify and develop a preferred methodology for analyzing the qualitative data set.
4. Analyze the data generated from *Talking Difference* using our developed methodology.
5. Provide Museum Victoria with sufficient information for the continuation of data analysis using the preferred methodology.

In this chapter, we will discuss the methodologies used to complete each objective, as well as the reasoning for selecting these methods.

3.1 Gain an understanding of different theoretical approaches available to analyze qualitative data.

The first step in our project was to better familiarize ourselves with the process of qualitative data analysis and its widespread application. Qualitative data analysis (QDA) is very much a case-by-case process and no single approach clearly applies to all data sets in a manner similar to that of quantitative data with fixed variables.

Our method to understanding the different ways to analyze data was conducted through research and interviews of professionals in the field. Our research provided background knowledge of the different theoretical approaches available, helping to narrow down the approaches that best fit the specific data set of *Talking Difference*. We first researched the qualities and steps that all qualitative data analyses take. Once we understood the general process our team researched further into different types of qualitative data analysis approaches.

We focused on approaches that are popular and/or used to analyze similar data, which are responses to a sensitive sociological topic. In addition to our chosen method, we looked at using a computer software program to enhance the efficiency of data analysis. We researched a few popular qualitative data analysis software programs to gain an overview of how they work and to compare which ones were best suited for coding our type of data, which are video, audio, text and drawings. Interviewing professionals in the QDA field gave our team recommendations for a few approaches that would work most efficiently with this specific data. We interviewed professionals in both the United States and Australia. Our American interviewees included Professor Paul Mihas and Professor Ara A. Francis. In Australia we interviewed Sahra Hjorth and our sponsor Carolyn Meehan.

Professor Paul Mihas teaches qualitative research at the Odum Institute located at the University of North Carolina. His courses cover multiple topics from qualitative data analysis methods to workshops on analysis software application such as Atlas.ti, NVivo 10, and MAX-QDA. More specifically, he teaches a hands-on course on the analysis software, NVivo 10, which our group considered to automate our preferred methodology. We interviewed Professor Mihas because of his focus on QDA software applications which would allow us to learn more about various tools available to use in our own analysis and which software programs would work best with the specific *Talking Difference* data.

Professor Ara A. Francis earned her PhD in Sociology from the University of California and currently teaches for the Sociology Department at the College of the Holy Cross in Worcester, Massachusetts. Professor Francis is an expert in the fields of qualitative data analysis and social psychology. With an extensive knowledge of QDA and social issues, our team sought her advice on which theoretical approaches would work best with data from the *Talking Difference* studio.

Sahra Hjorth is a PhD fellow from Aalborg University, located in Denmark. She is currently working and studying in Melbourne, conducting research on immigration patterns throughout the World. A significant part of her PhD requirement is focused on interviewing people from a variety of different cultures in a qualitative manner and analyzing their responses using QDA approaches and the aid of NVivo. We chose to interview Ms. Hjorth for her valuable and professional opinion concerning which approaches and software applications that could be selected for our own analysis.

The questions asked in each interview, found in Appendix C, were designed to extract the most relevant and useful information from the interviewee in a timely fashion. Our research focused on methods and available software programs, but was fairly limited, as it did not allow the same level of understanding as physically conducting a data analysis ourselves. However, our interviews helped transition us through this learning process. The professionals selected have experience regarding different QDA approaches and a significant insight on which software applications may be most effective for analyzing the *Talking Difference* data.

3.2 Understanding the collections of data we will be analyzing.

Qualitative data analysis approaches often vary between studies, depending on the data sets that are being inspected. One of our highest priorities was to increase our understanding of the data from *Talking Difference* and uncover any challenges we may face. To achieve our targeted understanding we first began researching the *Talking Difference* studio itself. Specifically, we examined the Interactive's website for any relevant information that would give us insight as to what forms of data we would be working with. This Interactive allows participants to record answers to various questions, examples found in Appendix A, via video, audio, drawing, and writing (Museum Victoria 1, 2014). On the website there were a few responses that gave our team a look at existing data from the response database. The few responses we saw helped familiarize us with what the Interactive has been collecting over the past six years and what we will be working with.

Our next step was to contact and interview our sponsor, Carolyn Meehan, and the *Talking Difference* project manager, Tatiana Mauri, of Museum Victoria. With our interviews, we strived to gain the perspective of our sponsors and determine what details of the project were most important to Museum Victoria. Some of the topics we aimed to cover included: the purpose of the interactive, expected outcomes of our project, and any general information regarding data from the portable studio. Our interview questions, in Appendix B, were semi-structured to allow for flexibility regarding our sponsors' responses as well as the fluidity of the conversation.

Once we arrived on-site, our most important task was to obtain and begin understanding the data. After a meeting with our sponsor, we were assigned a sample of the entire data set from *Talking Difference* to analyze. The sample, approximately 180 interviews, was collected

during the *Talking Difference* “Hobson’s Bay Tour,” featuring the four locations of Williamstown, Laverton, Altona North, and Altona Meadows. Our team familiarized ourselves with the data by watching videos, listening to audio recordings, reading text responses, and viewing drawings to gain a better sense of what the data held and begin to understand what our main analysis would look like.

For the analysis, we first had to understand the basis of both the role of the *Talking Difference* studio and Museum Victoria, as well as what the data was presenting. To gather this information, we interviewed two professionals, Dr. Moya McFadzean and Dr. Yin Paradies. Ms. Mauri, the Talking Difference project manager, referred us to both of these contacts. Our interviews were semi-structured, and allowed the interviewee to speak more broadly on the issues at hand. This gave us new information that helped in our understanding of the data.

Dr. Moya McFadzean is the Senior Curator of Migration in the History and Technology Department at Museum Victoria. Her expertise is in the “challenges in representing diverse migration narratives in museum collections and exhibitions” (Singingbowl Media, 2014). Her research focuses on Australian immigration policy and promotion. Our team interviewed Dr. McFadzean to understand museums’ role in battling racial discrimination in Victoria, questions found in Appendix D. This interview gave us a better understanding of why the *Talking Difference* studio was created by the museum and what its underlying purpose was in influencing social change.

We then interviewed Dr. Yin Paradies, the Principal Research Fellow at the Centre for Citizenship and Globalization. His research focuses on the health, social and economic effects of racism and anti-racism theory, policy, and practice (Museum Victoria 2, 2014). We interviewed Dr. Paradies to better understand the current state of racial discrimination as well as cultural diversity in Victoria and the role the government plays in the issue; the questions are illustrated in Appendix E. This interview allowed our team to develop a more in depth understanding of existing issues regarding racial discrimination in Victoria and how we may determine relevant themes in our codes.

3.3 Identify and develop a preferred methodology for analyzing the qualitative data.

Our team researched qualitative data analysis approaches from several sources and selected three that seemed best fit for our type of data: the “Grounded Theory”, “Constant

Comparative Analysis” and “Narrative Analysis” approaches. These theoretical approaches are previously explained in our background chapter.

With a better understanding of our data, we began to compare and contrast the three theoretical approaches we felt would work best with the given data. Additionally, we explained our possible approaches in our interviews with Professor Francis and our sponsor, Carolyn Meehan. They both gave strong professional opinions on which approaches they believed would work best with our data.

To enhance the selection of our preferred methodology, we chose to use a qualitative data analysis software tool that would help with coding and categorizing the data. Our team researched a few qualitative data analysis software applications and selected three that seemed most suitable for the data at hand. We worked with each software application to better understand its value and also interviewed two professionals with the purpose of gathering information on which software applications would be most suitable for the portable studio’s data. These professionals were PhD fellow Sahra Hjorth and Professor Paul Mihas, both of whom are experienced in using qualitative data analysis software applications. Using the information gathered from our research, our comparison, and the advice from our interviews, we were able to make a decision on which software application was most fitting for the data.

To test the efficiency of our coding process we first looked at the number of mistakes made while coding by simply viewing and/or listening to the media files. This included any significant errors made while coding the media files, such as misinterpreted phrases or overlooking any significant words or sentences. If few enough errors were made regarding where the codes were placed while capturing all relevant pieces of information, we would then time-test the former coding process against the process of transcribing the file and coding the corresponding text. Our team used a basic ratio of file time compared to transcription time for this test. Based on our results we would decide if transcription was a necessary step.

3.4 Analyze the data generated from the Talking Difference Portable Studio using our established methodology.

Using our preferred methodology constructed through Objective 3 we began to analyze the data compiled from *Talking Difference*. In order to analyze the data our team had to create themes or categories into which the entries will be coded. The majority of our themes were

created using the questions that the *Talking Difference* studio is based upon. An example is as follows:

Question: “*Have you ever been stereotyped? What happened?*”

The corresponding major theme extracted from this question is ‘Stereotype.’ However, a question is not excluded to just one theme, the question can have multiple themes. The example above can have a sub-theme, ‘Feelings.’ Next, we began putting the responses to questions into the correct theme, or category, but some responses contained themes that were not present or obvious in the question. In that case, we added new themes or sub-themes.

These themes were labeled using one or two words and contained an explicit description that explained what that theme consists of, allowing anyone to be able to code following the same guidelines as we did. We looked further into these themes to find any overlapping patterns within the data, such as the themes with the largest and smallest number of entries. We then reconstructed the data through the creation of related categories based on discovered themes. The created themes were utilized in the coding process via our preferred QDA software program. The selected software application allowed us to create graphs and models for our own organization that would display relevant information based on the findings of our analysis.

3.5 Provide Museum Victoria with sufficient information for the continuation of data analysis using our preferred methodology.

Museum Victoria has asked us to find a preferred methodology for analyzing qualitative data and a comparison between the different software applications to help decide which one the organization should purchase. Choosing an appropriate methodology required extensive research and the critiquing of various qualitative data analysis approaches. The theoretical approaches and software program we chose must work best with the variety of media with which we worked. We will later explain in our Findings and Conclusions, step-by-step, how to use the chosen approaches and software program so that our procedure could be followed by anyone to continue analyzing the rest of the data from *Talking Difference*. We were only given a small portion of the data, so it is important we be clear and concise in our explanation so Museum Victoria can complete analyzing the remaining data once we have finished our work.

We selected our preferred methodology with the knowledge that later on our selection would be utilized by Museum Victoria for other projects in addition to the *Talking Difference*

studio. Also, we have planned for the museum to use the analyzed data from *Talking Difference* to strengthen their stance against racial discrimination in Victoria through more initiatives moving forward.

3.6 Challenges

The major challenge that our group faced was the task of selecting a preferred methodology capable of analyzing the museum's extensive data set using only a small subset, the "Hobsons Bay Tour." In addition, creating an accurate analysis of the data was difficult due to our team's lack of experience in qualitative data analysis. An accurate analysis occurs when the themes and relationships among the data are easily seen. If an analysis were inaccurate, the potential of presenting false information and overgeneralizing to our audience would become possible. Because the topic of our project is sensitive, this analysis error may lead to stereotyping, creating the opposite effect of our goal.

Another challenge our group faced was the willingness and availability to recruit professional participants for our interview phase. Many of the professionals we contacted are full-time professors, many of whom teach multiple classes and conduct research. It is common for professionals to run on tight schedules; therefore it was of the utmost priority that our group marketed our interview requests effectively. This included conducting thorough background research to eliminate any process-slowng questions. In addition, we modeled our initial contact e-mail to be very concise and direct to our objective.

In the next chapter, our team will discuss in detail the findings of our project as well as the results of our data analysis.

4. Findings

This chapter presents the findings and decisions made to complete this project. We first explain our findings from the interviews we conducted to understand the data. Next, we discuss the decisions made to determine the chosen theoretical approaches as well as the software program that will aid in the analysis of the data generated from the *Talking Difference* Portable Studio. In addition, our team will explain the necessity of transcribing media files as well as the most efficient process for conducting each transcription. Then we discuss how we coded the data into themes and how we analyzed those themes to make our analysis. Lastly, we state what our deliverables were to Museum Victoria.

4.1 Understanding the Project

The goal of the *Talking Difference* Interactive is to challenge current ideas regarding racial discrimination and attempt to spark social reform. Therefore, it was important that we look into this issue of racism and understand why it is so prevalent in Victoria. We found that racial discrimination is not being addressed correctly in many institutions such as the Australian government and their local school systems. Dr. Paradies stated that there is little diversity in Parliament as an overwhelming majority of its population is white. This may suggest why the residents of Victoria are plagued by racial discrimination and why few policies exist that push to create reform. Although many individuals believe that the overall levels of racism in Australia are declining, a recent Social Cohesion report suggested that rates of individuals experiencing racism soared 9% to 19% from 2007 to 2013 and 12% to 19% from just 2012 to 2013 (Markus, 2013). Dr. Paradies claims this is because many Australians have begun to acknowledge more forms of racism than those that are intentional and planned. Additionally, Dr. Paradies mentions that the word ‘race’ is more sensitive compared to the words they like to use instead, such as ‘ethnicity’ or ‘culture’, which both direct attention away from the issue.

However, in recent years the government has put some effort into reducing racial discrimination. For example, there are a few organizations, such as the National Anti-Racism Strategy and the Human Rights Commission, that are funded by the government who share a common goal of battling racism. The government has also been pushing Multiculturalism, a large policy platform believed to create cultural harmony by positively acknowledging different cultures, but has failed to fully address the issue of racial discrimination. Parliament has also

directed more focus on racial discrimination towards Aboriginal peoples and is working to make up for its past actions and policies against Aboriginals. For example, the Parliament created a day for celebration of multicultural acceptance, called ‘Harmony Day.’ This day is an opportunity to celebrate the harmony between different cultures in Australia.

Dr. Paradies explained that there are many racial issues arising in schools and their stance on “racial reconciliation.” For example, many teachers educate their students on Multiculturalism through celebrations of cultures involving food and festivities. These celebrations are meant to spread social acceptance, but fail to educate their students about different cultures and the current state of Victorian racism. These celebrations can often single people out rather than allow them to integrate and share the deeper aspects of their culture and rich history with their peers. To combat this issue, Dr. Paradies believes Australian leaders must find a way to properly address how students are being taught about cultural diversity and the effects that racism can have on others. Several teachers find that they are unsure of how to properly educate their students on the importance of cultural acceptance and the problem of racial discrimination. Dr. Paradies believes that providing training for teachers on how to explain this difficult topic is the first step to decreasing the issue among students.

4.2 Choosing our Theoretical Approach to QDA

Our team used the information gathered from background research and our interviews with Professor Francis and our sponsor, Carolyn Meehan, to choose the theoretical approaches necessary for our analysis. After explaining the data collection we would be working with and our intended purpose to Professor Francis, she recommended that we choose an approach focused on creating major themes before analyzing data and if necessary, redefine themes as we progress through the analysis.

To conduct a successful and meaningful analysis, our themes and codes needed to accurately assess all responses to paint a realistic picture of the public’s thoughts and experiences regarding racial discrimination. Carolyn explained to us her own process for analyzing data. First, she familiarizes herself with the data and begins to write down prevalent themes. As she continues, new themes tend to arise, and some are refined as necessary. She recommended that we take a similar approach to our own analysis, confirming the recommendation of Professor Francis.

With the information gathered from our interviews, we found that using the “Grounded Theory” approach coupled with the “Constant-Comparative Analysis” approach would provide the best analysis. The goal of the “Grounded Theory” approach is to generate theories that explain how some aspect of the social world works (Cohen, 2008). This theoretical approach will help create a realistic analysis of the current issue of racial discrimination. To further enhance our analysis of the current social issues, we adopted the “Constant-Comparative Analysis” approach to assure the inclusion of all relevant and useful responses in the data. This approach requires the researcher to take one piece of data and compare it to the rest of the data and determine whether it is similar or different. We found that using this approach was most effective with coding the data into appropriate themes and finding emerging patterns in the various responses.

The final theory considered was the “Narrative Analysis” approach. This approach helps the researcher analyze the various ways that stories and events are portrayed by breaking the responses down into simple categories, as explained in Chapter 2. It follows basic steps of the other approaches, however we found that much of the analysis of this approach focuses too heavily on the manner in which the story is told. Our team decided that this was unsuitable because we are not looking primarily at this aspect of the responses. Instead, we are more interested in the context of a person’s story and the meaning behind it.

4.3 Finding the Best QDA Software Application

After researching and testing various QDA software programs, specifically NVivo 10, Atlas.ti, and HyperRESEARCH, our team chose to analyze the data with QSR’s NVivo 10 package. We chose these three packages to test after interviewing multiple professionals in the field of QDA that have first-hand experience software applications. Both Paul Mihas, a Professor at the Odum Institute located at the University of North Carolina, and Sahra Hjorth, a PhD candidate in the field of Sociology with advanced expertise in QDA software programs, agreed that these programs would be most valuable to our project, above all others. Ms. Hjorth worked with us extensively to help us come to the decision of choosing NVivo 10, stating that this software application had all of the necessary features to create an outstanding analysis, including powerful tools that may be used by analysts. Although all packages we looked at were sufficient, Ms. Hjorth explained that NVivo 10 has the most user-friendly interface and was the

easiest software program to quickly learn and advance with. This software application is designed using a Microsoft user interface (Figure 4), similar to the design of MS Office Suite, to assure simplicity and familiarity for the user already familiar with common office software programs.

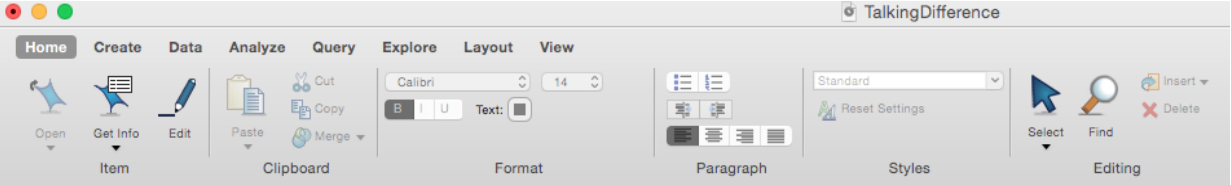


Figure 4: NVivo 10 Toolbar

In addition, users have the ability to import multiple files of data simultaneously, unlike the other two packages. NVivo allows users to store their data and codes in a single ‘project’ for easy portability and file sharing between multiple analyzers.

As beginner users, our team was able to efficiently create categories for approximately ten data pieces in a two-hour training session with Sahra Hjorth. We learned that using “nodes”, or themes, made categorizing the data easier. An example of a node is ‘Joking’. As an occurrence of racial joking comes up, our team simply highlights the associated phrase and drags that into the ‘Joking’ node, as shown in the example in Section 3.4 and in Figure 5.

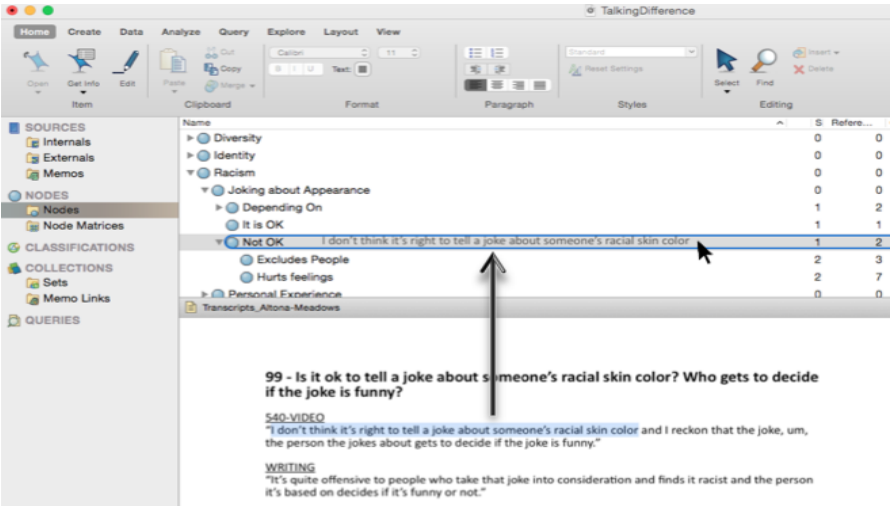


Figure 5: NVivo Example- Highlighting phrase and dragging into correct theme, also referred to as coding.

This process allows for an efficient system of analyzing and categorizing the data. NVivo offers powerful tools to help find trends and analyze data. One tool our team found useful was

annotation that, when going through the data, allowed us make a note of any themes that were prevalent.

The other software programs we explored were unable to code drawings, a feature that is vital to the proper analysis of all data generated from the *Talking Difference* studio. Much of the data is in the form of drawings, so the software program we decided on needed to allow the researcher to incorporate them into the themes. We found that NVivo 10 offers a very impressive customer support with real-time interactions that other packages do not offer. In addition, NVivo allows for very simple and fast file transfers from Windows to Apple platforms to assure a smooth transition of projects between users with different operating systems. However, this software application does come with some limitations in terms of the cross-platform usage. A few of these limitations include Macs having fewer features than Windows, fewer compatible file types for audio and video, complete lack of compatible image files between platforms, and the inability to automatically code large text files using thematic patterns. For a full list of comparisons of both platforms please refer to Appendix F.

4.4 Transcription Analysis

Our team found that transcribing the video/audio files would be beneficial to the overall processing of data based on the needs of our chosen software application. We devised a process for transcribing the assorted media files using a program we discovered called Transcribe, an online Google Chrome web browser application, for a smoother and simpler transcription of audio files into plain text. A few of the impressive features include the option to speed up or slow down the audio as necessary and the capability to start or pause the audio at any point using only the 'Esc' key. These features allow the analyzer to move at their own desired pace as they type directly into the textbox below the audio control board.

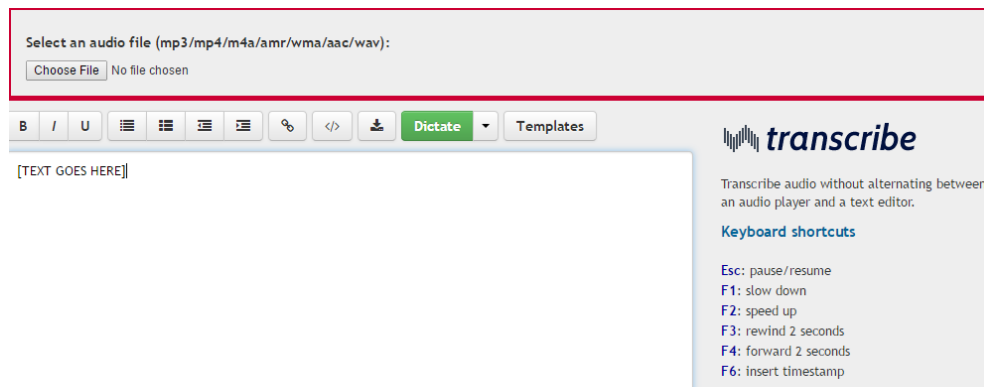


Figure 6: Snapshot of Google Transcribe

Furthermore, users may create “templates” that can replace lengthy and repetitive phrases to save time while moving through the audio file. An example of this would be creating a template to replace the phrase “multicultural” with “mc”, which will automatically be formatted as the user types.

In order to determine the true efficiency and necessity of transcribing audio and video files our team conducted a timed analysis of each individual datum. We created three distinct categories of file lengths in which each video or audio file would be placed for the most efficient measurement of transcription time. The three categories were 0-20 second files, 20-60 second files, and files greater than 60 seconds. When recording the time of each file transcription we analyzed our efficiency using a ratio of file time compared to the time taken to transcribe the file in its entirety, labeled as $t_{\text{File}}:t_{\text{Transcribe}}$. To assure the consistency of each transcription our team devised a process that was repeated for every media file, explained in Appendix G. Our process included reviewing the audio and/or video file for a clearer understanding and then using the online application Transcribe to transcribe the file. This process confirmed our conclusion of the necessity to code files greater than 20 seconds and not for files in the 0-20 second range due to the quantity of mistakes made when typing and when coding the audio. The inconsistencies for the time of transcription for the shortest files showed inefficiency in the process. Specifically, we found that time of setting up the file for transcription took longer than the transcription itself. This proved that with minimal errors in the coding process the analyzer simply must view and/or listen to the file to code. For any files of the remaining two groups we found strong evidence supporting the efficiency of transcription. For longer files the process of setting up for transcription becomes less significant and the total time becomes far more consistent with the length of the file. We found that $t_{\text{File}}:t_{\text{Transcribe}}$ for all data in the Hobsons Bay library fell in the range of 5.3s-6.9s range. This means that for every 1s of file time, it took our team an average of approximately 6s to transcribe.

4.5 Coding the Data

The task of coding and properly addressing key themes in the data was one of the more challenging aspects of our project. As beginner analysts with only theoretical knowledge regarding the process of producing a qualitative data analysis, our team had to overcome a few

hurdles to effectively achieve our goal. With a clear understanding of the data and our preferred methodology created we were ready to begin coding the “Hobsons Bay Tour” data. One issue that our team focused on was the possibility of overgeneralizing the data and failing to create useful and meaningful themes. This issue, however, caused our team to over-specify the data with an abundance of codes that offered little meaning. We then found it was necessary to devise a new way to analyze the data and create relevant themes. We met with our sponsor to discuss how we should go about this process, and she recommended that our major themes stay broad and of lesser quantity. This would allow for more responses to fit into each theme and show meaningful trends based upon the questions asked in the *Talking Difference* studio. Our two analysis processes, “Grounded Theory” approach and “Constant-Comparative Analysis”, are explained below.

The first step of the “Grounded Theory” approach is to summarize the data into different themes. For our first analysis process, we looked through each response to find and code relevant themes. To further explain this coding process, an example from the Altona North Library of the *Talking Difference* data is coded below:

Question: *Is it okay to make jokes about someone’s skin color or accent? Who decides if it is racist?*

Response:

“I don’t think it’s okay to make fun of someone’s skin color or accent because that’s not how God created us. I think it hurts their feelings and it doesn’t make them feel very good.”

Themes (“nodes”):

- Racism
 - Joking
 - Appearance
 - Feelings
- Identity
 - Religion

The themes found in this entry were ‘Joking’, ‘Appearance’, ‘Feelings’, and ‘Religion’. ‘Joking’, ‘Appearance’, and ‘Feelings’ are all sub-themes of the major theme ‘Racism’, and

‘Religion’ is a sub-theme of Identity.

We continued to code the responses by location and the order in which they were taken. As more responses were coded, we began to follow the second approach “Constant-Comparative Analysis,” stating that the analyst must continually compare the data within the themes as the analysis is continued. In other words, this approach helps recognize if these themes need to be modified to correlate with the rest of the data. If any theme seems to be too broad or contains a large variety of data within it, the theme will most likely need to be split into multiple sub-themes. We found that our major theme ‘Identity’ was too broad and as a result, a large amount of the data was categorized into that one major theme. To solve this, our team broke down this major theme into sub-themes of ‘Appearance’, ‘Culture’, ‘Language’, and ‘Religion’.

As we continued to code we began to notice an issue. Our team had reached a point where our codes consisted of nearly 30 different categories, a result of being as specific as possible when creating themes. Being too specific with our codes made it incredibly challenging to see emerging patterns as the data was scattered over too many sub-themes. To solve this issue, our team met with our sponsor and devised a new system for creating themes. For our second analysis process, we decided to create themes using the various questions asked by the *Talking Difference* Portable Studio, as opposed to using the responses. To better illustrate our new process we have provided an example below:

Question: *Have you ever experienced racism? How did it make you feel?*

Theme (“node”): ‘Racism’

Sub-theme: ‘Personal Experience’

The major theme this question fit into was ‘Racism’ and in the sub-theme ‘Personal Experience’. For every response that explains an instance where the participant experienced racism we would label the relevant parts of the statement into that category. With fewer themes, we found it easier to notice significant patterns among the data. To further simplify the themes, our team was able to separate the questions from the “Hobsons Bay Tour” into three distinct themes: ‘Racism’, ‘Identity’, and ‘Diversity’. The questions were filed into these categories based upon what the question was trying to ask of the participant. Questions that asked about

personal experiences of racism were clearly labeled under the ‘Racism’ category, whereas questions pertaining to the participants feeling of belonging would be categorized as ‘Identity’. Once all the questions were properly labeled we were able to move deeper into the data to find emergent themes. This is where we again utilized the “Grounded Theory” and “Constant-Comparative Analysis” approaches.

Another step of the “Grounded Theory” approach is taking action to redefine, reorganize, merge, and add to the themes. We were able to merge some of the similar themes, such as ‘Dance’, ‘Festivals’, and ‘Music’ into a sub theme of ‘Celebrations’. Subsequently, the data was reconstructed through the creation of relational categories, which were based on the discovered themes, as directed by the “Constant-Comparative Analysis” approach. The created themes, shown in Appendix H, were utilized in the coding process via our preferred QDA computer software program. The three steps of the “Grounded Theory” approach were repeated as many times as necessary until all entries were coded and the themes defined in an understandable and explicit way.

4.5.1 Analysis and Drawing Conclusions from Codes

Our team used each of the three major categories to categorize sub-themes we created from incipient ideas in the data. These ideas were then turned into themes when we found enough instances to identify as trends in the responses. A distinct theme that we found throughout the major category of ‘Diversity’ was ‘Benefits of a Multicultural Environment’. When asked about participants’ favorite aspects of living in a multicultural society such as Australia, people often discussed cuisine and celebratory festivals above all else. Our team saw this as an important sub-theme because it shows that many people see multiculturalism as simply enjoying the cuisine and festivals of a particular culture. This trend shows a possible lack of knowledge and understanding for certain cultures.

Coding repetitive ideas is crucial to our analysis because it documents any responses that show similarities among participants’ thoughts. This reveals recurring trends that may unveil issues within the Hobsons Bay community regarding issues of racial discrimination and identity. One particular question that arose while coding these more specific themes was which pieces of data were relevant and which were not. For this step we relied heavily both on our background research on racism and discrimination, as well as our interview with Dr. Paradies. Dr. Paradies provided our team with an extensive analysis on the issues of discrimination,

specifically institutionally, in Australia today. This newfound knowledge allowed us to take on a more in-depth perspective on what issues exist and what the real causes may be. When we look at responses regarding kids on playgrounds being teased because of their own identity, it is important to look at the entire picture and not just one instance. Some trends that our team found important to think about was the context in which the joke was told, why these children were being teased, and if the joke was truly meant to harm the victim. Also, we had to look at why the person teasing committed this act. Was it due to peer pressure or ignorance of the victim's background or culture? We found all these to be important questions that contribute to the broader issue on why racism and cultural discrimination is so prevalent in Victoria today.

4.6 Deliverable

Museum Victoria has asked us for the best theoretical approaches and software application for analyzing qualitative data and a comparison between the different software programs to help decide which program the organization should purchase. Choosing an appropriate methodology required extensive research and critiquing of different qualitative data analysis approaches. The approaches and software application we found to be most efficient were the “Grounded Theory” and “Constant-Comparative Analysis” approaches, and the NVivo 10 software.

Our preferred methodology and sample analysis of the data set was presented to the staff of Museum Victoria at the conclusion of our project. We explain step-by-step how to use the chosen approaches and software program so that our procedure can be followed by anyone to continue analyzing the remaining data from *Talking Difference*. Our team also met with our sponsor at the conclusion of the project to familiarize her with the capabilities of NVivo 10. We hope that, moving forward, our preferred methodology will be able to be utilized by the Museum for other projects in addition to *Talking Difference*. Also, we hope the museum can use the analyzed data from *Talking Difference* to improve their battle against racial discrimination in Victoria through similar initiatives or galleries at their museums.

5. Recommendations

After conducting extensive background research and interviews regarding the process and techniques of QDA, our team has developed a preferred methodology that we recommend be implemented for Museum Victoria's *Talking Difference* Portable Studio. Our team then conducted our own analysis of the data generated from the *Talking Difference* Interactive to uncover any emerging themes we found to be significant regarding the topics of racial discrimination and cultural diversity in Victoria. In this chapter we will present recommendations for using the preferred methodology, software choice, and discuss the success of our own analysis. As this project continues, it is possible that some analysts will have extensive experience with coding, while others will have less. These recommendations and guidelines were created for any analyst to be able to understand the structure of the *Talking Difference* data and analysis process.

5.1 RECOMMENDATION FOR USE OF THEORETICAL APPROACHES TO QDA

We recommend that 'Museum Victoria' analyze the data generated from the 'Talking Difference' Portable Studio using the "Grounded Theory" and "Constant-Comparative Analysis" approaches.

As previously stated in Chapter 4, an efficient analysis of the data generated from the *Talking Difference* Interactive must thoroughly consider all responses as being of equal importance to form a realistic picture of the public's thoughts and experiences regarding racial discrimination. This is made possible through the use of emergent themes and comparison of all individual data pieces against one another to test for significance. To do this, our team recommends that Museum Victoria adopt two theoretical approaches, "Grounded Theory" and "Constant-Comparative Analysis", to be used together when analyzing for maximum efficiency and inclusion of all relevant and useful responses within the data.

5.2 RECOMMENDATION FOR USE OF QDA SOFTWARE APPLICATION

We recommend that 'Museum Victoria' use the MS Windows platform of 'NVivo 10' for the automation of certain processes in the analysis of the 'Talking Difference' Portable Studio data.

Although the actual creation of themes and sub-themes for the *Talking Difference* data must be completed manually, many software programs have been created to automate the process of coding files and creating visual aids to identify patterns and trends. This technological advancement can save time and energy on the menial task of coding the data into the themes and subthemes created. For this reason we recommend that Museum Victoria utilize a specific software application, NVivo 10, to aid in the process of analyzing the data compiled by the Interactive. This includes a Microsoft Windows-based user interface, designed to replicate that of MS Office Suite, which allows for fast learning and mastery of the program. However, due to limitations in the transfer of Windows to Mac, our team also recommends that NVivo 10 be used only for the Windows version. This will eliminate many complications and technical issues caused by transfers of projects from each version as well as the loss of key features on the Mac version.

5.3 RECOMMENDATION FOR THE TRANSCRIPTION OF CERTAIN MEDIA FILES

We recommend that 'Museum Victoria' transcribe certain audio and video files, dependent upon length, using our regulated process via Transcribe by Google and Switch Sound File Converter.

One concern that continually arose throughout the process of coding our data and finding themes was the debate over the necessity of transcribing certain media files. Before any conclusions could be drawn, we first had to test the efficiency and usefulness of transcribing the media files. This included testing for the possibility of errors while coding the files alone, as well as the time necessary to complete the process of transcription. To do this our team created three distinct categories in which each video or audio file would be placed for the most efficient measurement of transcription time. The three categories created were 0-20 second files, 20-60 second files, and files greater than 60 seconds. We devised a simple ratio of file time compared to the time taken to transcribe the file in its entirety, labeled as $t_{\text{File}}:t_{\text{Transcribe}}$. To illustrate the results of our analysis, please refer to Table 1.

Table 1

<i>Determination of transcription for each file length (Video, Audio)</i>		
Length of file (s)	Code File	Code Transcription of File
0-20	✓	✓
20-60	X	✓
60+	X	✓

LEGEND: ✓ → Efficient manner of coding; X → Inefficient manner of coding

We recommend that for audio and video files, the analyst refer back to this table to ensure that they produce the most efficient analysis possible in terms of both quantity of errors and time taken to code. Our team has devised a consistent and efficient process of transcribing data using user-friendly software application. We first used the program Transcribe, an online Google Chrome web browser application, for a fast and efficient transcription of audio files into plain text. To convert certain video files that are not compatible with Transcribe, our team used Switch Sound File Converter, which creates an audio version of the video file and stores it in a central location for easy accessibility. Instructions for using both programs as well as our devised process can be found in Appendix G.

5.4 RECOMMENDATION FOR USE OF DEMOGRAPHICS IN PARTICIPANT RESPONSES

We recommend that 'Museum Victoria' develop a more consistent and efficient method of recording and extracting demographics from the participants of the 'Talking Difference' Interactive.

Having background information on the participants' responses can be very useful when conducting an analysis. Certain demographics such as age, gender, race or ethnicity, and geographic location offer multiple uses for analysts. First, analysts may quantify the responses

in varying categories to track the interests of different people in the studio. This data would allow Museum Victoria to gain a better understanding of the different people that have interacted with the *Talking Difference* Interactive.

Second, analysts may use the data to compare responses between groups and draw conclusions using these comparisons. For example, analysts would be able to look at different locations and see where people may experience less discriminatory acts and thus be more culturally infused in their area. Also, they may look at trends of age to see the varying beliefs and experiences at different stages in a lifetime. In addition, these demographics can be used as indicators when uncovering emerging themes. Information, such as instances of personal experiences regarding racism, may be broken down by certain races or ethnicities. This breakdown can easily find correlations amongst responses and can track the quantity of instances of racism against each group of people.

To date, there is little consistency in the demographics of each participant. Many of the responses come with either little information about the participant or made-up information. Many people entered ages that did not properly align with the age they appeared in the video response, such as a boy that looked to be in his early teenage years entering the age '69'. In addition, many names contained a random assortment of letters and symbols, clearly displaying a false name. Our team believes this could be due to feelings of fear or being judged, or for a number of other personal reasons. Most responses containing thorough demographics come from adults at the Williamstown library. Museum Victoria must find a feasible way to record more information about the users, specifically children, so that they may begin to analyze this alongside the participants' responses. These demographics offer vital information with grand possibilities for finding patterns in the data generated from *Talking Difference*. With consistent data regarding demographics, many trends regarding racial discrimination and cultural diversity may be more easily identified, benefitting the public of Victoria in many ways.

5.5 RECOMMENDATION FOR ANALYSIS OF DATA

1. *We recommend that when creating and defining themes, the analyst uses their **best judgment** to ensure the significance of the message that the theme or sub-theme in question seeks to provide.*

Our team learned that it is challenging to avoid over-specifying while creating themes for this particular data. With each piece of data being as important as all others there is a tendency to create too many themes and be too specific, making it difficult for patterns to emerge. There is a limit to the number of themes that can be useful before the importance of the responses begins to diminish. Our team overcame this challenge by reading over all the questions to have a full understanding of the data before we began to create themes. After reading the questions, our team decided on three major themes: *Diversity, Identity, Racism, & Stereotype*. As we went through the questions, we took note of what ideas were repeating, and these were the three most prevalent. We recommend that the analyst do the same with their data set. Creating themes becomes easier and more evident as the analyst progresses through the data, however good judgment must always be used to conduct an effective analysis.

2. *We recommend that 'Museum Victoria' create new themes for new topics if they continually arise from the responses, generally more than three times.*

There are occasional occurrences where responses are entered and seem as if they have no place. Later on, the analyst may notice that some specific answers, previously seen as irrelevant, continue to arise. In this case, a new theme should be created for these occurrences. To help decide if new information is worth categorizing, the analyst should make note of different ideas they see and how many times those themes come up. NVivo allows you to quantify these responses simply by using the 'Memo Pad'. If new ideas are noticed repeatedly, generally at least three separate times, a new sub-theme should be considered for use. For example, the question "*What can you do in your everyday life to make Australia less racist?*" has many responses that say "no one should be racist because God created us all equal." Though this is a person's personal opinion, it was a theme that emerged repeatedly that we then classified as "Religion", under the major theme of "Identity."

3. *We recommend that Museum Victoria write a description for each theme created to ensure all analysts are coding along the same guidelines.*

To clarify the themes and sub-themes that have been created, our team recommends that the analyst write a detailed description for each new theme created in NVivo. This ensures that anyone coding the data will code along the same guidelines as the person before them.

5.6 RECOMMENDATION FOR CODING

We recommend that 'Museum Victoria' avoid coding single phrases and code the entire relevant statement that pertains to the theme.

To illustrate our recommendation we have provided the following example: One particular response read: *"I've been racist to someone in the school, because I saw other people doing it to another person."* This entire response should be coded into one theme, "Racism in School." By coding what is relevant, analysts will be able to open any theme and read responses that pertain to that theme only. Coding fragments of ideas and not the entire idea is not helpful for analysts and creates confusion, because they would need to go further into the data to figure out what the participant was talking about. Going back to the example above, if you code the individual sections of the main idea as "I've been racist", "racist to someone in the school", and "I saw other people doing it", there are now three sections of a response that fit into a variety of themes, and none present the entire story. If the analyst opens the theme 'Personal Experience', they would only see "I saw other people doing it". Reading this alone has little to no meaning and coming to conclusions will be nearly impossible. If the analyst is unsure of which theme to place the coded response into, descriptions for each theme are provided to explain what belongs in each.

6. Conclusion

The *Talking Difference* Portable Studio and its vast quantity of data have the potential to be a driving force in the reform of cultural acceptance and diversity in Melbourne and throughout Victoria. This Interactive gives an equal voice to all members of the public who wish to share their own thoughts and experiences and voice their opinions on the cultural diversity of Melbourne. The process may comfort many people who feel isolated due to racism or alone in being discriminated against. This Interactive is a very powerful tool for starting a more involved dialogue than ever taken place before through Museum Victoria. With a proper analysis of all the responses recorded by the *Talking Difference* studio, many interesting trends and themes that exist in Australian society may be uncovered. Additionally, this data may be used in the *Identity* Exhibit at Museum Victoria's Immigration Museum. The data and analysis can become a powerful piece in the Exhibition because they unveil the everyday racial discrimination that many people are blind to. If this issue is brought to the attention of the public, many begin to take notice of and stand against these negative actions.

As students analyzing this data and completing this project, we have learned much about racism and diversity in Victoria that exists today. This newfound knowledge is further proof that the *Talking Difference* Interactive holds very important information for anyone that views the data. A few key themes that our team was particularly interested in are as follows:

- The data from the "Hobsons Bay Tour" shows that approximately half of the respondents that have been stereotyped were due to their accent and appearance. Although it can be very common to be stereotyped by appearance, our team found it interesting that accents were just as much cause to be stereotyped by others.
- When asked what the best thing about multicultural community, approximately half of all participants answered that they enjoy the celebrations and, more interestingly, cuisine of any particular culture above all else.
- When asked about telling jokes about someone's appearance, accent, or culture, many responses say that the jokes hurt the victim's feelings. This is concerning because each joke has some truth to it, so the people saying these jokes do somewhat believe what they are saying. Joking is meant to be for humor and not hurting people's feelings. If this kind of joking starts from an early age, the situation can become worse.

Moving forward with the Interactive, the data analyzed from the studio may be used for a number of purposes. Researchers may use this information to support claims. In addition, the general public of Victoria may use this data for their own purposes, whether it be for personal research or simply wanting to learn more about this issue. Our team hopes that everyone will ultimately benefit from the effective use of our developed methodology for the analysis of the *Talking Difference* data.

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Appendixes

Appendix A: Sample of Talking Difference Questions

1. Have you ever been stereotyped? What happened? How did it make you feel?
2. How do you identify yourself?
3. Have you ever experienced racism? How did it make you feel?
4. Were you born in another country? How long did it take you to feel like you belonged in Australia?
5. Do you speak English with an accent? How does it change the way people view you?
6. What is the best thing about living in a multicultural country like Australia?

Appendix B: Initial Sponsor Interview Questions

1. Can you tell us a little about your position and what you do at the museum?
2. Why do you enjoy working at the museum?
3. What other positions have you held?
4. From our understanding, we believe the project is about finding the best methods to organize the digital media received from the *Talking Difference* Portable Studio. The methods we will use are for analyzing qualitative data.
 - 4.1. Is this your viewpoint of the project, if not, may you expand for us on the project?
5. What do you envision the completed project to be?
 - 5.1. What is the main objective of this project/exhibit/goal?
 - 5.1.1. The project description mentions racial discrimination, how central is it to your goal?
6. Are we working on the portable studio, the museum exhibit, or the online portion of the *Talking Difference*?
 - 6.1. Is this project to enhance a previous exhibit or are we working for a new gallery?
7. What material do you have for us to analyze?
 - 7.1. We have researched enough to know that we will be working with audio files as well as videos and interviews of individuals, but what other types of materials and data will we be working with? Diaries/journals, ...?
8. Are there any other prior instances of the museum utilizing QDA for an exhibit?
 - 8.1. What specific methods were used?
 - 8.1.1. Software, specific techniques, models?
 - 8.2. Who were the key staff members? May we contact them?
 - 8.2.1. Is there any other information on these exhibits you would like us to know?
9. What is the main message that you would like the analysis of the *Talking Difference* data to display?
10. Does the data that we will be analyzing have pre-set categories for coding and creating themes, or will we be creating these categories and themes ourselves as we progress through the data?

11. *Secondary Objective:* Will we be presenting to students?
 - 11.1. How will we be presenting our project and findings to these students?
 - 11.2. What age group do you believe we will be presenting too?
 - 11.3. What message do you hope for our results to project?
12. Is the project focused solely on racial discrimination? What is the focus level on social issues? Should we be worried about the social issues aspect or is that just their focus?
13. What building are we going to be working in?
14. What exhibits do you recommend to someone who has never visited the museum before?

Preamble for Interviews (Applies to Appendix C)

We are a student group from Worcester Polytechnic Institute (WPI) in Worcester, Massachusetts, USA. Our group will be conducting interviews with various professionals in the field of qualitative data analysis (QDA) to learn more about their expert opinions on the use of different analysis methods and best practices. This is a collaborative project between Museum Victoria in Victoria, Australia and the community at large. The goal of this project is to develop and apply a preferred methodology for analyzing qualitative data generated from Museum Victoria's 'Talking Difference Portable Studio'. Your participation in this study is completely voluntary and you may withdraw at any time. If you are interested, we are willing to include your responses and comments as anonymous, though it would be useful for readers to validate your answers based upon your professional experience and accolades.

Appendix C: 'Qualitative Data Analysis' Professional Interview Questions

1. What methods of QDA do you believe are most effective based on:
 - 1.1. Speed, Quality of work, Simplicity, and most importantly, our types of media?
2. We have drawings in our data set, what would be the best method to analyzing that?
3. Have you used software in your studies?
 - 3.1. Which do you believe are most effective for video and audio? What are your thoughts on the following software: Atlas.ti, NVivo, or MAX-QDA?
 - 3.2. We understand each have their own strengths, but do you believe one may be better applied to the types of data we are working with?
4. Do you have any recommendations and useful tips for our specific project?

Preamble for Interviews (Applies to Appendix D & E)

We are a student group from Worcester Polytechnic Institute (WPI) in Worcester, Massachusetts, USA. Our group will be conducting interviews with various professionals who work with both racism and museums to learn more about racial discrimination in Victoria as well as museums efforts against social issues in the community. This is a collaborative project between Museum Victoria in Victoria, Australia and the community at large. The goal of this project is to develop and apply a preferred methodology for analyzing qualitative data generated from Museum Victoria's 'Talking Difference Portable Studio'. Your participation in this study is completely voluntary and you may withdraw at any time. If you are interested, we are willing to include your responses and comments as anonymous, though it would be useful for readers to validate your answers based upon your professional experience and accolades.

Appendix D: Moya Mcfadzean

1. What are the key elements in a museum or exhibition that make it successful (meaning that they have an impact on the visitor or even the whole community)?
 - 1.1. Are these elements different for an exhibition in the museum vs. an exhibition online?
2. What's the role of interactivity in museums?
 - 2.1. Why is it so important to engage the visitors?
 - 2.2. Do you feel museums are technologically behind than the rest of the world?
 - 2.2.1. How are museums trying to stay ahead?
3. In your opinion, what are the issues that are driving many to say Australia has racial discrimination?
 - 3.1. What are some key events/promotions/ideas that need to be implemented to the people of Australia to dramatically decrease racial discrimination?

Appendix E: Yin Paradies

1. Is racism in Australia more of an issue today than it has been in the past?
 - 1.1. Is discrimination becoming less prevalent? Has discrimination changed its form?
If so, how?
2. How has the government been involved?
3. Are museums playing a big role in its improvement?
 - 3.1. Why are museums so interested in having a voice on racial discrimination issues?
 - 3.2. We are under the impression that museum systems are actively taking on roles to promote positive cultural change. What motivation lies behind this? Why/How do you think museums can take on this role?
4. How are museums getting involved? We have seen the *Talking Difference* Interactive and the Identity Exhibit and now they are starting to become actively involved in attacking this racial discrimination. Can you speak to their success at all in achieving their goal?
5. What can museums do to give themselves a more direct approach and see better results in raising awareness?

Appendix F: NVivo’s Windows/Mac Platform Comparison

Via: <http://www.qsrinternational.com/product-comparison/nvivo10-nvivo-for-mac.html>

This table, provided NVivo, uses the following symbols to indicate comparable functionality. A full circle indicates that the software fully supports the described capabilities, a half circle indicates partial support for the described capabilities, and an empty circle indicates no support for the described capabilities.

Data Sources		NVivo for Windows	NVivo for Mac
Documents	Supports TXT, RTF, DOC, DOCX, PDF; Editable Text	●	●
Images	Supports BMP, GIF, JPG, TIF, PNG; Editable Picture Log	●	○
Audio & Video	Supports MP3, WMA, WAV, M4A, MPG, MPE, WMV, AVI, MOV, QT, MP4, 3GP, MTS, M2TS; Editable Synchronized Transcripts; Waveform Visualization	●	□
Datasets	Supports TXT, XLS, XLSX, ODBC; Display as Form or Table View	●	○
Webpages	Supports Webpages (with NCapture)	●	●
Social Media	Supports Facebook, LinkedIn, Twitter, YouTube (with NCapture)	●	○

Data Interoperability

ty

Qualitative

**Analysis
Software**

Supports NVivo, NUD*IST, Atlas.ti, Framework, MaxQDA



Reference

**Management
Software**

Supports EndNote, Mendeley, RefWorks, Zotero



Statistical

**Analysis
Software**

Supports Generic Formats (including SPSS Stats)



Note-taking

Software

Supports Evernote, OneNote



Online Survey

Software

Supports SurveyMonkey API and Generic Survey Formats



**Generic
Formats**

Supports HTML, XML, XLS, XLSX, TXT, SVG



Data

Management

Organization



Supports Folders, Search Folders, Sets






Transcription	Supports Transcript Creation, Transcript Importation	●	●
Reliability	Supports Single File per Project	●	●
Security	Supports User Profiles, User Passwords, User Permissions, Encoded Storage	●	□
Scalability	Supports 10GB Project Files, Unlimited with NVivo Server	●	□
Traceability	Supports Audit Log of User Actions	●	○
Recoverability	Supports Multiple Levels of Undo, Project Repair, Project Restore, Automatic Backup (with NVivo Server)	●	□

Data Analysis

Coding	Supports In-Vivo Coding, Thematic Hierarchical Coding, Case Coding, Relationship Coding	●	□
Automatic Coding	Supports Automatic Coding by Data Structure, Automatic Coding by Example	●	○

Classifications	Supports Source and Node Classifications with Attributes, Assign Colors to Project Items	●	
Annotations	Supports Annotations for any Specified Content	●	○
Memos	Supports Memos for Project, Sources, Nodes	●	●
Links	Supports See-Also Links and Hyperlinks	●	
Framework Matrices	Supports Framework Analysis	●	○

**Data
Exploration**

Text Search Query	Supports Querying Words, Phrases, or Concepts with AND, OR, NEAR operators	●	
Coding Query	Supports Querying Coding with AND, OR, NEAR, SURROUNDS, PRECEDES operators	●	
Word Frequency Query	Supports Querying Frequently Occurring Words or Concepts	●	

Matrix Coding Query	Supports Querying to Cross Tabulate Coding and/or Attributes	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Find	Supports Finding Items by Criteria and Grouping Find Results	<input checked="" type="radio"/>	<input type="checkbox"/>
Reports	Supports Pre-defined and Custom Reports	<input checked="" type="radio"/>	<input type="checkbox"/>

Data Visualization

Coding Stripes	Supports Viewing and Printing Coding Stripes for Nodes, Attributes, Users	<input checked="" type="radio"/>	<input type="checkbox"/>
Models	Supports Customizable Visual Models for Project Items and their Connections	<input checked="" type="radio"/>	<input type="checkbox"/>
Charts	Supports a Range of Customizable Charts for Project Items and their Associations	<input checked="" type="radio"/>	<input type="checkbox"/>
Word Clouds	Supports Customizable Visual Representation of Word Frequency Queries	<input checked="" type="radio"/>	<input type="checkbox"/>
Cluster Analysis	Supports a Range of Cluster Analysis Diagrams such as Dendrograms, Circle Graphs, Cluster Maps	<input checked="" type="radio"/>	<input type="checkbox"/>
Word Trees	Supports Word Trees of Text Search Queries	<input checked="" type="radio"/>	<input checked="" type="radio"/>

Tree Maps

Supports Tree Maps



**Geovisualizati
on**

Supports Geospatial Visualization of Social Media Data



Appendix G: Process for Audio/Video Transcription

1. Watch the video file / listen to the media file
 - 1.1. One to two times to familiarize the user with the data at hand
2. Upload the media file to Transcribe
 - 2.1. Audio files may be uploaded directly
 - 2.2. Video files must be converted to simple audio files before being uploaded. For this process our team used the program Switch Sound File Converter Plus, a supported program of Transcribe.
3. Transcribe the data using the Audio control board and typing into the provided text box within the application.
4. Listen to the audio file within Transcribe to search for any inconsistencies or errors in the transcription and spellcheck the text.
5. Transfer the text to a central document with all other useful data files for organizational purposes when coding the data using NVivo
 - 5.1. Copy and paste the text into a .doc file
 - 5.2. Export the text as a .doc file using the provided function on the audio control board.

Appendix H: List of Themes Created

Diversity

- Benefits of a Multicultural Environment
 - Celebrations and Cuisine
 - Diverse Group of People
- Promoting Acceptance, Education
 - First Hand Experience
 - Reduce Racism
 - Through Religion
 - World Peace

Identity

- Identifying Yourself
 - Country of Birth
 - Religion
- Meaning of Belonging
- Pride in Appearance

Racism

- Joking About Appearance
 - Depending On
 - Context of Joke
 - Relationship
 - It is OK
 - Not OK
 - Excludes People
 - Hurts Feelings
- Personal Experience
 - Being Racist Towards Others
 - Victim of Racism
- Stereotype
 - First Impression
 - By Accent
 - By Appearance
 - By Age
 - By Gender
 - By Race & Nationality
 - Ever Happen to You
 - Never Been Stereotyped