1-1-2008

Evaluating alternative styles of audio description in an animated comedy

John Riccio
Ryerson University

EVALUATING ALTERNATIVE STYLES OF AUDIO DESCRIPTION IN AN ANIMATED COMEDY

by

John Riccio
B.Com. Ryerson University, 2007

A thesis

presented to Ryerson University

In partial fulfillment of the

requirements for the degree of

Masters of Management Science

in the program of

Management of Technology and Innovation

Toronto, Ontario, Canada, 2008

I hereby declare that I am the sole author of this thesis.

I authorize Ryerson University to lend this thesis to other institutions or individuals for the purpose of scholarly research.

_____ 08/19/2008

John Riccio Date

I further authorize Ryerson University to reproduce this thesis by photocopying or by other means, in total or in part, at the request of other institutions or individuals for the purpose of scholarly research.

_____ 08/19/2008

John Riccio Date

Evaluating Alternative Styles of Audio Description in an Animated Comedy

Master of Management Science, 2008

John Riccio

Management of Technology and Innovation

Ryerson University

Abstract

Audio description is the practice of adding extra auditory cues into visual media to explain visual information to blind and low vision viewers. This thesis investigates the impact of conventional and alternative styles of audio description on the blind and low viewers' comprehension, entertainment experience, trustworthiness of the audio description narrative, and style preference.

Eighteen blind and low vision participants took part in the study. The participants were divided into two groups, and asked to watch three episodes of the television show *Odd Job Jack* in a single audio description style. Each participant was asked to complete a pre and post study questionnaire, and a post episode questionnaire at the completion of each episode.

Results indicated that the alternative style of audio description provided better understanding, entertainment value and is more trustworthy. Yet, there is no distinct preference among the blind or low vision viewers for either audio description style.

Acknowledgements

First and foremost, I would like to thank my family, Mom, Dad and Anne Marie, for always supporting me and providing me with encouragement to complete this paper. Without their help and support I would be unable to succeed.

Dr. Deborah Fels, my thesis advisor, for recognizing potential in me during my undergraduate studies, and for being so supportive, and willing to take time out of her incredibly busy schedule to meet with me every week and guide me through this process. Without her support and aid I would not have been able to finish this thesis.

I would like thank Dr. Wendy Cukier, Associate Dean of the Ted Rogers School of Management, for all her help, and taking the time to meet with me on multiple occasions to provide input and insights into my thesis.

I want to thank Ryerson University and NSERC for funding my project.

To my thesis committee, Dr. Jennifer Brayton and Dr. Ozgur Turetken, for agreeing to review my thesis on such short notice.

I would like to thank all the participants of my study, as well as the volunteers, including Katie, Tim, George, Quoc, and Jorge. In addition, it is important to thank BlindCanadians.ca and John Rae for helping me obtain my subjects

To the CLT staff, especially Carmen, J.P. and Norma, for their constant support, and patience with my millions of daily questions.

Finally I would like to thank all of my friends in the MBA and MMSC programs especially Peter and Stephen, who were there with me through the late nights, and resubmissions.

Table of Contents

List of Tables

List of Figures

1. Introduction

Audio description is the process of writing, and performing additional narration, which is then inserted during the breaks in dialogue of a television program or movie, to describe important visual information for access to those programs and movies for people who are blind or low vision (Wall, 2002). As such, it is an integral part of watching TV for those who are blind or low vision. Audio description, as an official practice, began in 1981 in Washington DC, at the Arena Stage (Independent Television Commission, 2000). It was the developed by Margaret and Cody Pfanstiehl, who later went on to form the Audio Description Service (Independent Television Commission, 2000). The popularity of Audio Description grew, and by the end of the 1980's it was being practiced across North America and the world, including the UK and Japan. (Independent Television Commission, 2000)

Audio description was mandated by the CRTC in 2004. In this mandate, broadcasters are required to produce two hours of audio described programming per week and it increases to four hours per week in 2009. This indicates that the need for audio description is being recognized. This increase should help to boost the audio description industry as well as increase its profile with the general public.

One of the issues in audio description is the current style in which it is created. In the conventional approach, a third party provider uses a neutral third person narration method as the means to deliver description. Some researchers have found that this approach is not suitable for all the various types of genres and content. In addition, viewers often complain that this style of description is disruptive and not enjoyable.

Fels et. al, (2006b) suggest an alternative technique where description is created by the creative members of the production team who use a character driven first person technique. They found that blind and low vision viewers reacted more positively to this style compared with the conventional style but found it less trustworthy. I intend to build upon the findings of Fels, et al. (2006a).

In this thesis, I will investigate the impact an alternative style of audio description produced for an animated comedy series has on an audience's enjoyment, flow and understanding of that show as experienced over time. These factors will be compared with an audience's reaction to the same content produced with conventional description. My research questions are as follows:

1. Which style of audio description is preferred by blind and low vision viewers?
2. What is the impact of different styles on the understanding of the show's plot, setting and characters?
3. Is there a difference in trustworthiness between the first person and third person approach?
4. What is the impact of audio description style on entertainment experienced by blind and low vision viewers?

I plan to extend the current research by addressing some of the limitations outlined by Fels et. al.(2006a) that included small participant numbers (only seven blind or low vision participants), exposure to short duration (one to two minutes) of content. The study carried out for this thesis proposes to use 18-20 blind or low vision participants who will watch three full-length (22 minutes) audio described episodes of *Odd Job Jack* in one of the audio description styles. In previous studies, participants were exposed to

short duration clips (e.g., less than two-minutes) containing the conventional or alternative description. In these studies, researchers reported that one potential reason for a positive response to the alternative description style was a novelty effect and further longitudinal studies were required to overcome this effect. In my study, it is my intention to expose participants to multiple, full length episodes of *Odd Job Jack* in order to reduce this novelty effect and examine audience's reactions and compare them with those found in the earlier studies.

My intention is to examine the impact that the new method of audio description has on understanding, trustworthiness of the audio description narrative, the entertainment experience, and the blind and low vision viewer's preferences. The main purpose of audio description is to increase the blind or low vision viewers' understanding. If the new style negatively affects their understanding it will not be a suitable replacement. In addition, the audience has to be able to trust the information they are receiving or they won't perceive any value in listening to the audio description. What has often been left out of previous research is the entertainment aspect, yet film and television is intended to be entertaining. If the audio description diminishes the entertainment value of the show, it is not as useful to the audience.

The focus of this thesis is on audience reactions and evaluation of the different styles of audio description. The business, legislative and implementation components of audio description are not a focus although there may be some implications from the results regarding these elements. In addition, this thesis does not address different genres of content or live venues for audio description. It is focused on pre-produced television content for blind and low vision audiences. Finally, I did not include sighted participants

because they are not the main users of audio description. Before possible uses for sight participants are determined, it must be proven that the new style of audio description is equivalent to or exceeds the current standards for the blind and low vision viewers.

At the completion of this study, my research will contribute to the current practice and knowledge base of audio description by providing film and television producers with evidence regarding two different styles of audio description. This should enable them to make informed decisions regarding the creative approach and inclusion of audio description in their productions.

2. Literature Review

2.1 Third person audio description

Currently, most productions outsource audio description for television or films to an independent provider. This provider writes, records, and adds the audio description narrative to the already finished production (Snyder, 2005). In conventional thinking, the main function of audio description is to objectively provide the most important visual information, in a limited amount of time, in a neutral tone similar to that of a newscaster. This approach is built upon the principle that the purpose of audio describers is to act as a camera lens, relaying to the audience only what is visible, without interpretation or subjectivity. In fact, it is recommended that the describer avoid or control their use of their own reactions to the film. Thus, all information presented to the audience is objective, allowing the blind or low vision viewers to interpret these actions on their own accord (Pfanstiehl & Pfanstiehl, 1985). In fact, organizations such as the Independent Television Commission (ITC) and Audio Description International (ADI) have produced comprehensive guidelines on how to properly produce audio description to achieve this camera lens effect.

2.1.1 Standards in audio description

In general, most organizations producing audio description do so with the intention of standardizing the processes and procedures to ensure that all describers provide good quality descriptions. In order to achieve this, each audio description company produces their own guidelines which are not usually shared in the public domain. These guides

cover all pertinent audio description topics, including what to describe, how to describe, and the production process/preparation for description. As a result, two common and available guides (created by the ITC and ADI) were reviewed and combined to determine the generally accepted procedures. It is important to note that these guides were created and written by sighted individuals based mostly on current industry practices with little academic research to support their principles.

2.1.1.1What to describe

Many academics argue that the audio describer's goal is to act as a "camera lens" (Pfanstiehl & Pfanstiehl, 1985, p. 91); however, this goal is unachievable. As the old adage states "a picture is worth a thousand words", unfortunately this holds true for audio description. As a result, it is important that audio describers prioritize which information is most essential to understanding the film or television show (Independent Television Commission, 2000).

In order to properly prioritize what information to describe, the describer must understand what information the blind and low vision viewers need to comprehend from the current scene, future scenes, and the film as a whole.

To understand the current scene the viewer often needs to understand who is in the scene (including exits and entrances), who is speaking, the location/set, the facial expressions, movements and mannerisms of the characters (Audio Description International, 2003).

Although each of these factors provides important information, it would be difficult to describe this for each scene. In addition, the describer must still provide all information

that the blind or low vision viewer needs to understand the movie as a whole (Audio Description International, 2003). It is common for film makers to use their visual images to foreshadow future events, the audio describer must relay these visual images in a subtle manner, as that is how a sighted viewer would receive this information (Independent Television Commission, 2000). Consider a scene from a murder mystery, as the detective surveys the crime scene. He may glance at several objects, which are of no consequence to the current scene, but are later used as critical evidence to determine the killer. Without this information, the blind and low vision viewer may be confused as to how the detective was able to solve the mystery.

ITC also points out that the describer should highlight sound effects, directly before or after it occurs, as this will help allow blind and low vision viewers achieve an equal experience. It is also important that the describer never state the obvious; for example, it would be ridiculous for the describer to announce that the telephone is ringing as this sound is common knowledge to the audience. It should also be noted that the describer should avoid describing sound effects that are explained during the scene, again, this would be describing the obvious (Independent Television Commission, 2000).

As mentioned before, the describer must never interpret the visual cues for the audience, nor provide an opinion or commentary about the film or television show instead the describer should attempt to simply verbalize the visuals (Independent Television Commission, 2000).

2.1.1.2 How to Describe Action

In addition to providing strict guidelines on what should and should not be described, The ITC and ADI guidelines provided detailed information on how to properly describe the visuals to the audience.

There are certain rules that conventional audio describers must never break; firstly, all audio description is performed using third person narration. This third person narrator should be perceived by the audience as interested, warm, confident and authoritative; someone who is all knowing about the story (Audio Description International, 2003).

The describer should always attempt to describe the action as it unfolds, so that the blind and low vision audience experiences it at the same time as the sighted audience (Audio Description International, 2003); however, it is important that they do not contravene the golden rule of audio description. The golden rule states that audio describers should never describe over existing dialogue (Audio Description International, 2003; Independent Television Commission, 2000). In order to avoid speaking over dialogue, it is acceptable to signpost or pre-empt the action in order to properly describe the scene (Independent Television Commission, 2000).

It is important that the describer keeps the mood, tone and pace of the scene that he or she is attempting to describe, as this allows their description to blend into the action of the film or television show. Using a monotone or uninterested voice to describe the information takes away from the scene and draws the audience out of the film reality (Audio Description International, 2003). In addition, it is vital that the describer understands the audience of the film and uses appropriate vocabulary.

There are certain grammatical/structural issues that describers must be aware of during the writing of the audio description narrative, in order to produce quality audio description. The describer should always attempt to use complete sentences, as this is much easier for the audience to process and comprehend (Audio Description International, 2003). In addition, the describer should attempt to use proper names or pronouns whenever possible. The usages of terms such as, "he" or "she" can often create ambiguity as to which character is performing the actions (Independent Television Commission, 2000). The resulting ambiguity leaves the blind and low vision viewer confused; therefore unable to properly comprehend the scene.

As mentioned before, all of the action is being described in real time; thus, the describer should also use the present tense. ITC suggests using a "mixture of present and present participate gives the text a better narrative feeling" (Independent Television Commission, 2000, p.12). The final major stylistic guideline requires describers to add variety into their vocabulary. This is specifically important when using adjectives and verbs. The proper choice of verb or adjective can considerably enhance a scene as it accurately describes and distinguishes the mood, tone or action from other events in the film. In addition, the use of the same word over and over again becomes repetitive and boring for the audience (Audio Description International, 2003). It is also important to note that variety keeps the viewer focused on the film, engaged in the movie, and allows the describer to disappear (Audio Description International, 2003).

2.1.2 Seven step framework for production of audio description

ITC developed a seven step framework for new describers to follow, in order to produce quality audio description. ITC suggests, as audio describers become more experienced, they should manipulate these seven steps to build their own framework for successfully describing video (see Figure 1). The seven steps are as follows (Independent Television Commission, 2000):

1. **Choosing a suitable program for description**

According to the ITC, not all television programs or movies are suitable to be audio described, for instance, news programs generally have a continuous script with little space or need for audio description. This same principle often holds true for many game shows (Independent Television Commission, 2000). The ITC also states that shows or films that require continuous audio description are also unsuitable. An example of this is action films; where there is very little dialogue for extended periods of time (Independent Television Commission, 2000). In this situation continuous description can become tiresome for the audience, as the cognitive processing load would be large.

2. **Viewing the program**

Once the audio describer has determined that the film or show is appropriate for audio description, the describer must watch the film using a time coded version. It is generally expected that the audio describer will watch the film in its entirety more than once (Independent Television Commission, 2000). Watching the film more than once allows the describer to grasp the entire story, notice important details, cues and significant events; hence, allowing the describer to better prioritize what is to be

described. ITC advises that the describer may want to watch the film without the visual images to help determine the issues that blind and low vision audiences will face when watching the film (Independent Television Commission, 2000). At this time, the describer should make notes concerning which events need to be described as well as performing any additional research that could be useful in the script (Independent Television Commission, 2000).

3. Preparing a draft script

Independent Television Commission (2000) suggests that to prepare a draft script the audio describer should have a PC based work station, with the ability to perform word processing, time code-indexing, video editing, and audio recording. In addition, this workstation should have the ability to associate the elements of the written script with the program's time-code (Independent Television Commission, 2000).

4. Reviewing the script

Once a draft script has been written it must be reviewed and edited by an editor or senior describer to ensure the quality of the work. After the script has been reviewed, the describer should rehearse the entire script, in conjunction with the show, over several times to be well prepared before recording (Independent Television Commission, 2000).

5. Adjust the program sound levels

Now that the final audio description script is completed, the audio describer needs to reduce the original sound track levels during spaces where the audio description will be added. This process enables the audio description to be heard more clearly by the

audience. ITC suggests this change in background volume should be subtle as to not jar the audience (Independent Television Commission, 2000).

6. Record the audio description

With the script ready and the sound levels adjusted, the describer is now ready to record his or her tracks. It is important that the describer focus on their sound level, intonation, and delivery of material, as mentioned earlier, it is necessary that they stay in tune with the scene. Staying in alignment with the scene enables the audio describer to produce non-intrusive commentary that allows the viewer to enjoy the film or program.

7. Review the recording

The last step in this process is to review the audio description to ensure that there are no "mistakes, omissions, or imperfect delivery" (Independent Television Commission, 2000, p. 11)

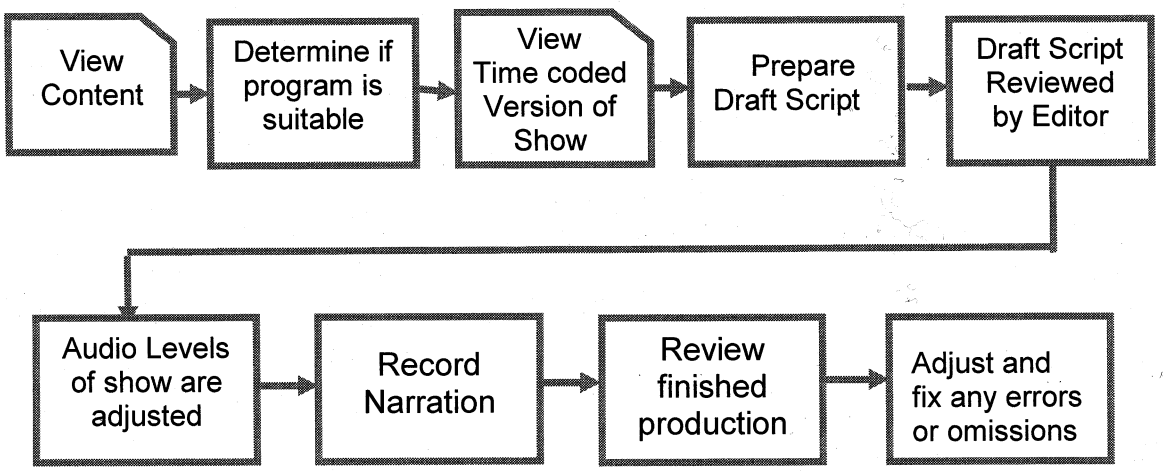


Figure 1 :ITC Seven Step Framework

2.2 Need for audio description

Although my research is heavily influenced by the work of Fels et al. (2006a), it is important to consider previous work from the field of audio description to gain a full understanding of current issues. Approximately 2.5% of the Canadian population is considered to be blind or of low vision, which is just over 800 thousand people (CNIB, 2008). In addition, it has been found that people who are blind or low vision watch as much television as those who are sighted (Kirchner & Schmeidler, 2001). However, without the use of audio description many blind and low vision viewers believe that they are not receiving as much information as those who are sighted (Standards For Audio Description, 2007; Kirchner & Schmeidler, 2001).

Kirchner and Schmeidler (2001) have produced some interesting insights into the social impact of audio description. They found that a significantly higher proportion of blind or low vision viewers who watched television with audio description were more willing to discuss the show with sighted friends and family members, when compared to those who watched the show with only the original soundtrack. Their study involved 111 blind participants watching three hours of science related television. The participants were shown two different shows one with audio description and one without audio description, and were asked to complete questionnaires about the program and the audio description. One of the issues with this study was that it focused on the use of audio description for documentary, which is a genre that typically uses third person narration style. Other genres such as drama or mystery were untested thus limiting the generalization of their results (Schmeidler & Kirchner, 2001).

Pettitt, Sharpe & Cooper (1996) found that, in general, people who are blind or of low vision, that have experience with audio description, have reported that it is informative and it increases their enjoyment of the show or film. They investigated whether audio description was useful for enhancing the entertainment value of television. They took a random sample from 120 blind or low vision people, and interviewed them about their viewing habits. From this group, 100 of the initial participants were given the opportunity to watch four-five hours of audio described television per week, for a period of four months. The genre of these programs spanned from light entertainment such as sitcoms to more serious television such as documentaries, and educational films. Finally, interviews were conducted to gather information about viewing patterns and the impact of audio description. Close to 90% of the participants in this study stated that audio description was helpful in increasing their understanding and enjoyment of the television show (Pettitt, Sharpe, & Cooper, 1996). Although this is a positive sign that blind or low vision audiences did find the audio description helpful, there was no comparison against a control condition to examine whether there was a better understanding of the show as a result of the audio description narration. Instead, they focused only on participant's perceptions (Pettitt, Sharpe, & Cooper, 1996).

2.3 Issues in current audio description practices

2.3.1Creating the unified world

What is often forgotten in the creation of audio description, and is generally under emphasized in most audio description research is that television shows, and films are art forms intended to entertain (Fels D., Udo, Diamond, & Diamond, 2006a). Ball states

that the "the most important characteristic of a work of art is unity", without unity "it does not qualify as art" (1984, p. 3). In order to create theatrical entertainment, such as films and television, one must manipulate each component of the production (lighting, sound and acting); through this manipulation the creator is able to achieve a multitude of effects (Ball, 1984; Brockett & Ball, 2004).

In successful productions this manipulation leads to harmony among each of the different elements, leading to the creation of a unified piece of art. This unity is sought after by every artist (including filmmakers) in every piece of art that they produce. Ball believes that greater harmony amongst the integrated components results in a better film or television show, and that all filmmakers are always seeking new techniques to achieve this perfect unity (1984).

Through the integration of each individual component the film creates its own world (Ball, 1984). The unity among the components helps to legitimize this world for the audience, this leads to the audience believing in the film's world. Ultimately the audience member should no longer be aware that he or she is watching a film, but instead, become immersed in the film's world, as if it were reality (Ball, 1984).

Ball argues that every time an element is out of alignment with the rest of the film or television show, the production loses authenticity; he refers to this as "breaking the system" (1984, p. 33). The filmmaker is always striving to build this system of harmony that creates a strong and legitimate world. When the system is broken the audience realizes that they are simply watching a film, and are no longer part of the film's world. This prompts Ball to suggest that this is the greatest error that can be made by a filmmaker.

In this light, the current conventions of audio description, with the goal to act as a camera lens and simply translate the visual to verbal, is flawed. The goals of audio description need to be adjusted so that they conform to and are consistent with that of filmmakers. Therefore, all audio describers should strive to present a unified piece of work to the audience regardless of their method of consuming it.

2.3.2 The leader of unity

The literature has made it fairly obvious why film and television shows require unity in order to create a world that the audience believes. However, it is also important to determine how this is generally done in the film industry. The responsibility to create this unity lies solely with the director, as he or she is the captain of the ship (Benedetti, 1985). The director of the film or television show is the primary visionary of production; thus they are charged with the responsibility of communicating this vision with the entire production team, and ultimately turning this vision into a concrete product (Baldwin, 2003). In actuality, the finished product is not a pure vision of the director, but rather a collaborative effort of the entire production team. The director is able to augment, refine and fully develop his or her vision through discussions with key members of the production team (Baldwin, 2003).

The director must then oversee the work of the entire production team to ensure alignment amongst all the elements of the film. Through this process the director is attempting to create a "coherent aesthetic style" (Baldwin, 2003, p. 33) or what Ball referred to as a "system" (1984, p.33). Baldwin points out that a coherent aesthetic style can only be achieved when all the elements that form the production, including actors'

performances, the set design, music, lighting etc, come together to support and uphold a unified vision.

The procedures and working relationships built between members of the production team are in stark contrast with the conventional practice of audio description. The audio description is assembled separately from the remaining whole without those who have the strongest ability (the directors or script writers) to blend it with the production. It is extremely rare for the audio describer and production team to ever have contact (Independent Television Commission, 2000). If there is no interaction or even contact between the describer and the production crew, is it truly possible to present a unified piece of work? Oddly enough the ITC recognizes that there must be unity in their own processes, stating that if an actor is used to perform the audio description they must consult with the writer of the audio description script in order to ensure that the writer's full interpretation is produced (Independent Television Commission, 2000). Yet, the conventional practice would indicate that there is little value in communicating with the production team to understand their vision, and intentions of the film.

Consider what it would be like to watch a film that had been produced solely using the audio description model, where there is no communication between the members of the production team. In this situation, each person produces their work with their own unique vision. The writer would produce the script in his or her genre of choice, for this example it will be slapstick comedy. The writer than sends the script to the rest of the production team. The director reads the script and decides that he wants to emphasize the love story in the film, hence he is going to direct it as if it were a romantic comedy. While the costume designer feels that the film would work better if it was set in the

1970's. The musical director reads the script and sees a sad drama of an awkward young man searching for love, so he produces his music accordingly. When this movie is pieced together it would be possible to get a modern slapstick drama-comedy based both in the 1970's and present day. Clearly, this movie would lack continuity, there would be absolutely no coherent aesthetic style, and each element would contradict the others, so the film would be constantly breaking its system. This would result in a dreadful movie that would be unbearable to watch. This is an extreme case; however, it indicates how a lack of communication can negatively affect the production, and ultimately ruin what could have been a very good film.

2.3.3 Interpretation and subjectivity of audio description

Building a unified world aids a filmmaker in his or her attempt to illicit particular responses from the audience. Thus enabling him or her to achieve what some argue to be the primary challenge of film and television. The unification and integration of the individual component plays a prominent role in directing the audience towards a particular response (Brockett & Ball, 2004). As mentioned previously, it is becoming evident that the current audio descriptions conventions contravene this goal. In addition, the current guidelines over emphasize providing an unemotional and objective view of the movie as the audio describer attempts to avoid unintentionally swaying the audience's opinion of the storyline or meaning. However, audio description is an inherently interpretative process, leading it to being subjective. By the nature of audio description it is impossible for the audio describer to describe everything, therefore he or she must make a subjective decision on what to describe, how to describe it, and when to describe it. In addition, the describer is asked to interpret the mood, tone and

timing of the scene so that the audio description will flow within it; but this is another subjective decision. This leads some to argue that audio describers should be less focused on objectivity and more focused on providing an entertaining experience (Fels D. , Udo, Diamond, & Diamond, 2006a)

2.3.4 Audience reception

In fact, Brockett and Ball (2004) would argue that it is not possible for script writers, directors, actors or audio describers to dictate to the audience a particular reaction, as each individual has different preferences and beliefs ; thus, making this obsession with objectivity somewhat irrelevant. Audience reception theorists, such as Hall or Morley, would agree with Brockett and Ball that audiences are not easily influenced and that our individual differences account for different interpretations of the same events (Hall, 2006).

Fiske (1987) states that television viewers are social subjects, who base their perceptions on their own social history, including socio-economic background, ethnicity, gender, orientation etc. He would also suggest that social subjects have more power to construct their own meaning than the creators of the production (in this case both the film and the audio description). He states that the preferred meaning (as intended by the creators) should no longer be seen as exerting considerable or complete influence over the viewers. This viewpoint is in contrast to the passive, gullible, and easily influenced viewer that is assumed by the description standards and guidelines, where any subjectivity would overtly bias the blind and low vision audience. Fiske (1987) even suggests that when there is a significant difference between perceptions and filters of

the encoders and the decoders, it is the decoder's social history (as explained earlier), has the strongest impact on their understanding or interpretation of the text. This active audience research indicates that conventional style of audio description's obsession with objectivity is somewhat irrelevant.

Hall (2006) argues all texts (including films and television shows) have a preferred reading, which could also be referred to as a true meaning. This preferred reading is the property of the text and creator, who encodes this reading through the process of creation. In the case of films and television this preferred reading would be the vision of the production team. The production team would encode the meaning into the text (Hall, 2006). As the audience consumes the text, they decode the meaning behind it. Hall states that there are three possible ways to decode the meaning, as dominant, negotiated or oppositional.

When the reader decodes the text with the dominant position, he or she is taking the meaning as the creator intended. A negotiated decoding occurs when the reader accepts part of the intended meaning, but rejects, adapts or does not understand the entire message. Oppositional decoding occurs when the reader fully understands the intended meaning, but rejects it and uses an alternative framework to decode the meaning (Hall, 2006). In actuality, it is extremely rare for the audience to decode the text completely from the dominant position, or the oppositional stance (Fiske, 1987). In most situations one will either accept or reject most of the preferred meaning, while modifying the rest of the preferred meaning to meet their needs or the specific social history (Fiske, 1987).

Hall (2006) also suggests that the preferred meaning can be either monogenic or polygenic. A monogenic text contains a meaning that is easy to understand and transfer to those who consume it (Hall, 2006). A good example of a monogenic program would be the news or a political talk show, as it is easy to identify the information that the show is attempting to convey, as well as, biases that may be constructing this message. Conversely, a polygenic text allows those who consume it to actualize the meaning that they feel appropriate; hence, the text may have multiple preferred or dominant meanings, and no two individuals will interpret this text exactly the same. Hall considers fiction to be a polygenic text, as the "interest of a story lies in its twists and turns, disjuncture's and ruptures, in its ability to surprise us with new meanings" (Haig, 2005, Section 4, Paragraph 3).

Haig (2005) applies Hall's model of encoding and decoding to evaluate how it relates and affects audio description. It is clear that audio description introduces a new link into the chain of encoding and decoding. The addition of third party audio description leads to a situation where the text is encoded by the production crew, decoded by the describer who then re-encodes the text with his or her interpretation of the production crews' initial message. Finally the blind or low vision viewer decodes both the original text and the audio description text to form their own perception and interpretation. Haig (2005) also points out that the audio describer and the blind audience have completely different experiences, which renders their interpretation filters vastly different.

Haig (2005) questions whether the audio describer has the ability to separate the description "from the hegemony of their personal norms of perception" (Section 4, Paragraph 2). If they are unable to sufficiently do this, they are unknowingly passing

along their subjective interpretation of the text as opposed to the preferred reading. As a result, she believes that by nature audio description is "subjective, culturally defined and constructed, and unstable" (Haig, 2005, Section 4, Paragraph 7).

2.4 Critics of the third person approach

As the research of audio description currently stands, there is an abundance of evidence to support its importance to those who are blind or low vision. Unfortunately, much of this literature is solely focused on the traditional third person narration style of audio description. The current guidelines for creating useful and enjoyable audio descriptions center on the concepts of being objective, clear, concise, and definitive in word choice (Standards For Audio Description, 2007). However, with the exception of Fels et. al. (2006a), many of these researchers seem to ignore the value of entertainment in television shows and films. It could be suggested that as entertainment, films and television shows are not objective, and that visual cues can provide the viewer with subjective information. As such, there has been limited research investigating stylistic variations or alternatives for audio description that can address the entertainment and information needs of blind and low vision viewers.

Fels et. al. (2006a) have been among the more vocal academics and researchers to criticize the current standards of audio description. However, they are not alone in critical opinion of the current procedures and processes of audio description. Other researchers and industry professionals, such as Haig, have also taken a critical look at these current practices in order to make adjustments and improvements to the quality of audio description.

In 1997, Haig, a visually impaired film and television director, directed the first film to have the audio description completely integrated with the production. Her intention was to create a seamless and unified film, similar to that discussed earlier (Disability Arts in London, 2002). Haig has also focused much attention on indentifying the issues currently facing audio description. She argues that based on pictorial semiotic theory there are significant distinctions between visual and verbal (Haig, 2005). Thus, she is able to show that cultural analysis and awareness is mandatory for all audio describers, although this skill may be in short supply amongst the current industry professionals (Haig, 2005). Haig also uses Halls' encoding/decoding model of communication, as discussed earlier. Finally, Haig used the theory of power and knowledge to reveal how audio description practices are affected by power relationships in society. She exposes that the current model is dominated by the medical model of disability, "where the objective, knowing, professional experts provides for a docile viewer-patient" (Haig, 2005, Section 6, Paragraph 2). She identifies flaws in the current practices of audio description. This provides more support for the need to validate the results of Fels et. al. (2006a), in order to determine whether this model provides an adequate solution to many of these issues.

2.4.1 An alternative style-first -person approach

Upon further examination of the current practices of audio description, it becomes evident that these practices should be challenged. It would seem most appropriate to look for alternative models of audio description production. Fels, et. al. (2006b) developed the first-person approach to audio description. This approach is character driven, where the description follows the style and perspective of one of the characters

from the show or film. In their paper, they describe the process using the main character as the describer; however, other characters can also adopt this role. The character narrates using the past tense, and it includes subjective and emotional information (Fels D., Udo, Diamond, & Diamond., 2006b). Although, this style of audio description results in a more integrated storyline and unified piece of work through the control over what and how described information is provided, it does increase the workload on the production and creative team.

As opposed to the current practice, this in-house approach does not outsource the production of audio description. Generally, this approach follows a similar path (as shown in figure 2), as that of a third party produced work, but the tasks are carried out by the creative team it. However, the creative team including the director decides on the approach to be used for the description. Writing of the audio description script can then be undertaken by the scriptwriter who has been trained in unique requirements of blind/low vision audiences and audio description techniques (Fels D., Udo, Diamond, & Diamond., 2006b). The director and the recording actor whose responsibility is to act the dialogue must then create the video description track. The raw track can then be sent to the television show or film's sound editor who can edit and adjust the audio description to fit with the flow with the original sound track including appropriate timing, and volume levels. Quality control can also be provided at this time. Finally, the sound editor can mix both sound tracks together with the video tracks for the master tape. The audio description then becomes part of the master tape having the same quality as the original audio track. This process has the potential to produce a more integrated experience for the audience, as scriptwriters, directors and sound editors are all part of

the audio description process and can integrate this with their inherent understanding and vision of the show; thus creating an unified piece of work. It is my opinion that the process proposed by Fels et al. (2006b) is comparable to that used for the creation of DVD menu and content; hence, the next section will look at this process to highlight the similarities.

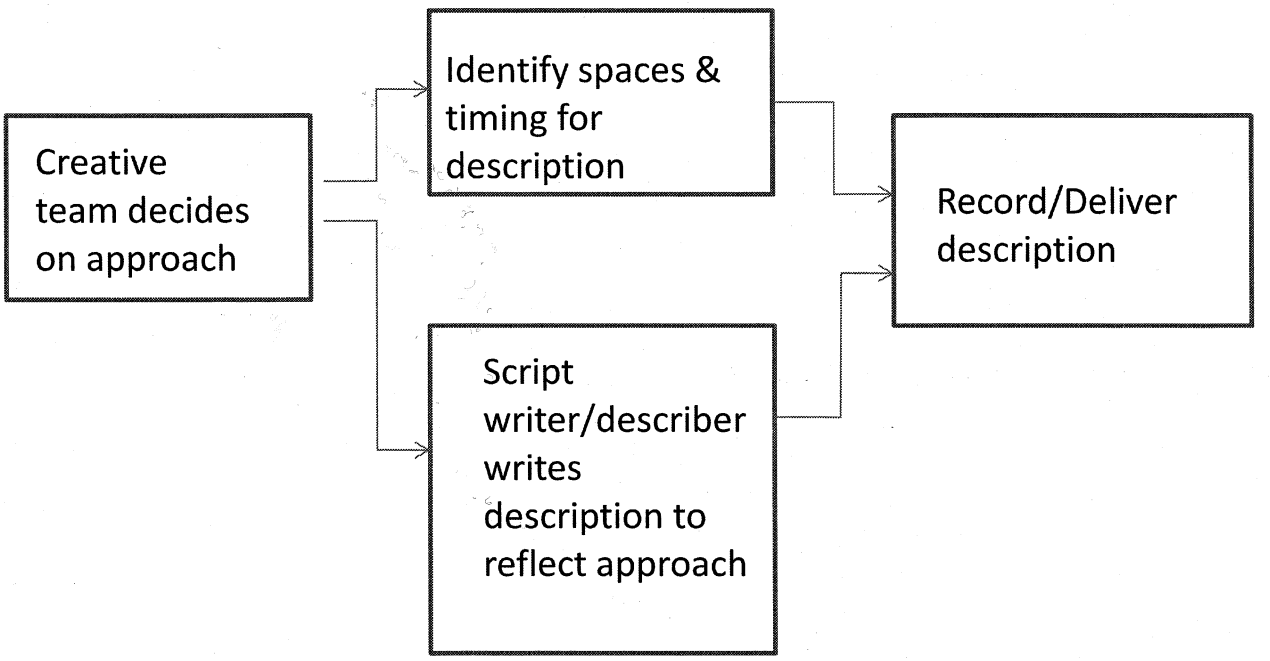


Figure 2: Alternative audio description process

2.4.2 DVD extras

With the advent of the DVD as the main method of home film consumption, came the creation of the DVD extra, where the average viewer was able to receive a more indepth look at their favourite movies DVD bonus features began, as a necessity, as a result of Warner Brothers' 1999 release of *The Matrix* DVD with two documentaries about the film (Moerk, 2005). These bonus features helped to drive sales of the *The Matrix* DVD to over a million copies, with only 3 million DVD players owned by consumers (Moerk, 2005). DVD extras have become so popular that many major films

have their own DVD crew who work with the production team to produce the DVD event (Moerk, 2005). Similar to the rest of the production, the main DVD producer meets with the director to understand his vision of the movie as well as to share ideas about what should be included and how she can help. When DVD production team attempts to avoid or exclude the director, the bonus features truly suffer and are often medicore at best (Moerk, 2005). The director now views being involved in the DVD extra process as part of the normal operation; not being included would be considered unaccepted (The Hollywood Reporter, 2003). The director views the DVD production as their opportunity to present the film as they envision it. However, like all other parts of the production, the director oversees the process but the responsibility for implementing this vision rests withof the DVD production team, who must create the extras in accordance with the director's vision (The Hollywood Reporter, 2003). It would seem that the creation of the audio description follows this similar procedure as a DVD extra.

2.5 In-house approach

Fels et. al.'s (2006a) put their proposed audio description process to the test, in a comparative study which gauged viewer reaction to the current style of audio description versus the newly created first person approach. Fels et. al. (2006a) showed 14 participants (seven sighted, and seven blind) short clips of an adult comedy series called *Odd Job Jack* in both styles of description. The viewers were then asked to rate their preferences for each style, in terms of the quality and quantity of the information presented, and the entertainment value of each type of audio description. They found that three times as many participants preferred the first person approach over the traditional approach (Fels D., Udo, Diamond, & Diamond, 2006a). However, these

results conflicted with the fact that the first person approach received more negative feedback regarding the trustworthiness of the description than the traditional approach (Fels D. , Udo, Diamond, & Diamond, 2006a). This conflicting finding could be a result of the novelty effect from the new style of narration, the fact that first person narrative is less trustworthy than third person narrative form, or the participants had a negative reaction to the content of the show. Unfamiliarity with description style may cause the viewer to be more critical of the presentation, and may have played a contributing role in the belief that this technique is less trustworthy than the traditional styles.

There are several limitations to the study performed by Fels et. al. (2006a), which I intend to address in this thesis in order to advance the knowledge in audio description practice. First, the study used only seven blind participants. While this is a fairly typical number of participants in assistive technology, the generalization of the results is limited. For the purposes of my study I would like to have at least doubled the number of participants.

In addition, many of the participants were not part of the target audience of the show that was chosen for the study. The show used was a cartoon comedy series aimed at a target audience of 18-35 year old males. This might not appeal to those outside of this target audience and some of the comments from the participants may have reflected their negative reaction to the show itself. Therefore, the viewers' preferences could have biased the study as the participants might be inclined to evaluate the shows content instead of the description techniques. However, with the limited number of blind or low vision people within the target audience of this show, it will be difficult to fully correct this bias.

Finally, the participants were only shown four short clips of about 1.5 minutes each. This approach is contradictory to the standard method of consuming television – watching the show one episode at a time (Fels D., Udo, Diamond, & Diamond, 2006a). This resulted in a novelty effect, where the new method of describing was perceived to be interesting and exciting, thus receiving higher positive feedback. To eliminate this novelty effect, I will be showing multiple full episodes of the show, and measuring their change in opinion over the course of the episodes to help eliminate this novelty effect.

2.6 Perceptions of quality

One of the major issues of evaluating alternative styles of audio description is that we are required to measure the audience's perceptions of quality. Thus, it is important to look at other factors that may influence the audience's opinion of the audio description as well as the show as a whole. Jumisko-Pyykko (2008) points out that one's perception of quality is dependent on particular characteristics of each sensory channel. Generally, for film or television this would involve a combination of the processes amongst the visual and auditory sensors (Jumisko-Pyykko, 2008). Blind viewers present a unique situation where they are using the auditory information to create and understand the visual images they are unable to see. Hence, perceptions of audio description will be more heavily influenced by attributes that affect auditory processes, which include, factors that have been identified by Jumisko-Pyykko (2008), pitch, loudness, timbre and location. In 1991, Neuman, Crigler, and Bove performed a study attempting to determine how audio quality affected and influenced viewer's perceptions of the television viewing experience. They tested multiple dimensions of audio quality, including mono vs. stereo sound, and low fidelity vs. high fidelity, to determine how

differences amongst these variables affected the audience perception of the television show. Ultimately, they found that shows with the combination of better quality (high fidelity) and stereo sound were perceived by the audience "as more likeable, interesting, and involving" (Neuman, Crigler & Bove, 1991, paragraph 1). For the purposes of my study, I must be aware of this issue, through the administration of the study as well as the analysis of my results.

2.7 Flow

Katz , Gurevitch, and Haas (1973) suggest that there five basic needs for mass communication, such as television, in society:

- Cognitive - obtaining knowledge
- Affective - emotion and pleasure
- Personal integrative - providing confidence and strengthen credibility
- Social integrative - strengthens connections with others
- Tension release - escape from life

For my thesis I wanted to focus on the Affective and Tension release factors because these are factors are individual measures. Research in audio description is so new especially regarding style that involving a more complex group assessment is premature. In order to aid in the evaluation of the affective and tension release factors I will be using Csikszentmihalyi's (1990) concept of flow as it has measurable attributes that relate directly to these two factors as described in the next paragraphs. Also, I use a comprehension test as a simple first measure of the cognitive factor. The comprehension test measures understanding and meaning making is one important cogntive process used in mass communication. Although the social and personal integrative factors are important reasons for watching television (as described in

Kirchner and Schmeidler (2001)), it is a more complex undertaking to assess them that is beyond the scope of this thesis. It is important to understand the impact that audio description style has on the individual who is blind before attempting to determine the impact it has on a group of sighted and blind or low vision individuals together.

The film literature examined earlier emphasized the concept of the unified whole. When a film achieves unity, the audience is able to lose itself in the film without the realization that they are even watching a movie. This type of effortless involvement to activities is called flow. The concept of flow was developed and has been extensively studied by Csikszentmihalyi (1990, 1992). Flow is a cognitive state of intense euphoria through concentration and involvement in an activity or task (Johnson & Wiles, 2003). When Csikszentmihalyi first developed the concept of flow he was attempting to enhance the existing knowledge base and understanding of human happiness. He determined that it would be most appropriate to develop a model to represent the optimal human experience. He chose the term flow to represent this experience, because it elicits a sense of effortless movement or involvement (Csikszentmihalyi, 1990).

Csikszenmihalyi's developed this concept by studying top performers from a variety of different fields, ranging from athletics, to medicine, to the arts. His intention was to have them describe their mindset when they are in an optimal state of performance. He then compared the information he gathered from common people, about how they experience their optimal performance. From this he was able to conclude that, irrespective of age, profession, gender, culture, or activity, people often described their happiest experiences in terms of flow (Csikszentmihalyi, 1990). Thus, he was able to

conclude that while in the state of optimal experience, one becomes motivated, happy and efficient as he or she is absorbed in the activity at hand. This includes the elimination of unnecessary or irrelevant thoughts and emotions (Johnson & Wiles, 2003).

It is important to understand that the state of flow is not simply a state of pleasure, it goes beyond this; activities that induce flow require the full attention of the participant (Csikszentmihalyi, 1990). Csikszentmihalyi (1990) identified seven conditions that enable a task to induce flow:

- A challenging activity that requires skill
- Merging of action and awareness
- A task with clear goals and immediate feedback
- Concentration on task at hand
- Loss of self consciousness during a task
- A sense of control over one's actions
- An altered sense of time

2.7.1 A challenging activity that requires skill

One of the major components of achieving flow is to be involved in a challenging activity that requires skill to complete. Flow-inducing activities are generally goal oriented and bound by rules; however, this does not limit flow to strictly physical activities or skills (Csikszentmihalyi, 1990). In order for an activity to actually induce flow, one's perceived skills or abilities must be equivalent to the challenge that he is facing in that activity (Csikszentmihalyi, 1990). As Figure 3 indicates, if the activity is too

difficult, people experience anxiety, while if it is too easy, the participant is bored. Flow is only achieved when there is congruence between skill and challenge.

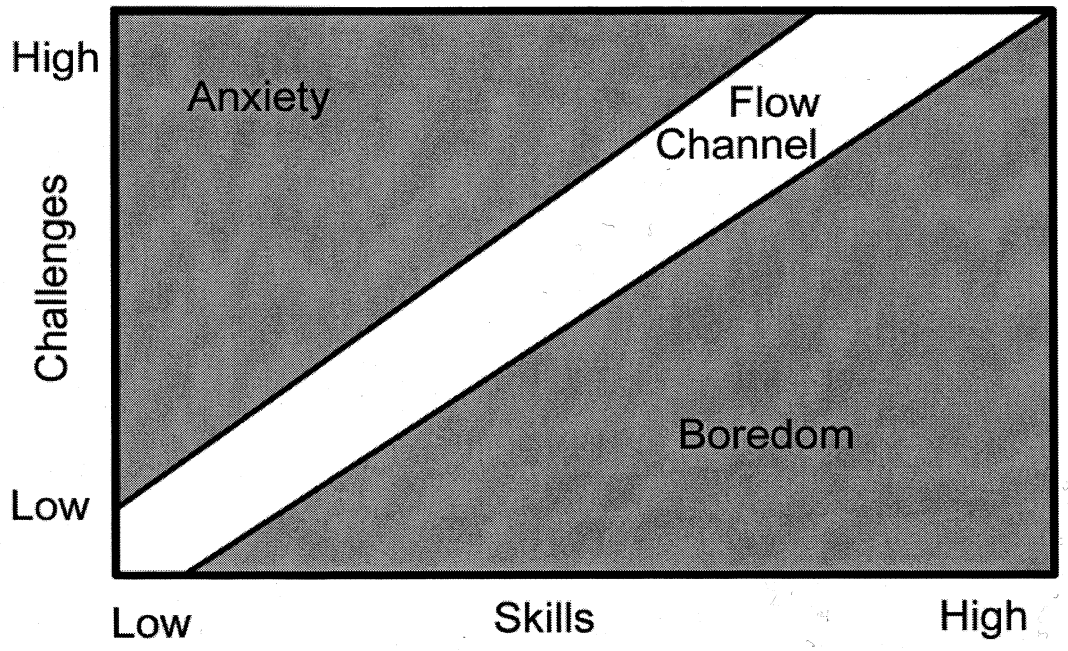


Figure 3: Optimal challenge graph (Csikszentmihalyi, 1990)

2.7.2 Merging of action & awareness

To be in a state of flow, the participant's skills must be matched with the challenge offered by the activity. In order to achieve this, all of the participant's relevant skills must be recruited, which then leads to an intense concentration on accomplishing the tasks of the activity. All distractions are ignored by the participant because of this intense effort which leads to automatic and effortless interactions and behaviours.

2.7.3 Clear goals and feedback

In order to induce flow it is often required that tasks have specific goals, not generic ones such as a winning (Csikszentmihalyi, 1990). These goals are often regulated and measured by the rules of the activity. In addition, it is important the participant receives immediate feedback on his progress towards the ultimate goal. Although these goals are not always clear or present in the mind of the participant; he or she must have a strong understanding of their intentions (Csikszentmihalyi, 1990). Consider a friendly game of tennis where the goal of winning is no longer relevant. This game can still be flow inducing because it has other relevant goals, such as returning the ball over the net after it is hit by the other player. In addition, the player knows whether they are successful after every hit because it either goes over the net or not and the other player hits it back; hence they are receiving immediate feedback (Csikszentmihalyi, 1990).

2.7.4 Concentration on task at hand

Often times when a participant is immersed in a task he or she becomes so focused that nothing else can enter his or her consciousness. During the state of flow, a participant becomes so focused that all anxieties and preoccupations are blocked from consciousness allowing for an enjoyable experience (Csikszentmihalyi, 1990). This concept ties directly into the concept of a unified film production as discussed earlier. A unified world allows the viewer to concentrate on the film, and become immersed within it, forgetting about her own problems and issues. However, when a filmmaker breaks the system he or she is creating a distraction that does not allow the viewer to

concentrate; hence allowing the issues of their own life to flood back into consciousness.

2.7.5 Loss of self-consciousness

The loss of self-consciousness is closely related to the previous element of being able to concentrate on the tasks. In everyday life, there are certain events that threaten our own self-image, which will result in anxiety and self scrutiny. During the state of flow the self image is never threatened, because the participant is both concentrated on the task at hand, and his skill level is equivalent to the challenge (Csikszentmihalyi, 1990).Csikszentmihalyi claims that as one concentrates and works hard to improve skills and complete tasks, one is able to achieve self growth, and a stronger sense of self (1990).

Loss of self-consciousness is not equivalent to the complete lack of awareness of body or mind. Even though flow can often help automate one's actions, it requires an active role from the mind or body to analyze the environment. Consider a good hockey player, the player is not focusing on skating by consciously moving one leg at a time, and carefully focusing on the exact form of each stride; as this is an automatic response for good players (as explained earlier). Instead, she is focusing on the higher level task of analyzing the action of the game. She is required to understand where she is in relation to the rest of the players, and attempt to anticipate the opposing team's actions, in order to counter them. Now that she has decided where to go she most mobilize her body to get there accounting for variables such as speed and direction. If she needs to speed up to beat another player to the puck, she is going to have to possess the

awareness to take quicker strides. Hence both her body and mind are playing active roles in her success.

Csikszentmihalyi does point out that the loss of self-consciousness allows the participants to block out body signals that are unnecessary to complete the task at hand, this can include hunger, fatigue, and even injury (1990).

2.7.6 Paradox of control

While in a state of flow, people will often report on their ability to control the current situation or at least the perception that they can control what occurs. A video game player has the ability to control what her character does, she can move her character left, right, up, or down, to duck their enemies or defeat them etc. Through the ability to control the character the player is enabled to beat the game. If this rule is violated, and the ability to beat the game was out of the players control it would seriously contravene her sense of flow.

Oddly enough this rule can hold true even in situations where the concept of control would be illogical, such as gambling. Professional gamblers report that they rely on their skill not luck to win games even though they are playing games of chance (Csikszentmihalyi, 1990). He suggests that this phenomenon occurs because people are actually experiencing a lack of worry, and only precieve this as control (1990). Returning to our gaming example, unlike real life, the user can run into a battlefield and fight hundreds of enemies without harm to themselves; thus there is no real reason for her to worry.

Yet gambling has real consequences (such as losing money), how could the gambler not be worried? Csikszentmihalyi would point out that people who experience flow during high risk (like gambling) or life threatening (such as skydiving) activities have built up the necessary skills to mitigate against being worried. For example, a professional skydiver is well trained in all the safety procedures and techniques for a safe landing; thus, reducing the need for them to worry (Csikszentmihalyi, 1990).

2.7.7 Transformation of time

When taking part in a flow activity, losing sense of time is often reported (Csikszentmihalyi, 1990). An activity can be so pleasurable that a person's sense of time becomes altered so that what may have been several hours can seem like mere minutes (Csikszentmihalyi, 1990).

It is important to note that it is not necessary for all of these conditions to be present in order for one to experience flow. In addition, activities that induce flow are autotelic, meaning that they are done for their own intrinsic rewards with no concern for current or future benefit. Thus, people continue to take part in these activities as they are for pure enjoyment.

Much of the research carried out by Csikszentmihalyi focused on understanding the experiences of experts, such as top athletes or surgeons. Yet the phenomenon of flow can be experienced in many different situations by many different people. In fact, Csikszentmihalyi identifies that, among people who are blind, reading is often an activity that induces flow. If we then extend this concept to listening to audio description, some of the same mechanisms might apply.

Consider how the flow conditions or variables might relate to the experiences of television or film audiences. First, film provides a challenging activity, as it is bound by rules and conventions of language as well as the customs and norms of the culture in which the film is set. Thus, the audience must understand the rules of the language and the cultural customs and norms or it will be very difficult to enjoy the film. Clearly, if the film is in an unknown language without subtitles, the audience is unable to understand or enjoy the film fully. In addition, the audience must have the ability to interpret words, images and sounds, understand the plot, empathize with the characters, and finally evaluate the film.

Similar to reading a book, a truly enjoyable film allows individuals to become immersed in the storyline, plot and lives of the characters; thus, the reader/viewer becomes less self-conscious and eliminates unpleasant thoughts or anxieties (Csikszentmihalyi, 1990). In addition, it can be easy to lose track of the sense of time when watching films or television shows, again indicating a flow experience.

I would like to suggest then that the theory of flow supports the notion that people who are blind want an equivalent entertainment experience while watching television or films to that of sighted audiences. The flow conditions should then apply similarly to all audience members. As indicated in early research in audio description style (see Fels et. al., 2006), blind audiences preferred the entertainment value of description over the trustworthiness of the information perhaps because it induces flow. My research will build on the hypothesis that first person video description will help to induce flow, as it is integrated into the storyline and reduces distractions, thus allowing the viewer to concentrate on the show. If the viewer is able to better concentrate on the show, she

should experience an altered sense of time, and the elimination of unpleasant thoughts from consciousness.

2.7.8 Self-selection

It is important to mention that four participants dropped out of my study. Two of these four participants choose to quit the study because they did not enjoy, and were not entertained by the show.

3. Universal design

Audio description is still a new concept and practice in television and film relative to other practices, such as closed captioning; hence, there are few theoretical frameworks that have been created and very little supporting research to guide this practice. It is important to look at the wider field of accessibility and assistive technology, where much more research has been conducted. One of the more prominent paradigms used in this field is universal design. Universal design is focused on the creation of usable products, practices or environments for all people, without adaption or specialized design (Preiser & Ostroff, 2001). There are seven principles that are at the core of universal design (Burgstahler, 2008) (Preiser & Ostroff, 2001).

- Equitable use
    - Products should be designed to be usable and marketable for all people, including those with diverse abilities. For example, a well designed website should be able to be accessed by those who are both sighted and blind (through the help of a screen reader). This accessible design ensures that everyone who visits the website is able to access the information they need.
- Flexible use
    - Products have a flexible design in order to accommodate for differences in user preferences and abilities. Almost all DVDs now come with options for the user to hear the film in different languages, as well as, with close captioning for those who are deaf or hard of hearing.

- Simple and intuitive use
    - The product's design should be easy to use for all customers, regardless of their experience, knowledge, or ability. Windows Vista (a computer operating system), is simple and intuitive so that all users are able to perform the basic tasks necessary.
- Perceptible information
    - The product design communicates all necessary information regardless of user abilities. A disposable camera does a creative job of this, providing detailed instructions on the back of the camera as well as colourful indicators to help guide the user.
- Tolerance for error
    - The design should minimize and protect the user from hazards or consequences as a result of an accident. All major computer programs such as Microsoft Word provide safety from the user accidently closing the program, by prompting the user to ensure they wanted to shut down; as opposed to instantly closing and having the user lose all unsaved work.
- Low physical effort
    - Products should be designed so that they can easily be used without requiring strenuous or fatiguing actions. A grocery store installing an automatic sliding door allows customers to easily enter and exit while carrying heavy parcels, or pushing a cart.

- Size and space for approach and use
    - Products and spaces should be designed to be accessed and used by all people regardless of physical ability, or size. Public washrooms are designed so that people in wheelchairs have enough space to enter, use the washroom and wash their hands without strain or aid from others.

Clearly many of these rules (such as, size and space) are not applicable to audio description research as they are focused on physical barriers or boundaries. However, many of these principles, especially simple and intuitive use, or perceptible information, are important to the practice of audio description.

The principle of perceptible information must be considered in word choice of audio descriptions. A describer has a very short period of time to convey the most information possible. In conventional form, it is the describer who must decide what information is important to describe and then formulate appropriate neutral words to represent that information. An example of this is to use more verbs, such as crying compared to adjectives, such as sad. In conventional audio description, words, such as sad convey an interpretation of an emotion while crying describes the action of being sad (or happy or angry etc.) and the audience must decide whether it is sad or happy based on other cues. Hence, this is not perceptible information, as it is not directing the user to the correct emotion that is being displayed. For a sighted person all of the cues including facial expressions are given to indicate that the person is sad or happy, there is really no interpretation required.

The words used by the describer should also be simple and intuitive (Preiser & Ostroff, 2001). The level of simplicity may also need to be adjusted depending on the target audience; however it is extremely important to use words that are easily understandable and clear to convey the message to the audience. For example, for a show that is targeted towards teenagers, the describer might want to avoid using words such as nonplus or superfluous. Despite the fact they are descriptive and unique, many young teenagers would probably not understand their meaning. Instead, it would be better for the describer to use more common words such as, baffled to replace nonplus, and unnecessary would be a suitable replacement for superfluous.

The fact that there is such a gap between the way a sighted person and a blind person experience and process the film contravenes the equitable use rule. Clearly, the audio description does not allow the blind and low vision audience access to the same information as those who are sighted. In addition, the current style and quality of audio description is also contravening this rule. It is being created with the sole purpose of allowing blind and low vision viewers to understand; while possibly diminishing the entertainment experience of sighted viewers. Audio description should be created so that all viewers, sighted or blind are able to enjoy the show, film or play. In fact, audio description that places more emphasis on entertainment could help to serve a wider audience, beyond the blind and low vision viewer, and ultimately create a new revenue stream for film and television production companies.

4. The audio film industry

When a production company utilizes character driven and entertainment focused audio description, they are essentially creating an auditory version of the film. This auditory film allows the listener to develop their own visual images based on the description; thus, the product would be consumed as though it were an audio book. This will open a new revenue stream for production companies as they are easily able to enter and compete in the audio book industry. Adding to the attractiveness of this proposition is the fact that production and film companies will be able to enter this market without incurring much additional expense.

The creation of audio description would be done by production team members who are already on staff. The recording of the audio description would take place during the post production. This process may require several extra days in the recording studio. All of the marketing of the product would be linked to the marketing of the film and the DVD (Kozloff, 1995). The studios would incur extra costs in the manufacturing of the physical audio description product if they chose to utilize CD formats of the audio film. If the production company wanted to avoid or minimize these cost, it would be advantageous for them to bundle it on the DVD, while selling it separately through online distribution channels, such as I-tunes. This online distribution would allow the production company to avoid extraneous production costs for the physical product.

In fact, introducing a line of audio films is not a novel idea in the film industry. Walt Disney Studios, for example, started producing audio books as tie-ins to their movies in 1957. Disney's marketing muscle was able to propel many of these audio books to sell

over one million copies (Kozloff, 1995). Kozloff suggests that most audio publishers have miniscule promotional budgets, thus, they rely on creating tie-ins to movies (1995). She even suggests that the entire industry could one day become a promotional tool of the film industry (Kozloff, 1995).

In the early 1990's Blockbuster Video rentals even began to carry audio book cassettes. This initiative did not meet Blockbuster Video's expectations, so they were quickly removed from the shelves (Kozloff, 1995). Audio publishers were quick to point out that the test was premature and that store staff were not adequately trained to promote the genre (Kozloff, 1995).

It might be possible for the film industry to attempt to enter this market again as much has changed since the early 90's As mentioned earlier, the creation of the DVD extra has created a public expectation that features accompany a DVD. In addition, films are consumed much differently than they were in the early 90's. Consumers no longer need to go to the theatre or watch films on their television, films are now mobile (The Hollywood Reporter, 2003). DVD players are in cars, and the popularity of the all-in-one handheld device such as the IPOD, allows viewers to consume movies anywhere, anytime. Consider a family car trip where the parents (in the front seat) are able to enjoy the film with their children, because of the quality of the audio description, while still being able to concentrate on the road. While, commuters using their IPODs or other handheld devices are able to better enjoy their film with watching on a small screen, as opposed to straining their eyes. Essentially you have a marketplace that is primed to use audio description on its own or to enhance the viewing of their favourite television show or movie.

This brief analysis of how audio films could be cheaply produced, and the possible consumer uses, demonstrates that audio description is a viable option for production companies. However, this discussion does not indicate that it will be a profitable venture. It is important to take a brief look at the audio book industry to understand their market, and if it would be appropriate to enter.

4.1 Audio book industry

The audio book industry has seen steady growth since the mid 1980's when major publishing houses first began to release auditory versions of popular books (Neary, 2005). In 2007, the Audio Publishers Association (APA) released their bi-annual report on industry profitability, as well as consumer profiles. In this report they stated that yearly industry-wide profits were estimated to be $923 million, a 6% increase from 2005 (Audio Publishers Association, 2007). The APA also reports that 24.6% or approximately one quarter of the American population reported that they have listened to at least one audio book within the last year. In addition, they are reporting an increase of total sales online by 14%, which is a 5 percentage point increase compared to the 2005 report (Audio Publishers Association, 2007). These are all positive indicators that entering the industry could be a profitable venture for production/film companies. Clearly, this brief discussion does not provide enough evidence or in-depth analysis for companies to make a proper evaluation as to whether it would be appropriate to enter this market. In order to do this it would require a tremendous amount of industry and consumer research, which is well beyond the scope of this

paper. Without definitive evidence that this first person audio description is acceptable, and a significant improvement over the current process, it would be fruitless to determine its marketability

5. Methodology

It is my intention to expand on the research described in the literature review, with a focus on examining audience levels of content comprehension, and enjoyment as defined by flow, over a longer period of exposure to the alternative style of audio description. These results will be compared with the conventional style of audio description.

5.1 Research questions

For the purpose of my research, I compare two different styles of audio description, which have been developed in previous literature (conventional third person/ third-party produced and first person/production studio created) for use in an animated comedy series. I will be attempting to build upon previous research by examining viewer preferences, and the impact of stylistic variations on audience understanding. Thus, my research questions are as follows:

1. Which style of audio description is preferred by blind and low vision viewers?
2. What is the impact of different styles on the understanding of the show's plot, setting and characters?

To adequately answer these questions, I attempt to explore differences between the trustworthiness of the audio description, and the entertainment value of it. As such, I must also investigate the following sub-questions:

1. Is there a difference in trustworthiness between the first person and third person approach?
2. What is the impact of audio description style on entertainment experienced by blind and low vision viewers?

5.1.2 Understanding the show

The main purpose of audio description, regardless of the method used, is to always increase the blind or low vision viewer understanding of and engagement in the storyline (VSA Arts Of Texas, 2007). It is important that the audio description provide accurate information, so that the viewer can follow and understand the progression and plot of the show. My research topic relates specifically to which descriptive approach provides enough information to satisfy the informational and entertainment needs of the blind and low vision audience, within the time restrictions imposed by the pace and dialogue of the show.

5.1.2 Entertainment experience

One of the initial purposes for the existence of audio description was to enhance the entertainment value of productions for the blind and low vision audience (Standards For Audio Description, 2007). Thus, it is important that my study determine whether there are differences in the entertainment value of each description method. If a method reduces the entertainment value or interferes with it then the goal of audio description has not been achieved. Ultimately, one method should lead to a more unified and interesting film, thus creating a better entertainment experience for the audience.

5.1.3 Trustworthiness

It is also important to determine whether the viewer believes that the information they are receiving from the audio description narrative is valid and accurate. If the viewer does not trust the audio description then the value of the method will be diminished. In Fels et al.'s (2006) audio description study, there was a belief among the participants that the first person approach was less trustworthy but more entertaining. However, this was based on short (one-minute) clips; the audience did not even view one whole episode. I will investigate whether this trend is maintained over longer exposure or whether there is a change in attitude over time.

5.3 Research design

In order to attract as many participants as possible, I chose to run the study in two different venues at the same time. Participants had the choice to take part in either an online version of the study (2 participants) or a group session (16 participants). In both of these studies, the same three, 22 minute episodes of the Comedy Network television show *Odd Job Jack* were used.

Odd Job Jack is an adult cartoon in the style of Family Guy and South Park. The premise of this is show is that the main character, Jack Ryder, works for a temporary employment agency. In each episode Jack is given a new job where he has an unusual adventure. For example, in one episode Jack becomes a magician's assistant, who ends receiving his own full hour special. The show tends to use vulgar, rude and inappropriate humour. The target audience is males between the ages of 18 and 35. *Odd Job Jack* was used because it was the only show available that was audio

described in the first person style and the conventional/ third person style audio description. *Odd Job Jack's* audio description was created using the exact process advocated by Fels et al (2006) as explained in section 2.4.1 and figure 2. For this study, I anticipate that viewing three, 22 minute episodes is sufficient to overcome some of the novelty effects limiting the study reported by Fels et al (2006a).

In the group session, the study participants were divided into two groups, the alternative style group (9 participants) and the conventional style group (9 participants). The alternative style group watched all three episodes of *Odd Job Jack* with the first person style of audio description. The conventional style group watched the same three episodes of *Odd Job Jack* (in a different order) using the conventional style of audio description as produced by AudioVision Canada, a professional video description company.

Due to the difficulties in recruiting enough subjects who are blind or low vision and between the ages of 18-35 (the target audience for *Odd Job Jack*), the target age demographic was expanded to include all adults. This may result in the same issues identified in Fels et al (2006a) study, where there was an increase in negative reactions to the audio description because of audience's dislike of the show which was related to age. Although the intention was to keep the online version and the study group as similar as possible there were some slight differences that I will outline in the following two sections.

An ethics application was submitted and approved by the Ryerson Research Ethics board (see Appendix H).

5.3.1 Online study

For the online portion of the study, I created a website that was accessible for the blind and low vision participants. This website allowed the participants to gain access to the study using their preferred accessible technologies for accessing the text-based documents and questionnaires. This website used an accessible flash video player and online forms were formatted for access by screen readers. Each user was given a unique username for logging into the site. The user answered questions and gave opinions that could be tracked and clustered together for analysis using these unique identifiers. The username feature also allowed the website to be customized to only show the next relevant task for the participant. When the participant logged in for the first time, she was assigned to one of the two groups at random. In addition, the order in which the episodes were watched was randomized to avoid an order effect. Appendix I shows sample screen shots of the login procedure, and the questionnaires.

Using an online platform provided several distinct advantages over the study group format. First, it allowed the participants to watch the shows on their schedule in a more convenient setting, at their preferred times and in their own home. Participants could also watch the shows over multiple sittings, which is similar to how television is generally consumed, one episode at a time over the course of several days or weeks. Using the online platform also allowed me to recruit participants from beyond the Greater Toronto Area, where there are a limited number of blind and low vision viewers.

5.3.2 Study group

The participants in the study group watched all three episodes in a row, with only one short break between episodes two and three, as well as at the completion of each questionnaire. The alternative group (AG) watched the episodes in the following order: episode one, *Nobody likes a Gorilla*, episode two, *The Mindhumper*, and episode three *The American Wiener*. The conventional group (CG) watched the shows in the reverse order, to mitigate against a possible order effect. The participants were assigned to a group randomly, based on their arrival to the study location and there were equal number of participants in each group. To administer the questionnaires volunteers sat with the participants and read them the questions, and record their responses.

5.3.3 Data collection

As members of the study, the participants were asked to complete three different types of questionnaires; a pre-study questionnaire, post-episode questionnaire (participants completed three of these), and post-study questionnaire. At the conclusion of the study, we held an informal discussion that was recorded so that participants could stay and voice their opinion about the audio description. The whole study including the discussion component lasted approximately two hours.

5.3.3.1 Pre-study questionnaire (See Appendix B)

The purpose of the pre-study questionnaire was to gather demographic information (questions 1-5) and determine the users experience with, and opinion of, the current methods of audio description (questions 6 - 10). This questionnaire was administered after the participant consented to be part of the study.

5.3.3.2 Post-episode questionnaire (See Appendix C, E, F, G)

The post-episode questionnaire was administered at the completion of each episode and was comprised of two distinct sections. The first section was a set of 7 comprehension questions for episodes 1 and 3 and a set of 6 comprehension questions for episode 2, which were directly related to the episode participants had just watched. The purpose of the comprehension questions was to determine the viewer's understanding of the episode.

The second section of the post-episode questionnaire was used to track the participant's change in opinions and attitudes over time (questions 1-6). The response categories were forced-choice 5-point Likert scales. This helped to determine whether the description style was affecting the participant's reaction to the show. This questionnaire was also used to evaluate the impact, over time, on entertainment, flow and understanding (questions 7 -14). These questions were also forced-choice 5-point Likert scale where 1was strongly agree (the best), 3 was neutral and 5 was strongly disagree (the worst).

5.3.3.3 Post-study questionnaire (see Appendix D)

The post-study questionnaire was administered at the completion of the entire study to allow the viewer to provide overall opinions and attitudes about the methods of audio description. This questionnaire consisted of 13 questions, which measured the audiences perception of changes over time using a forced-choice Likert scale (questions 1-5)where 1 was better over time, three was neutral and 5 was worse over time. The opinion of the audio description in comparison to standard audio description

was judged using a 4 point scale, where 1 was more enjoyable/trustworthy, 2 was neutral, 3 was less enjoyable/trustworthy and 4 was neither is enjoyable (questions 6 and 7). This questionnaire also measured whether they enjoyed the show on similar 5 point Likert to question 1-5 where one was enjoyable, 3 was neutral and 5 was not enjoyable (question 8); as well as, relevant market information about their opinion on possible uses (questions 9 and 10), and whether they would prefer the use of the alternative audio description (questions 11- 13)

5.3.3.4 Group discussion (See Appendix J)

A group discussion took place at the completion of the study, and only those participants who wanted to provide additional verbal feedback and input were asked to stay. This discussion was audio recorded using two microphones and a laptop computer for later analysis. Similar discussions were held in both rooms. We led the discussion by posing 5 questions to the group. These questions helped to evaluate the positive and negative aspects of the styles of audio description, and how to improve on the style (questions 1- 3). I also asked people's opinion of Odd Job Jack and asked them to expand on their answers from the questionnaire (question 4). To finish the discussion, I opened the floor to general comments about audio description in general (question 5). The purpose of this discussion was to gain a deeper understanding of the participants' opinion, as well as to allow them to provide feedback for further improvements. The discussion for the CG lasted 19 minutes and the one for AG lasted 31 minutes.

5.3.4. Participant characteristics

There were a total of 18 participants, 16 in the group sessions, and two in the online study, divided evenly between the CG and AG groups. Of these 18 participants, four dropped out of the study before its completion, three from CG, and one from AG. As there were only two participants in the online portion, the data were combined with that from the group sessions

There were 12 male subjects and 6 female subjects, the average age of the participants was 42.78 years old ranging from 18 and 59 years old. Seven of the participants referred to themselves as "totally blind", and seven said that there were "legally blind". Four of the participants were "low vision", but not legally blind. A majority of the group (11 of 18 participants) had a University or College education, while four participants reported having a post graduate or doctoral degree, and three stated they had a secondary school diploma. A majority of the participants (14 of 18) stated that they did not watch television with audio description, two stating that they did not watch television at all; and only two subjects watched one to two hours per week of television with audio description. Of the 18 participants, six stated that they watched adult cartoons, such as the Simpsons, or Family Guy, and only one participant had watched Odd Job Jack. Most of the participants (13 of 18) reported being neither satisfied nor dissatisfied with the current level of audio description, five were dissatisfied, and only one respondent was satisfied with the current standard of audio description.

5.4 Data analysis

Of the 18 participants in my study, 14 participants watched all three episodes, while two participants watched two episodes, and another two participants watched only one episode. As noted before the online data was combined with the rest of the data, as the population was too small for any significance to be measured between the types of study groups. The four participants who did not complete the study are still included in the statistical analysis for the sections that they were able to complete; however, all of the dropout's entries were excluded for the repeated measures analysis

For the purpose of my study, I determined five main hypotheses that relate to the research questions outline in Section 5.1:

- H1: The style of audio description has no effect on the blind or low vision audience's ability to understand the show (including plot, characters and setting).
- H2: The style of audio description has no effect on the blind or low vision audience's ability to trust the information provided to them by the audio description narrative.
- H3: The style of audio description has no effect on the blind and low vision audience's entertainment experience.
- H4: The blind and low vision audience, as a whole, has no preference towards one specific style of audio description.
- H5: The above variables are not affected over time

A 95 % confidence level was deemed acceptable to use in all of the statistical analyses. Hence, any data resulting in a significance level (p) of less than .05 was considered to be significant. In addition, significance levels between 05 and .055 were further investigated for trending purposes

Because of the small number of subjects, I used the nonparametric statistical technique, the Mann-Whitney test, to analyze the between-subjects data (description style as grouping variable). The Mann-Whitney test allowed me to determine whether variations in style affected the central tendencies of the group on the audience's understanding, the trustworthiness of the audio description, and the entertainment experience (dependent variables). However, the results will be much less generalizable compared with those that could be interpreted from parametric techniques.

I used a Repeated Measure Analysis, to examine differences that may have occurred between each episode (within-subjects variable) from information gathered in the post-episode questionnaires. This within-subjects analysis allowed me to determine the differences among the same factors over time. I used this technique to determine if there was a change in the reaction of the viewer to the different styles of audio description over time. In order for the repeated measures analysis to work the data must meet the sphericity assumption, which is essentially an extension of homogeneity of variance assumption for ANOVA (the variance of the populations from which the groups are sampled from are equivalent) (Baguley, 2004). If this assumption is violated the results will be analyzed using either the Greenhouse and Geisser correction. This method relaxes the assumption of sphericity by reducing the degrees of freedom (Baguley, 2004).

The data from the two small group discussions were evaluated to determine whether there was any pertinent information that would help explain or support the statistical analyses. This also allowed me to understand the needs and opinions of the audio description audience providing a springboard for future research.

6. Results

6.1 Effects on understanding: H1

A Mann-Whitney analysis was carried out on the comprehension scores between AG and CG for each of the three episodes, to evaluate the impact of the description style on the audiences understanding (H1). Comprehension scores were graded using the marking scheme where one point was awarded for each correct answer. A higher score would show better comprehension for a single audience member. There was no significant difference in comprehension scores between the two groups. The hypothesis, H1, stated that the style of audio description has no effect on the blind and low vision audience's ability to understand the show's plot, characters, or setting cannot be rejected.

Figure 4 and Table 1 shows the mean comprehension scores and standard deviations (SD) for each episode. The scores for the alternative style are consistently higher than those for the conventional style.

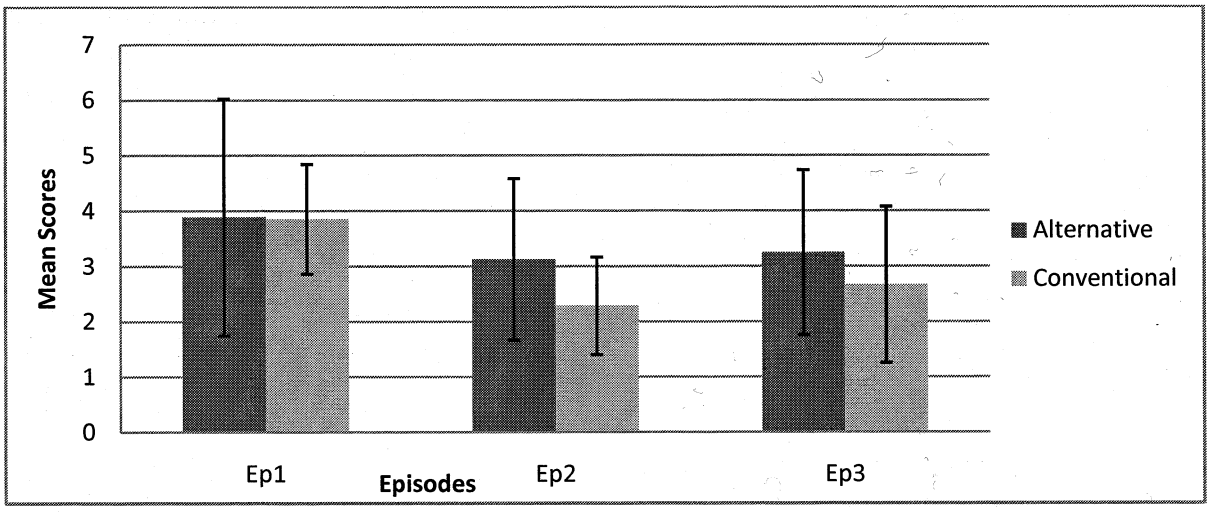


Figure 4: Mean and sd bars for comprehension scores

	Episode 1		Episode 2		Episode 3	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Alternative	3.89	2.14	3.13	1.46	3.25	1.49
Conventional	3.86	0.99	2.29	0.88	2.66	1.41

Table 1: Means and standard deviation for the Comprehension tests

6.1.1 Repeated measures analysis of understanding: H1 & H5

6.1.1.1 Comprehension scores: H5

A repeated measures analysis was performed on all six of the understanding variables from the post-episode questionnaires to determine whether there were any significant differences over time (H5). These analyses were used to evaluate significance between subjects (grouped by style) and within subjects (grouped by episode). The Mauchly's test of sphericity was not significant (p =.648) so the assumption of sphercity for this data holds. Of the understanding variables tested, only

two variables, the comprehension scores and a rating of whether the audio description provided adequate information to understand the plot, provided significant results from either the univariate or multivariate analyses.

The univariate analysis of the comprehension scores did not reveal any interaction between the comprehension scores and the style of audio description. However, there was significance across the three episodes for the whole group [$F(2, 14) = 4.247$, $p=.026$]. From the trend analysis there is a significant trend [$F(2, 14) = 5.466$, $p=.038$]. Examining the mean scores for understanding (see Figure 4), it appears that both groups preformed best on the episode 1 test, regardless of order, and worst on the episode 2 tests, with episode 3 test scores falling somewhere in the middle (see Table 1 for means and standard deviation). Since each group watched the episodes in a different order; this trend is not an effect that occurred over time; thus, the hypothesis (H5) cannot be rejected for understanding. Rather, it seems that episode 1 was more memorable than the others. An analysis of the means as depicted in Figure 5 shows that there is a noticeable difference between episode 1 and 2, and an even more noticeable difference between episode 1 and 3.

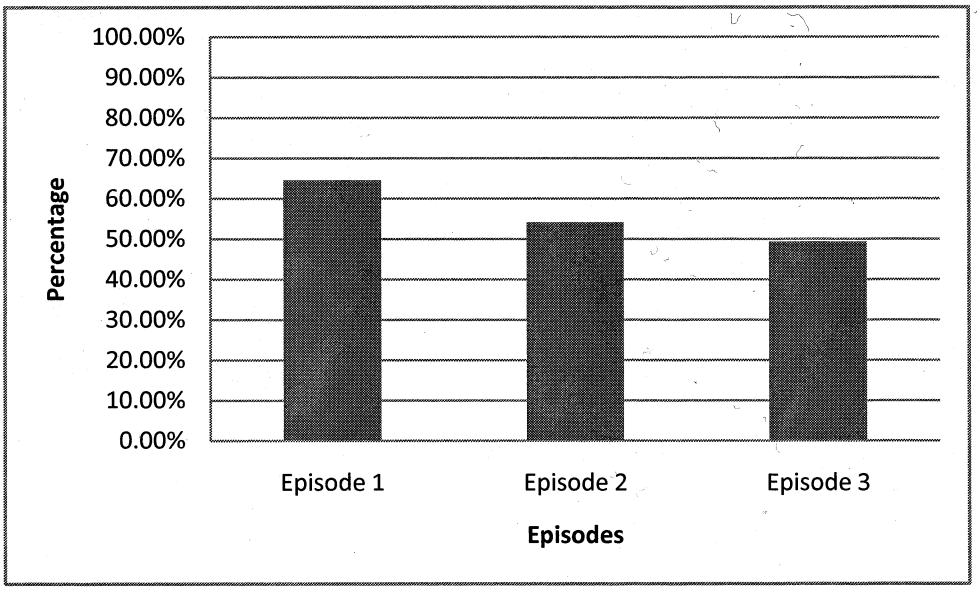


Figure 5: Percentage of correct answers for both styles

6.1.1.2 Information leads to understand the episode: H1 & H5

The rating of whether the audio description provided enough information to understand the plot obtained from the questionnaire showed significant interaction between understanding and style in the multivariate [F (14, 2) = 5.26, p=0.03] and univariate [F (14, 2) = 3.817, p = .021] tests. However, this analysis did not meet Mauchly's Test of Sphericity (p = .025). As a result, the Greenhouse-Geisser analysis was used and this test also indicated a significant interaction [F (14, 1.34) = 5.68, p=.04].

This variable was rated on a 5-point Likert where 1 was strongly agree (the best), 3 was neutral, and 5 was strongly disagree (the worst). These findings allow for the rejection of the hypothesis H1 or that the audio description style seems to have an impact on understanding. As Figure 6 illustrates, the AG's rating of this variable is consistently higher in comparison to the rating by the CG, across all episodes.

The trend analysis of this variable also revealed significant differences in understanding over time [F (14, 1) = 7.440, p = 0.33]. Figure 6 shows the mean and standard deviation of scores for this variable across the episodes for AG and CG, where a lower mean score indicates a more favourable rating. In Figure 6, there is an improvement over time for the AG group. Participants in the AG reported gaining more information from audio description as they watched more content using the alternative style. Keeping in mind that the conventional group watched the episodes in a different order (episode 3, 2, 1), there is a noticeable worsening of the ratings between episode 3 and 1 but not between 2 and 3. This shows that there is some improvement over time but this change may be a result of some external factor, rather than time. These findings allow for the rejection of the null hypothesis, H5 so that understanding changes over time. It seems that the audio description style has an impact on the perception of understanding. Although there is some improvement in the ratings for CG for the last episode viewed, improvement for AG is significantly better.

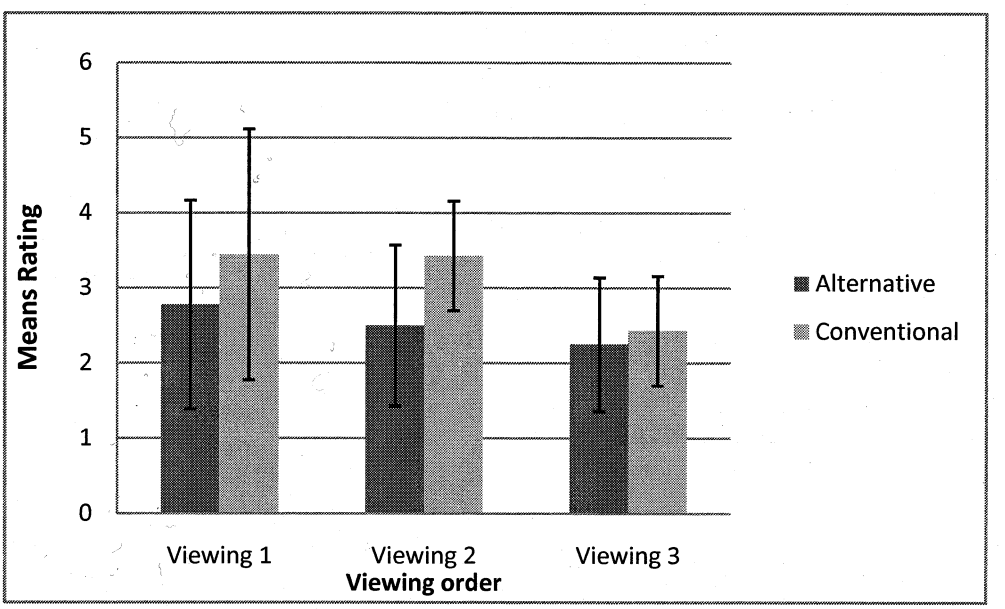


Figure 6: Means ratings and sd for information that leads to understanding

6.2 Effects on trust: H2

6.2.1 Post-study findings: H2

To test the effects of the audio description style on the audience's ability to trust the information provided by the narrative script (H2), two variables from the post-study questionnaire were examined, the perceived change in trustworthiness of the audio description and the overall trustworthiness in comparison to the audio description currently available on television. A Mann-Whitney test for change in trustworthiness and the overall comparison with standard description showed no significance between description styles for trusting the information for either question. As such, the hypothesis, H2, that the style of audio description does not affect the audience's ability to trust the narrative script cannot be rejected.

The mean and standard deviation of these ratings are shown in Figures 7 and 8, where a rating of 1 was more trustworthy (the best), 3 being equally trustworthy (neutral) and 5 was less trustworthy (the worst). Figure 8 shows that viewers in the CG found the information provided by the conventional style became more trustworthy (mean =1.857, sd =.99) across the episodes (4 of the 7 participants suggested that the audio description became much more trustworthy, with the remaining 3 suggesting it remained the same). Although for the AG the information provided by the alternative style became slightly more trustworthy it was to a lesser extent than those in the CG. 2 of the eight participants (25%) in the AG stated that the audio description became much more trustworthy, while1 participant rated the trustworthiness as slightly better, 1 participant rated it as staying the same, 2 participants rated it as becoming slightly less

trustworthy, with the final participant suggesting it was much less trustworthy over time. This distribution resulted in the AG's mean being close to the neutral rating (mean = 2.88, sd =1.458).

However, compared with the standard audio description as seen on television (the CG group viewed this style), the AG group ranked the trustworthiness as better than the standard (mean = 2.0, sd = 0.76) while the CG rated it as having similar level of trustworthiness (mean = 2.75, sd = 1.09).

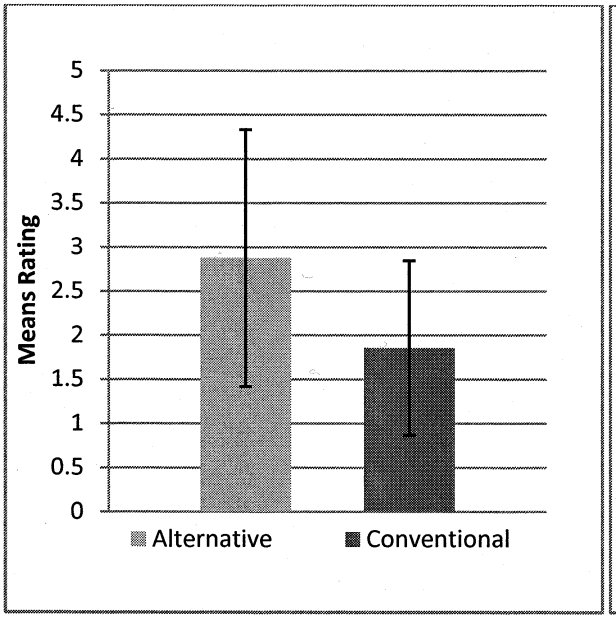


Figure 7: Perceived Change in Trust

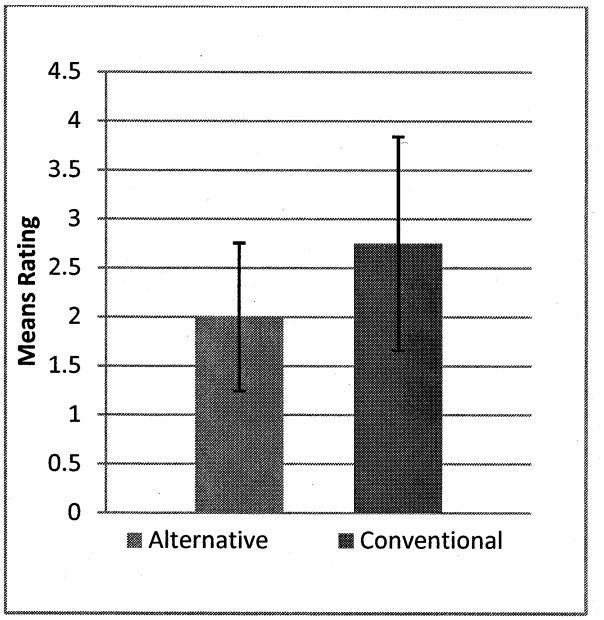


Figure 8: Trust compared to Standard on Television

6.2.2 Repeated-measures findings for trust H5

A repeated measures analysis was also performed for the ratings of the trustworthiness of the audio description style to determine if there was any difference over time (H5). A Greenhouse- Geisser analysis revealed no significant results for the effect of this variable over time. The hypothesis that trustworthiness of audio description is not affected by time cannot be rejected. This variable was rated on a 5-point Likert where 1

was very trustworthy (the best), 3 was neutral and 5 was not trustworthy at all (the worst). As Figure 9 illustrates, the trustworthiness of the audio description remained fairly consistent for the AG, while the CG showed a slight increase over time. In addition, CG group consistently provided a higher rating of trustworthiness in comparison to the AG group.

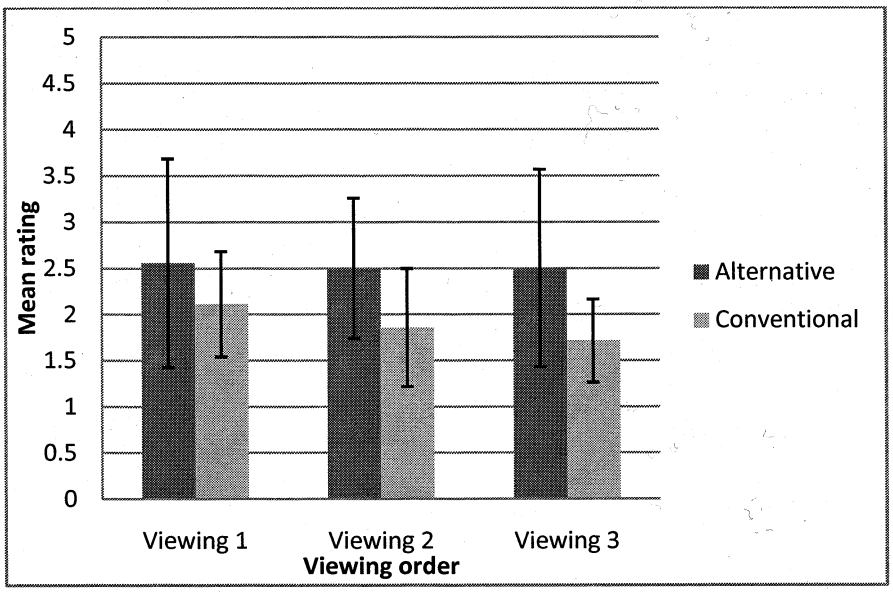


Figure 9: Mean and sd trustworthiness over viewings.

6.3 Effects on entertainment experience: H3& H5

In order to investigate H3, the effects of audio description style on the entertainment experience in the audience, responses to questions related to enjoyment from the post-study, and post-episodes questionnaires were used.

6.3.1Post-study responses to enjoyment: H3

Mann-Whitney tests for audience ratings of overall enjoyment, the perceived change of enjoyment, and the enjoyment of Odd Job Jack between styles showed no significant

differences. The hypothesis, H3, that audio description style has no effect on entertainment based on these variables cannot be rejected.

However, if we examine the audience's ratings of their overall enjoyment of the show compared to what they normally watch, their perceived change in enjoyment over the episodes and whether they liked Odd Job Jack there are some surprising results (see Figures 10, 11 and 12). Responses were provided on a scale from 1 to 5, where a rating of "1" indicates that the experience of watching the show was very enjoyable (the best), a rating of 3 was equally enjoyable (neutral) and five was not enjoyable at all (the worst).

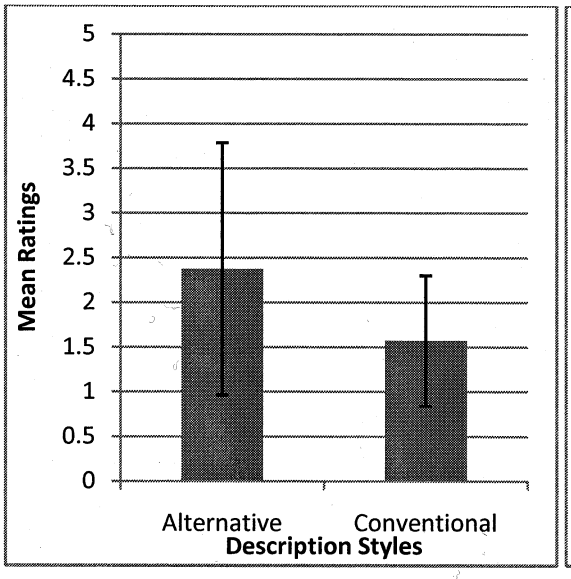


Figure 10: Means and sd for perceived enjoyment

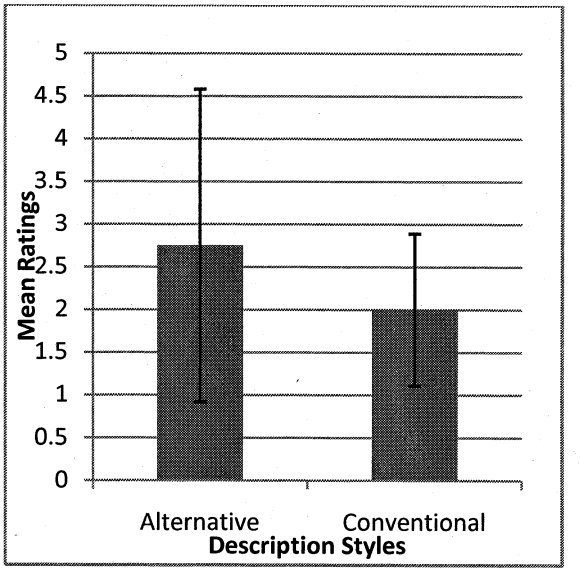


Figure 11: Means and sd for enjoyment compared to standards on television

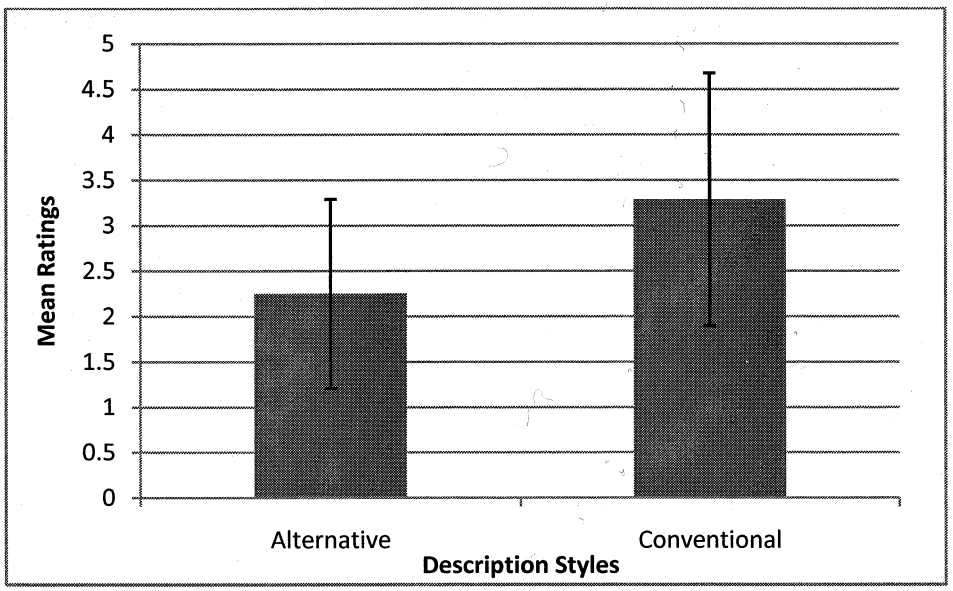


Figure 12: Mean and sd of enjoyment ratings of Odd Job Jack

In the case of the overall comparison, the CG group rated the style of audio description to be more enjoyable (2 out of 5 stating it was much more enjoyable, with 1 suggesting it was somewhat more enjoyable, and 2 suggesting it was equally enjoyable) in comparison with the standard audio description on television even though they were watching the standard audio description style (mean = 2.0, sd =0.89).

From the post-study questionnaire, the CG group ratings also indicated that they perceived the level of enjoyment over time as increasing. Four of the 7 participants responded that audio description quality was much more enjoyable, with 2 suggesting it was somewhat more enjoyable and 1 person stated that the enjoyability of the episodes didn't change (mean =1.57, sd = 2.38). However, they found the show, Odd Job Jack, to be just less likable in comparison to the AG (see Figures 13 and 14 for a comparison of likability of OJJ between CG and AG). In fact, in the CG group one participant left after two episodes stating that he "could not bear to watch another episode".

The AG rated the perceived enjoyment over time (mean = 2.38, sd = 1.46) and the overall comparison (mean = 2.75, sd = 1.089) as worse than the CG (as described above). Yet, the AG group rated the enjoyability of the show itself (mean = 2.25, sd = 1.04) much higher than the CG group. In fact, Sixty-two percent of the alternative group stated that they liked the *Odd Job Jack*, with only 13% saying they disliked it and the remaining 25% stating they were neutral. To illustrate this difference Figures 13 and 14 show the distribution of responses for each category' from the CG and AG, respectively.

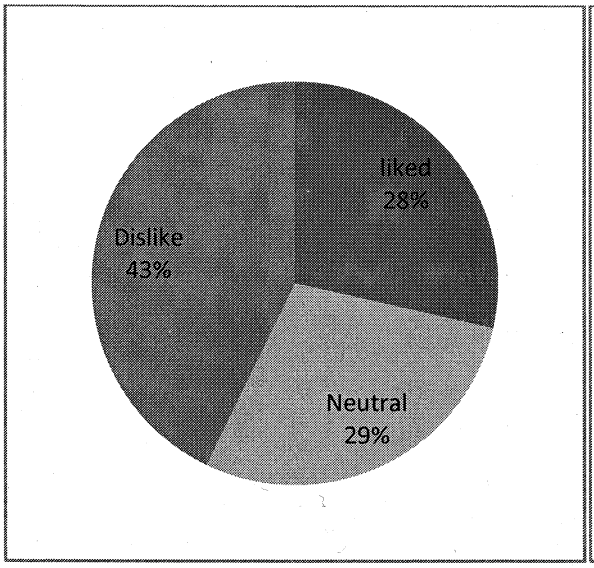


Figure13: Distribution of likeability responses for the conventional groups

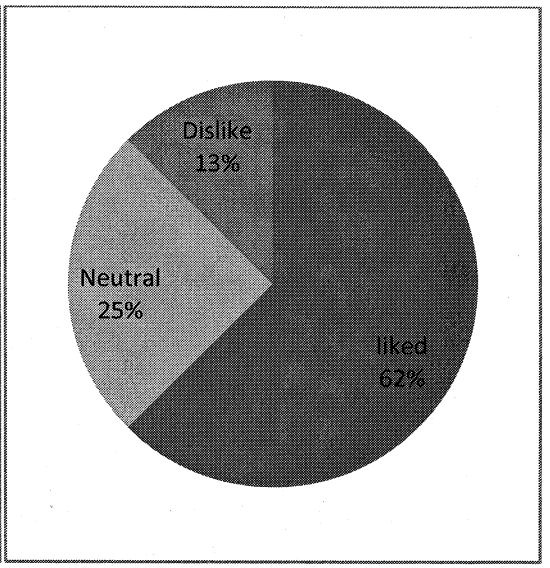


Figure 14: Distribution of likeability responses to Odd Job Jack for alternative group

6.3.2 Enjoyment findings from post-episode: H3

To investigate whether there were changes in enjoyment or the experience of flow (H3), the ratings for enjoyment of each episode, as well as ratings from two questions that measured flow, an altered sense of time, and distractibility, were used from the post-episode questionnaires. Mann-Whitney tests showed that there was a significant

difference for altered sense of time between CG and AG, for episode 2 (U (15) = 9, p=0.02) and for episode 3 (U (17) = 15, p=0.04). For distractibility and enjoyment there were no significant differences between CG and AG in any episode. We are able to reject the hypothesis, H3, for flow but not for enjoyment.

Figure15 shows the mean and standard deviation of enjoyment for each episode in the order they were viewed. Enjoyment was rated on a 5-point Likert where 1 was very enjoyable (the best), 3 was equally enjoyable (neutral), and 5 was not enjoyable at all (the worst). It seems that enjoyment became progressively worse for the AG group while it improved over time for the CG group.

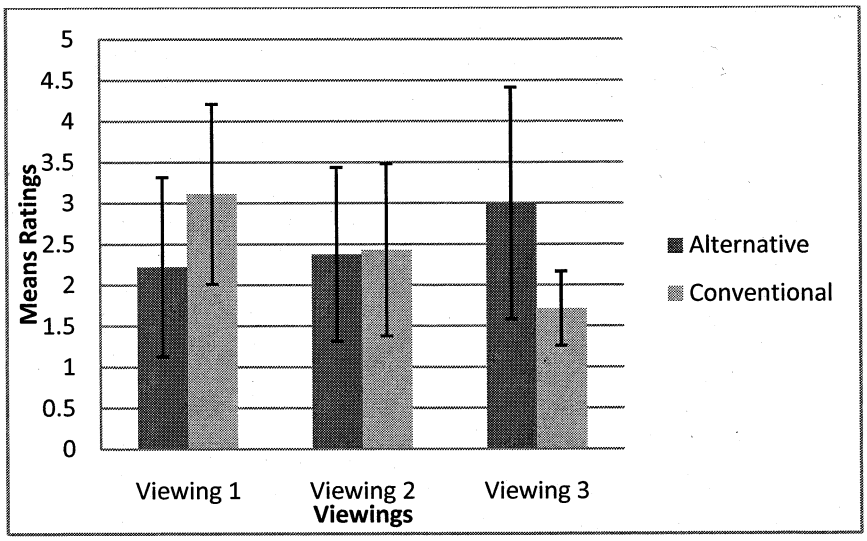


Figure 15: Mean scores and sd for enjoyment across viewings

Figure 16 illustrates the mean and standard deviation of the audience's agreement with the show's ability to alter their sense of time. This variable was rated on a 5-point Likert where 1 was strongly agree (the best), 3 was neutral, and 5 was strongly disagree (the worst). It seems the CG group did not experience much sense of altered time while

the AG group did, especially for the first and second viewings. However, for the CG group there was an improvement in this variable for the third viewing (episode 1).

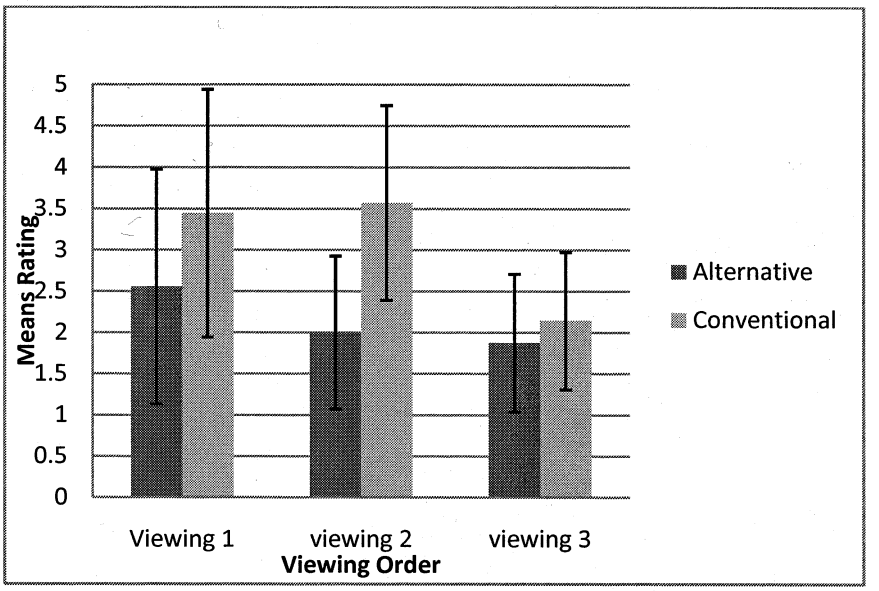


Figure 16: Mean ratings and sd for altered sense of time across viewings

Figure 17 shows the mean and standard deviation for the audience's level of distraction of the audio description. This variable was rated on a 5-point Likert where 1was strongly agree (the best), 3 was neutral and 5 was strongly disagree (the worst). It seems that episode 2 has a lower level of distractibility for the AG and CG, while episodes 1 and 3 are at a similar rating.

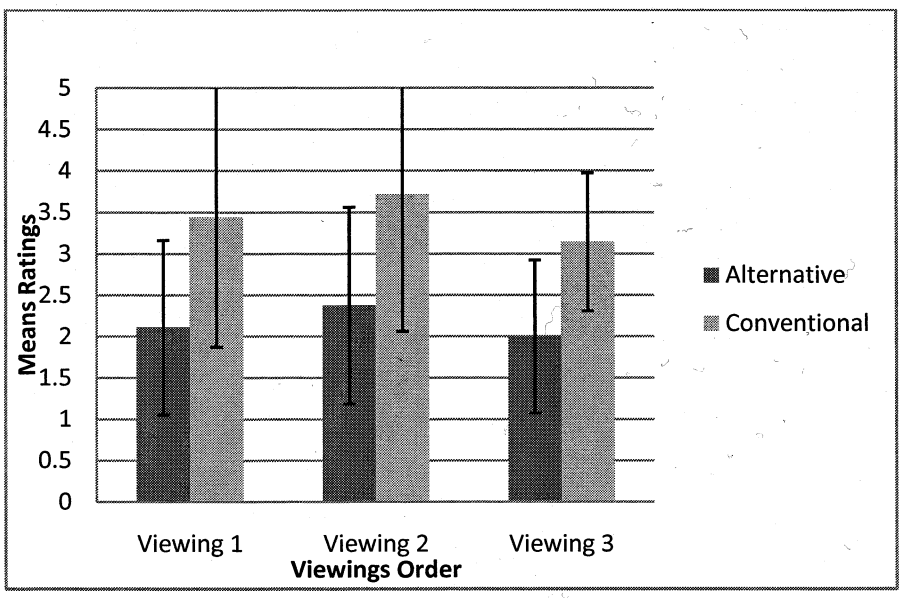


Figure 17: Mean ratings for experience of distractions across viewings

6.3.3 Repeated Measures Analysis of Entertainment: H5

A repeated measures analysis was performed on the variables that to examine the audience's entertainment experience to assess differences over time (H5). Table 2 lists the variables that showed significance from the univariate and multivariate analysis. Mauchly's test for sphericity was not significant for any of the variables listed in table two, therefore they follow the sphericity assumption. There were three variables that showed significance across the episodes: ranking of whether the audio description provided the audience member with enough information about the show for them to enjoy it, and both of the flow variables, altered sense of time and distractibility.

Factor	(Multivariate or Univariate)	Interaction with style	Df	F	p
Information Leads to Enjoyment	Multivariate	No	2	4.562	0.036
Distractibility	Multivariate	No	2	4.18	0.045
Altered Sense of Time	Multivariate	Yes	2	4.9	0.030
Altered Sense of Time	Univariate	Yes	2	6.759	0.05

Table 2: Significant Entertainment results from repeated measures testing.

Factor	df	F	p
Information Enjoyment	1	9.310	0.010
Altered Time vs. Style	1	6.655	0.024
Eliminate Distractions	1	9.019	0.011

Table 3: Trending analysis for entertainment experience

6.3.3.1 Information enjoyment: H5

A multivariate analysis of the participants' opinion of whether the information provided by the audio description allowed them to enjoy the show indicated that there were significant findings across the episodes. However, there was no significant interaction between this variable and the style of audio description. There was a significant trend for this variable (see Table 3). The mean ratings for this variable as seen in Figure17 show episode 2 has the lowest rating for both styles. This variable was rated on a 5-point Likert where 1was strongly agree (the best), 3 was neutral and 5 was strongly disagree (the worst). Given that the episodes were viewed in different order, it is likely

that the effect is related to the episode itself; as such, the hypothesis H5 enjoyment of the show will not improve over time cannot be rejected.

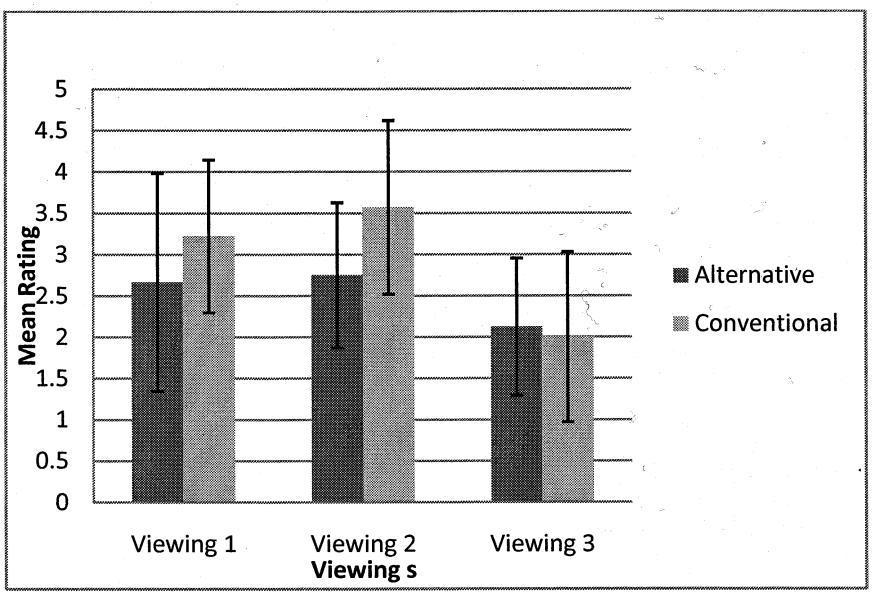


Figure 18: Mean and sd scores for information leads to enjoyment

6.3.3.3 Elimination of distraction: H5

Similar to both of the other entertainment variables, the multivariate, repeated measures test revealed significance for the elimination of distraction for both audio description styles (see Table 2). In addition, there is quadratic trend (see Table 3). Figure 18 shows the means and standard deviation of distractibility for all episodes. It shows that episode 2 was rated the lowest or easiest to be distracted. This finding provides additional evidence that episode 2 is less enjoyable because of some factor in the episode rather than the order in which was seen.

It would seem that the distractibility and the information that leads to enjoyment are related because as a result of the audience having lower quality information about the

show they were not able to concentrate and become as involved in the episode. However, there is no evidence that it is due to one specific audio description style or effects over time; as such, H5 cannot be rejected.

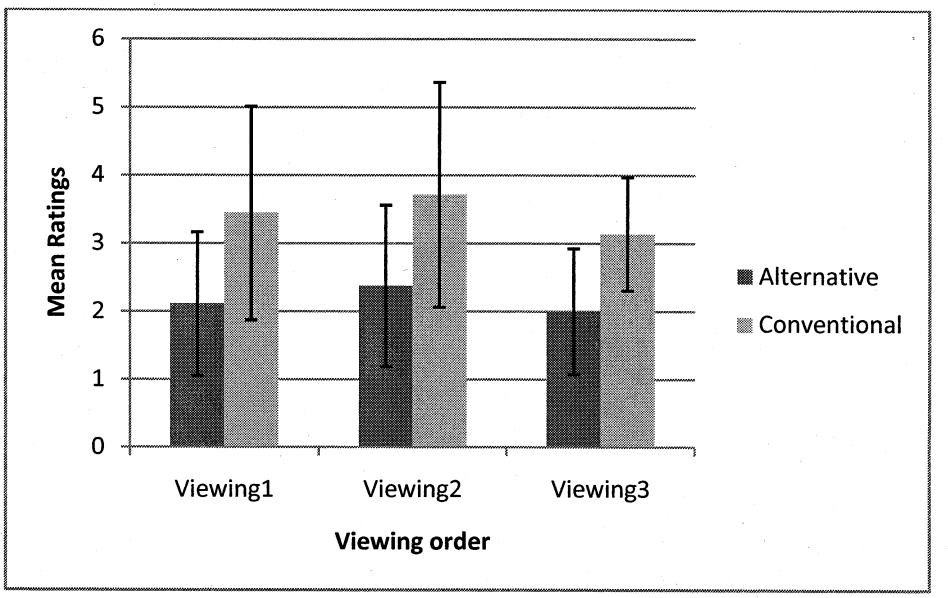


Figure 19: Mean ratings and sd for distractibility by viewing

6.3.3.4 Alteration of time: H3& H5

In contrast to the other significant findings from the repeated measure analysis of the entertainment experience, the alteration of time is the only variable to reveal significance across the univariate and multivariate tests as well as an interaction with the style of audio description (see Table 2). Figure 19 represents the mean ratings and standard deviation over time for each episode. This variable was rated on a 5-point Likert where 1was strongly agree (the best), 3 was neutral and 5 was strongly disagree (the worst). Figure 19 shows that there is a large difference in the ratings between episodes 2 and 3 (See Table 4 for means and standard deviation)

Group	Episode 1		Episode 2		Episode 3	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Alternative	2.55	1.42	2.0	0.93	1.88	0.84
Conventional	2.14	0.83	3.57	1.18	3.44	0.83

Table 4: Means and standard deviations for altered sense of time for Episodes 1-3

The ratings from AG become stronger across episodes from mean = 2.55 and sd = 1.42 for the first viewed episode to mean = 1.88 and sd = 0.84 for the last episode. There appears to be an interaction between entertainment experience and the style of audio description where the AG group had a more positive entertainment experience than those in CG. Figures 19 and 20 also indicate that there is a slight increase in this variable over time. Based on these results both hypotheses, H3 and H5, can be rejected for the altered sense of time flow variable.

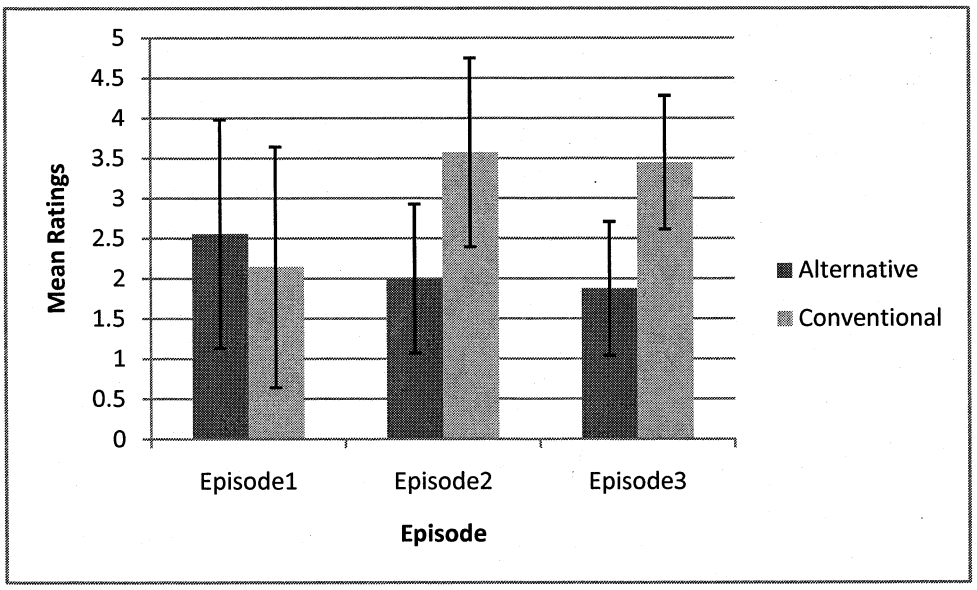


Figure 20: Mean and sd of ratings for altered sense of time across episodes

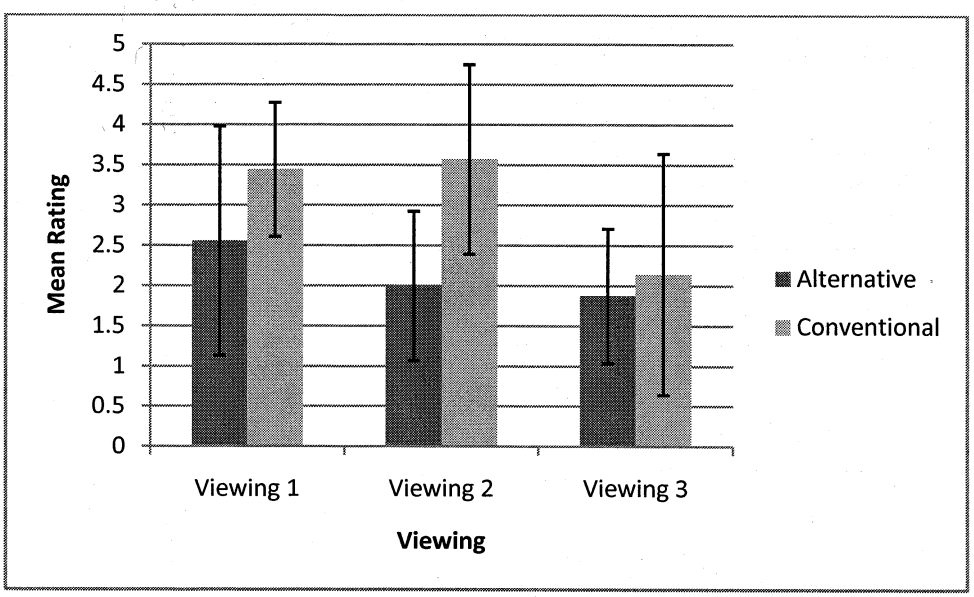


Figure 21: Mean and sd of ratings for altered sense of time across viewing

6.4 Audience's audio description preference: H3

The final hypothesis tested was whether the audience preferred one of the audio description styles for use in television and films, H4. Only the AG ratings were used as the viewers in this group were the only participants with experience of both audio description styles (alternative for the study and experience with conventional description from watching television at home).The participant was asked to choose between the conventional style, the alternative style or an untested style as their preference. The participants who chose the untested approach were stating that they wanted a third description option that was, as yet, unavailable. Figure 21 shows the number of participants that chose each style. The conventional and alternative approaches were preferred by two participants each. Three participants stated that they would prefer a third approach.

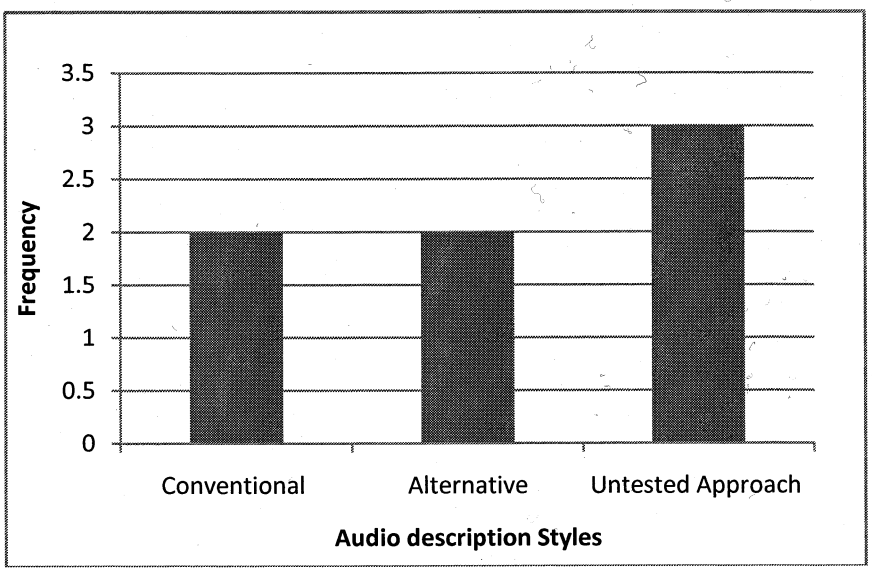


Figure 22: Frequency of ratings for three different audio description styles

7. Discussion

There were some surprising results from this study and some that were expected. Five hypotheses were developed to explore the three research questions in this thesis. Two of five hypotheses were rejected based on my analysis, and three could not; this will be further expanded and discussed in the next sections.

7.1 Research question 1: Preferences forsStyle among the blind and low vision audience (H4)

The blind and low vision audiences had no obvious preference regarding the audio description style. In fact, the group of eight participants who had experienced both styles (alternative and standard) were generally divided evenly with two (25%) participants preferring conventional, two the alternative style (25%), and three participants an untested approach (37.5%). This seems contradictory to the results found by Fels et al. (2006a) who reported that three times as many participants preferred the alternative method of audio description in comparison with the conventional method. One (12.5%) participant in my study refused to answer this question, stating that he could not make a fair judgment because he did not have enough experience with the alternative style of audio description. This statement introduced another interesting question; was viewing three episodes sufficient for the novelty effect to dissipate so that participants could assess their preferences?

There was, however, a significant difference in the ratings of enjoyment for each episode where episode 3 was rated as the least enjoyable (mean = 3, sd = 1.41). From the recorded discussion after the study, some insight was gained as to why people had

preferences for certain episodes. There were multiple complaints from the participants about the sound quality in episode 3. It is important to consider the possible impact that the poor audio quality had on the audience's opinion of the alternative audio description style. Neuman, et al., (1991) found that shows with poor audio quality were perceived to be less enjoyable than those with good quality regardless of content. The audio quality of a show may then have the greatest impact on preferences rather than other factors such as description style and style of the show.

However, it can be very difficult to balance two audio tracks particularly when using a copy of the master tape. The alternative audio description for episode 3 was produced after the show had been mastered while episodes 1 and 2 were produced during the original mastering process so that there was better control over volume levels. In addition, producing audio description was a new experience for the company who made Odd Job Jack and episode 3 was their first episode produced with audio description.

For the conventional description, all of the descriptions were made by the same professional description company, two at the same time and one earlier, from a copy of the master. There may have been more consistency. However, unless researchers are prepared to produce audio description directly and have the knowledge and resources to do so, it may be difficult to have much control over the volume level factor.

Another issue that may explain these preference results is attributes of the show itself. One participant who preferred the conventional style commented that English was his second language and that the pace of the alternative description was too fast. The cultural content of the show was also unfamiliar to him. From this participant's statements and comprehension scores I would suggest that the participant did not fully

understand the concept of the show. This is a situation where the challenge of following the audio description, and probably the narrative of the show, was likely overwhelming for the participant and interfered with his flow experience and resulting enjoyment of the show.

There is likely a strong relationship between a person's ability to understand and follow the context and narrative of a show with their ability to understand and appreciate the audio description. This will then affect their ability to evaluate the enjoyability of the audio description as an entity separate from the show. This could also be one of the reasons that the participants chose a preference for an untested approach.

Future researchers need to be aware of this issue and include this variable in their study or exclude those who are not fluent in the English language and culture. However, with the limited number of blind and low vision participants, a preferable solution may be to include first spoken language as a possible factor for correlation with the enjoyability, performance and flow data. If the sample size is small it might be preferable for the investigator to perform interviews with the participant to determine if there was a language barrier and whether it influenced the participant's ratings.

The first research question was to determine the preference of the blind and low vision viewer. The data from this study seem to indicate there is no obvious preference regarding audio description style and actually had a preference for another, as yet, unproduced style. It is possible that neither of the styles used in my study followed the universal design principle of being flexible for use regardless of preferences. It is also possible that participants did not have enough experience or time to become accustomed to the alternative style. Additional longitudinal studies are required that

allow viewers to take the necessary time to become familiar with the different styles. Only then can we be confident that the results are free from potential novelty effects.

7.2 Research question 2: impact on understanding (H1, H5)

The investigation of comprehension scores provided one measure of evaluating differences in a participant's level of understanding of the show between the different audio description styles. The results of this study showed that the AG group consistently had a higher mean score on the comprehension tests than the conventional group; however, these differences were not statistically significant. The better performance on the comprehension tests by the AG was most likely a result of their increased enjoyment of the show (mean = 2.25, sd = 1.04) over the CG group (mean = 3.286, sd = 1.385). People were likely better able to concentrate and pay attention to the show as a result of their enjoyment, which then could translate into a better understanding of it. The results from the post-episode questionnaire provided some evidence that the alternative style did have a positive impact on the level of understanding. As the episodes progressed, the AG reported that audio description narrative provided significantly more information about the plot to aid their understanding in comparison to the CG. In addition, the alternative group's rating of this variable improved with each episode (episode 1 mean = 2.778, sd = 1.394; episode 2 mean = 2.5, sd = 1.069; episode 3 mean = 2.25 sd = 0.886). This increase may be due to a learning or novelty effect - as the viewer watches more content that uses the alternative style of audio description, they become more accustomed to this style, less distracted by the newness of it, and are able to gather more information from the audio description narrative. This finding from the subjective results is somewhat supported by the comprehension test

results but not statistically. As the viewer becomes more comfortable with the style of audio description, they may perceive it as providing them with better information. Whether or not this translates to better performance on comprehension tests may not be as important as increases in the perceived understanding value. Only two participants in the study had any experience with audio description which means that for most participants audio description in any style was new and this may have affected their ability to construct meaning from the audio description and original audio track of the show. As people become more comfortable with audio description, their ability to understand the information may increase regardless of the style.

From this analysis, it is evident that there is a trend showing that the alternative style of audio description can provide a better level of understanding for the blind and low vision viewers. Further research with more subjects is required to determine whether this trend is predictable and becomes statistically significant.

7.3 Research question 3: Impact on trustworthiness (H2)

Although there was no significant difference between AG and CG for trustworthiness ratings, there is some evidence that the alternative style was more trustworthy (mean = 2, sd =.76) than conventional audio description (mean = 2.75 sd = 1.09) in general. However, the alternative group also found the audio description to become less trustworthy over time (see Figure 8), and was rated lower in each episode (see Figure 9). While the latter evidence supports the results found by Fels et al. (2006a) who reported that viewers found first person description to be rated as less trustworthy than conventional description, the former evidence refutes it.

One of the factors that could have negatively affected the trustworthiness of the content was audio quality. For example one participant stated in the discussion following the study that the first two episodes were very trustworthy, but the third one was "dreadful", therefore he was forced to provide a lower rating for trust and entertainment value. The third episode for the AG group had poorer sound quality than the first and second episodes as explained in Section 7.1. The sound levels were not mentioned as problematic by the CG group. It would then seem that even though one of the episodes was rated as having poor trustworthiness in the AG group, the episodes with alternative descriptions were more trustworthy than the episodes with standard descriptions.

In addition, the comprehensibility of the content could play an important role in affecting the trustworthiness of the audio description. If the information provided to the audience does not allow people to gain an adequate understanding of the plot, characters, and setting, then the information may not be as trustworthy. In this study, the AG, although not statistically significant, had a superior level of comprehension for the three episodes (as discussed in Section 7.2). These results then suggest that there is a trend for the alternative style of audio description to be more trustworthy, a surprising finding.

Further research is required to determine the level of impact that variations in sound quality of the audio description/original sound track mix has on the trustworthiness and comprehensibility of television and film content. In addition, examining the relationship between trustworthiness and comprehension may shed some light on the reasons for these results. Finally, further research is required to determine how important trustworthiness and comprehensibility are on the overall experience of the content by viewers.

7.4 Research question 4: Impact on entertainment experience (H3, H5)

In this study, entertainment experience was measured using three variables that asked participants to rate their general enjoyment and their level of two flow variables, distractibility and having an altered sense of time.

There was a significant difference between groups for the variable related to having an altered sense of time. Csikszentmihalyi (1991) contends that when users are in a state of flow they lose their sense of time, so that several hours could pass in what seemed to be mere minutes. The AG group reported having a stronger sense of loss of time (Episode1 - mean = 2.56 , sd = 1.42; Episode 2 - mean = 2.0, sd = 0.93; Episode 3 - mean = 1.88, sd = 0.84) than the CG group (Episode1 - mean = 2.14 , sd = 0.83; Episode 2 - mean = 3.57 , sd = 1.18; Episode 3 - mean = 3.44, sd = 1.50). Six participants in the AG group reported that time passed quickly in all three episodes while only two participants in the CG reported this. This seems to indicate that people in the AG were more likely to achieve a state of flow as defined by having a loss of sense of time. In addition, as the study progressed and the AG watched more episodes, this alternation of time variable was rated higher (see figure 21). This would indicate that as AG became more comfortable with the style of audio description they were able achieve a deeper state of flow as defined by having a loss of sense of time.

Based on the theories explained in the literature review regarding the responsibility of the creative team, the result that AG is more entertaining was expected. By having the production team creates the entire piece of art with a singular focus (providing entertainment) there would be more unity and cohesion within the episodes. This unity

draws the audience into the episode, helping to induce flow, and create a more entertaining experience.

Although the other flow variable designed to measure entertainment, distractibility, did not have significant differences between groups, the descriptive data show that there is a trend as indicated in figure 17 in section 6.3.2 whereby the AG group reported a more positive entertainment experience and had less distraction. The AG rating of distractibility was consistently higher in comparison to CG. Again, this finding wasn't unexpected based on the film and flow literature in section 2. The alternative style provides a more seamless and unified show, which allows the audience to become more involved in the storyline and the reality of the show. As the audience becomes more involved in the show they become less aware of their own reality, hence other distracting thoughts do not enter consciousness.

Participants were asked to rate their enjoyment of *Odd Job Jack* on the premise that if the audio description provided a better entertainment experience, the audience would be more likely to enjoy the show. For the enjoyment ratings, 62% of the AG group liked the show, 13% of the audience disliked the show, and the other 25% were neutral. While for the CG group, 28% liked the show, 43% disliked it, and 29% of audience was neutral towards it. This seems to indicate that the AG group enjoyed the episodes with alternative description more than the CG group enjoyed the same episodes with standard description

During the discussion group one participant provided a possible explanation for this finding. He stated that at home he would never watch an adult cartoon because the humour was far too visual for him to enjoy it, yet he was able to enjoy it with this style of

audio description. Although he did not indicate why he thought this would be the case for him, I would suggest that by having the humour and emotion driving the audio description, he was able to achieve a better entertainment experience and have improved levels of understanding.

The enjoyment ratings in the post-study questionnaire, although not significantly different, could have been affected by the order in which the participants viewed the episodes. The alternative group watched episodes in one order (episode 1, 2, and 3), while the conventional group watched in the episodes in the reverse order. Although the enjoyment ratings between the groups were similar for each episode, the alternative group watched the least enjoyable show last and it was fresher in their mind when answering the post-study questionnaire. This could have influenced the participant's rating of enjoyment in the AG group.

In addition, the entertainment experience could have also been negatively affected by the sound quality issues of episode 3 as described in Section 7.1. Based on Neuman et al.'s (1991) study, which examined the impact of sound quality and the perceived quality of the television show (with only sighted viewers); it is possible that the poor sound quality of third episode of *Odd Job Jack* negatively affected the ratings of enjoyment in the AG group.

During the discussion group, there was an interesting topic that was brought forth by one of the fully blind participants. She indicated that the current style of audio description has a negative effect on the enjoyment of television by her sighted relatives. She mentioned that some of these sighted relatives would not watch television with her when the audio description channel playing as they found it diminishes the

entertainment value of the show too much. This can then leave the blind person in an untenable quandary because if she wants to watch the program she must do it alone, or without audio description; both alternatives may not be acceptable. In this case, the principle of universal design of being marketable and usable for everyone regardless of ability seems to be disregarded. The participant then stated that she believed that the alternative style would not have the same negative effect on her sighted relatives, allowing her to watch television with them. Although, in my study sighted participants were not included because it was important to first determine that the alternative audio description provides adequate service to the blind and low vision viewers. If the alternative style was not suitable for the blind and low vision user then it would not qualify under the equable use principle of universal design, making it pointless to evaluate with sighted participant. Further research examining the enjoyment levels of sighted and blind audiences would now be recommended and useful.

7.5 Summary of discussion

This study presented in this thesis allowed me to evaluate the impact that variations in the style of audio description had on multiple factors of comprehension, trustworthiness, enjoyment and flow. Although some variables did not produce statistical significance between alternative and conventional description styles, there was some evidence that the comprehension level and trustworthiness of the alternative audio description increased overtime. In addition, comprehension and trustworthiness were higher for the alternative audio description. These trends indicate that further research with a larger sample size would be useful and may strengthen these trends to show that

indeed there is statistical support showing that alternative description is more trustworthy, understandable and enjoyable than conventional description.

However, the stated preferences by the participants assigned to AG did not indicate a preference for either style of audio description. In fact, 37.5% of people in the study said they would prefer an untested approach. This may be because neither the alternative nor the conventional approaches were satisfactory.

The only research question to be answered with significant findings was the impact of the alternative style on the entertainment value of the show was measured using two flow variables as identified by Csikszentmihalyi as being critical to the experience of being totally immersed in the environment or task. The results point to the alternative style of audio description providing a more entertaining experience for the blind and low vision audience and that participants experience flow more readily with the alternative description style. It would seem like a good next step to examine whether these findings can be replicated for other content from different genres and whether it can be sustained longitudinally.

8. Limitations

Although my study took strides in eliminating many of the limitations that plagued previous research such as evaluating entertainment and using full episodes (which help to eliminate the novelty effect found in Fels et al. (2006a) study), there are still several factors that must to be addressed in order to enhance the generalizability of the results.

The small sample size of the audience remains the most prominent limitation of my study. The study consisted of 18 participants, with only 14 participants completing the entire study. As a result, I was required to use non-parametric statistical analyses. Some trends were identified through these analyses and the descriptive data but the generalizability of them is weak at best. I was also unable to carry out statistical analyses on the distribution of the answers to questions as a result of the low numbers. It is difficult to find blind and low vision people who are interested in participating in research. CNIB (2008) reports that only 2.5% of the population in Canada is classified as blind or low vision and that translate into a very small subject pool in the Toronto area. However, in order to provide more compelling support of the advantages and disadvantages of various audio description styles more generalizable findings are necessary. New studies with larger number of participants or perhaps a within subjects approach might assist in gaining a sufficient sample size.

In addition to the small sample size, the distribution of the participants by gender and vision level was not balanced. This was due to the random assignment of participants to the audio description style groups when they arrived for the study. I did not know with certainty how many people would attend the study so I was only able to randomly assign people to groups based on when they arrived. As a result, there was an

unbalanced representation of people with the various vision status demographics and there was insufficient numbers to determine whether there was a correlation of the findings with vision status. The alternative style group had five totally blind, two legally blind, and two low vision participants; while the conventional style group had two totally blind, five legally blind participants and two low vision participants. To determine whether demographic variables significantly affect the opinions or preferences of audio description, future studies should attempt to recruit sufficient numbers in each demographic group and have a more even distribution among the categories.

In addition to the unbalanced representation of vision status, my study also suffered from a misalignment of the average age with the target audience of Odd Job Jack (ages 18 – 35). This is a significant issue when studying audio description, because the blind and low vision population is typically skewed to the older age ranges (Packer & Kirchner, 1997).

Another limitation of my study was that I only used one show, Odd Job Jack, an adult cartoon comedy that would fall into the same genre as *South Park* or *Family Guy*. Although the show can be funny for some, it can also be interpreted by others as offensive humour, potentially having an impact on their enjoyment regardless of the style of audio description. In fact, three people left the study early because they found the show offensive. In addition, most of the people in the study did not fit the target demographic for the show, being male between the ages of 18 and 35. As already mentioned, finding enough participants who are blind or low vision is already a difficult task. Most people who are blind or low vision are older people (reference) making the

task of finding appropriate numbers of participants in a younger target demographic even more challenging, in fact, highly unlikely.

Odd Job Jack was the only television show currently using the alternative style of audio description, and so it was my only option. I would suggest that further research use different genres of content. The preference and enjoyment ratings, performance and flow data may be very different for the two audio description styles.

In fact, this is the second study to use *Odd Job Jack*, and have similar positive results. It could be the case that the creative team who developed the audio description narrative for *Odd Job Jack* have an ability to produce high quality audio description, which is not shared amongst the entire television and film industry. As such, future studies must evaluate different programs across multiple genres and with different production houses. In order to gain access to this new audio description material, production companies must be convinced of the benefits that they will receive from using the alternative process, this issue will be further discussed in the future directions section.

Another limitation of this study was the administration of the three episodes. Initially, I wanted to try and simulate how the episodes would be viewed on television, one per viewing over multiple sessions (e.g., weeks) in a regular television viewing setting. The online study was designed to allow that to happen. However, people seemed to be unwilling to complete the entire study online or invest the time that was necessary without any incentive. As a result, I changed my strategy to use a group, face-to-face environment and people were asked to watch all three episodes in the same sitting.

The participants were located in a classroom for two hours and were asked to watch three consecutive episodes with short breaks in between for filling out questionnaires and other activities. This environment is different from how television is normally consumed as well. In general, television is watched at one's home, either alone or with close friends or family; and it is unusual that people would watch multiple episodes of a television that they had not seen before in one sitting. Recreating this experience would likely change the results because people would be more relaxed and have more time to process and become accustomed to the audio description styles.

In addition to the difference in viewing experience, it would be optimal if the participants within the groups could watch the show in different orders. In my study, the participants in each group watched the show together and the episodes in the same order, which likely biased my results. The alternative style audio described episode three had very poor sound quality and was watched last. The negative impression as a result of this technical difficulty was most recent in people's minds when they completed their final evaluation. This may have led the alternative style group to answering the questionnaire differently than they might have if the sound quality was better. It is important to attempt to control for the level of production quality for all materials, however, that can be very difficult to achieve especially when materials are often produced by different people and at different times, particularly true for the first person audio description style.

Another limitation of my study was that the comprehension questions were constructed by a sighted researcher. I may have inadvertently used visual cues to develop the questions, possibly making it more difficult for a blind participant to answer.

Having a blind researcher or educator participate in the development of comprehension questions based on her understanding of the show from the audio description may mitigate this concern for future research.

Another significant limitation of my study is that I only evaluated two of the five basic uses for television. Future research should expand the selection of television programs to include more shows from different genres, so that the cognitive and personal integrative aspects could be evaluated. In addition, future researchers should evaluate how the different styles of audio description impact the social integration aspect of watching television by having a group setting more representative of how people normally watch television together. It is important to determine whether the alternative style audio description provides blind and low vision viewers with the same confidence and ability to discuss the film or television show with sighted peers as was found by Kirchner and Schmeidler (2001).

A final limitation to my study was that volunteers were required to read all of the survey questions to the participants and fill-in or check off answers as directed by the participants. The online study was designed for participants to complete the surveys themselves using their own customized computer-based assistive technology. The group setting did not allow for use of computer-based technologies for answering the survey questions because 1) most computer-based assistive technology is not mobile; and 2) sound levels in the room would be unbearable with so many screen readers being used (although using headphone could be an option). Allowing participants to complete the study instruments independently is important to not introduce any biases

from the researcher in the discussion or reading of the survey questions and to ensure participants can be confident of the privacy of their answers.

9. Future directions

In addition to my discussion on the limitations of my study, I have found that there is ample opportunity for future research directions; some have been identified in the Discussion section. I believe that I have contributed some useful and interesting data and some evidence to support the hypothesis that the alternative style of audio description provides a better entertainment experience for blind and low vision viewers.

Another direction that I believe is worth investigating relates to the business of creating and marketing audio description products. As part of this investigation, supports and processes that would enable production companies to create audio description, and adopt a different modus operandi for audio description are also required. I suggest that there are two main factors that could help to instigate this investigation: 1) examining the business models and opportunities for audio description; and 2) impact on corporate responsibility objectives.

In Section 4, an alternative business model was proposed where the production companies market entertaining versions of audio description to sighted users for multiple purposes. This would require the producers and broadcasters to consider creating, launching, and sustaining a new product, audio television (similar to the audio book). In order to determine if this is a viable option, market research into possible uses for the product with sighted customers is required, as well as, an in depth analysis of the audio book industry, and the likelihood of profitability.

I would argue that the production of the alternative style of audio description would be no different than the production of DVD extras, and it would actually open up a new revenue stream for the production studios to compete in the audio book industry.

The second possible driver of this new direction comes from the recent emphasis on the importance of corporate social responsibility (CSR). When a company practices CSR they are attempting to balance "economic, environmental, and social imperatives while at the same time addressing shareholder and stakeholder expectations" (Industry Canada, 2007, paragraph 1). Is it corporately responsible for production companies to create audio description narratives that are unsatisfactory? To answer this question, one must analyze this issue through a corporate social responsibility framework.

10. Conclusions and recommendations

At the beginning of this study, I set out to compare blind and low vision participants' levels of understanding, trust and entertainment between the alternative style of audio description introduced by Fels et al. (2006b) and the current convention of the audio description industry over a longer term exposure. Ultimately, I wanted to determine which style of audio description was preferred by the blind and low vision community. Four research questions were formulated in an attempt to address this research goal:

1. Which style of audio description is preferred by blind and low vision viewers?
2. What is the impact of first person audio description on the understanding of the show's plot, setting and characters?
3. Does the viewer trust the information provided by the first person approach?
4. What is the impact of audio description style on entertainment experienced by blind and low vision viewers?

The current style of audio description uses third person narration and is produced independently from the production it is describing. The conventional idea is to provide as much visual information as possible without emotion or interpretation. The alternative style of audio description uses character driven/first person narration, produced by the production team. The main purpose behind audio description to provide entertainment; thus, it can include subjective information and emotions.

I also chose to examine the current style of audio description through the framework of the universal design paradigm, which revealed that the conventional \audio

description contravenes several of the universal design principles. This provided yet another reason as why alternative methods of audio description are necessary.

In order to answer the research questions posed, I evaluated both styles of audio description with blind and low vision audiences. Two groups of participants watched three different episodes of *Odd Job Jack.* One group watched the alternative style and the second group watched the conventional styles of audio description. Eighteen blind and low vision participants were recruited in the study (16 in person, and 2 online) and only 14 participants completed it.

Participants viewed either all episodes using the alternative style or the conventional style. Participants were asked to complete five questionnaires during the study, a pre and post-study questionnaire as well as three post-episode questionnaires (one for each episode). The post-episode questionnaire also included a set of comprehension questions about each episode. At the completion of the study, there was a brief group discussion for those who wanted to participate. The purpose of the discussion was to gain greater insight into the blind and low vision viewers' opinion of audio description as well as their suggestions or concerns about the alternative style. This also provided them a forum to explain some of their questionnaire answers in detail or voice any concerns they had about the study.

Non-parametric statistical analyses and descriptive data analysis were applied to the questionnaire results. The data were analyzed in order to answer the research questions as stated above. Thus, there was progression made in determining the impact that variations in the style of audio description had on the above four factors.

The analysis of the findings indicated that both the understanding and the trustworthiness levels of the alternative audio description increased over time for the alternative audio description. This increase of approval over time is indicative of the novelty effect. This trend suggests that as the viewer becomes more accustomed to the alternative style of audio description she is able to trust it more and derive more information from the description. Overall, there was also a trend to indicate that alternative style provided better understanding, and was more trustworthy in comparison to the conventional audio description.

. The examination of the entertainment experience provided the most promising results as both the evaluation of the means and the statistical analysis indicated that the alternative style of audio description provided a more entertaining and enjoyable experience for the audience. However, this trend needs to be examined in future research with a larger sample size in order to generalize these findings.

The final variable analyzed was the audience's preference for audio description style. Only the AG was used in this analysis as they are the only participants to experience both styles. However, this analysis revealed no significant findings, and the preference for audio description style was spread across the three choose fairly evenly (2 preferred conventional, two preferred alternative, and 3 preferred an untested approach). Thus, from these findings there was no distinct preference amongst the audience.

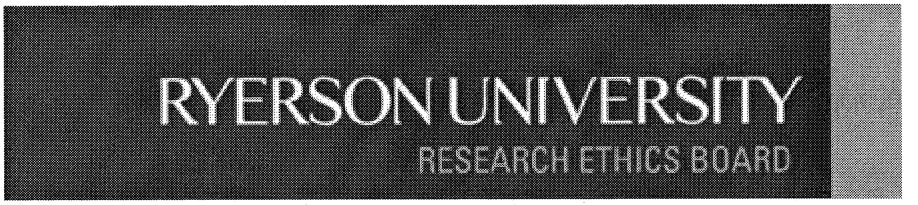
There were a number of limitations that had an impact on my study. The small number of participants turned out to be one of the major limitations of my study, which ultimately limited the generalizability of my results. In addition, only one type and genre of show was used, the episodes were viewed in an unnatural setting, and participants

had to watch them in one sitting. This may have negatively affected the preference and enjoyment results.

Future research should attempt to add new genres such as drama, sitcom, action, and documentaries that have been produced with the alternative and conventional styles. These studies must also be performed over a longer period of time (weeks), in a more natural viewing environment, and with a broader and more equal balance of participant types and characteristics such as age and gender. This will allow researchers to gain a better understanding of the impact of audio description style on blind, low vision and sighted audiences. However, the research presented in this thesis points to some of the advantages and disadvantages of each style of audio description and that alternatives are workable and possible.

Future research must explore the financial feasibility of creating and distributing content containing the alternative style of audio description. In addition, there could be an argument made that by producing poor quality audio description, film companies are not living up to the standards set by corporate social responsibility (CSR) and the goals of universal design. These issues could be analyzed through a CSR framework to help answer these questions, and to help drive change and adoption of this new style of audio description

Appendix A : Ethics Review



To: John Riccio

Re: REB 2008-089: A Longitudinal Study Comparing Alternative Audio Description Methods

Date: May 5, 2008

Dear John Riccio

The review of your protocol REB File REB 2008-089 is now complete. The project has been approved for a one year period. Please note that before proceeding with your project, compliance with other required University approvals/certifications, institutional requirements, or governmental authorizations may be required.

This approval may be extended after one year upon request. Please be advised that if the project is not renewed, approval will expire and no more research involving humans may take place. If this is a funded project, access to research funds may also be affected.

Please note that REB approval policies require that you adhere strictly to the protocol as last reviewed by the REB and that any modifications must be approved by the Board before they can be implemented. Adverse or unexpected events must be reported to the REB as soon as possible with an indication from the Principal Investigator as to how, in the view of the Principal Investigator, these events affect the continuation of the protocol.

Finally, if research subjects are in the care of a health facility, at a school, or other institution or community organization, it is the responsibility of the Principal Investigator to ensure that the ethical guidelines and approvals of those facilities or institutions are obtained and filed with the REB prior to the initiation of any research.

Please quote your REB file number (REB 2008-089) on future correspondence.

Congratulations and best of luck in conducting your research.

Nancy Walton, Ph.D.
Chair, Research Ethics Board

Appendix B: Pre-Study Questionnaire

This purpose of this questionnaire is to gather information about you and your opinions about the current state of audio description. It should take you about ten minutes to complete this questionnaire. Thank you in advance for your time and assistance.

1. Gender :
   - ❑ Male
   - ❑ Female

2. Age
   - ❑ 18 -29
   - ❑ 30-39
   - ❑ 40-49
   - ❑ 50-59
   - ❑ 60 and older

3. What is your last completed level of education
   - ❑ Post Graduate
   - ❑ University Degree
   - ❑ College Diploma
   - ❑ High School Diploma
   - ❑ Less than High school

4. What is your level of vision impairment?
   - ❑ Totally blind
   - ❑ Legally blind

- ❑ Low vision

5. Which of the following television shows do you enjoy watching (please select all that apply)?
   - ❑ Lost
   - ❑ Desperate Housewives
   - ❑ The Office
   - ❑ Odd Job Jack
   - ❑ Family Guy
   - ❑ Steven Colbert
   - ❑ Simpsons
   - ❑ King of the Hill
   - ❑ American Dad

6. How often do you watch television without audio description?
   - ❑ I don't watch television
   - ❑ One to two hours per week
   - ❑ Two to four hours per week
   - ❑ More than four hours per week

7. How often do you watch television WITH audio description?
   - ❑ I don't watch television
   - ❑ I never watch television with audio description
   - ❑ One to two hours per week
   - ❑ Two to four hours per week
   - ❑ More than four hours per week

8. How satisfied are you with the current quality of audio description on television?
   - ❑ Satisfied
   - ❑ Somewhat Satisfied
   - ❑ Neither Satisfied nor Dissatisfied
   - ❑ Somewhat Dissatisfied
   - ❑ Dissatisfied

9. How satisfied are you with the current amount of audio description used in advertisements and commercials?
   - ❑ Satisfied
   - ❑ Somewhat Satisfied
   - ❑ Neither Satisfied nor Dissatisfied
   - ❑ Somewhat Dissatisfied
   - ❑ Dissatisfied
   - ❑ I have never heard audio description for advertisements or commercials.

10. Please describe the characteristics of good quality description for television.

Appendix C: Post-Episode Questionnaire

The purpose of this questionnaire is to gather your opinion of the audio description used in the episode of Odd Job Jack. There are 14 questions on this questionnaire, thus it should take you approximately 14 minutes to complete. Thank you in advance for your time and assistance.

1. Please rate the level of enjoyment of the audio description in the Odd Job Jack episode you watched.

    - ❑ Very Enjoyable.
    - ❑ Enjoyable.
    - ❑ Can't decide.
    - ❑ Not that enjoyable.
    - ❑ Not Enjoyable at all.

2. How trustworthy was the information provided to you through the audio description.
    - ❑ Very trustworthy.
    - ❑ Somewhat Trustworthy.
    - ❑ Can't decide.
    - ❑ Not that trustworthy.
    - ❑ Not Trustworthy at all.

3. Did the audio description provide adequate information about the plot?
    - ❑ It provided too much information about the plot.
    - ❑ It provided just enough information about the plot.
    - ❑ More information about the plot was needed.
    - ❑ The information provided was unsatisfactory.

4. Did the audio description provide adequate information about the setting?
    - ❑ It provided too much information about the setting.
    - ❑ It provided just enough information about the setting.
    - ❑ More information about the setting was needed.

- ❑ The information provided was unsatisfactory.

5. Did the audio description provide adequate information about the character describing the episode?
   - ❑ It provided too much information about the character
   - ❑ It provided just enough information about the character
   - ❑ More information about the character was needed
   - ❑ The information provided was unsatisfactory

6. Did the audio description provide adequate information about the other characters in the episode (besides the main character)?
   - ❑ It provided too much information about the characters
   - ❑ It provided just enough information about the characters
   - ❑ More information about the characters was needed
   - ❑ The information provided was unsatisfactory

7. Rate your level of agreement or disagreement with the following statement "I didn't notice the time when watching the episodes of odd job. The time seemed to pass quickly."
   - ❑ Strongly Agree
   - ❑ Agree
   - ❑ Neither agree nor disagree.
   - ❑ Disagree
   - ❑ Strongly Disagree

8. Rate your level of agreement or disagreement with the following "While watching Odd Job Jack I was able to forget about other aspects of my life."
   - ❑ Strongly Agree
   - ❑ Agree
   - ❑ Neutral
   - ❑ Disagree
   - ❑ Strongly Disagree

9. Rate your level of agreement or disagreement with the following " The audio description provided me with enough information to enjoy the show"
   - ❑ Strongly Agree
   - ❑ Agree
   - ❑ Neutral
   - ❑ Disagree
   - ❑ Strongly Disagree

10. Rate your level of agreement or disagreement with the following " The audio description provided me with enough information to understand the plot"
    - ❑ Strongly Agree
    - ❑ Agree
    - ❑ Neutral
    - ❑ Disagree
    - ❑ Strongly Disagree

11. Rate your level of agreement or disagreement with the following: "The style of the audio description allowed me to enjoy the show."
    - ❑ Strongly Agree
    - ❑ Agree
    - ❑ Neutral
    - ❑ Disagree
    - ❑ Strongly Disagree

12. Rate your level of agreement or disagreement with the following: "The style of the audio description helped me understand the show."
    - ❑ Strongly Agree
    - ❑ Agree
    - ❑ Neutral
    - ❑ Disagree
    - ❑ Strongly Disagree

13. Rate your level of like or dislike of the style of the audio description.
    - ❑ Like it very much
    - ❑ Liked it.
    - ❑ Neither liked it nor disliked it.
    - ❑ Disliked it.
    - ❑ Strongly disliked it.

14. Why did you like or dislike the style of video description as rated in question 13?

Appendix D: Post-Study Questionnaire

The purpose of this questionnaire is to gather your opinions about the audio description after watching all the episodes, and to understand if your opinion about the video description changed over the course of this study. There are 11 questions on this questionnaire, thus it should take you approximately ten minutes to complete. Thank you in advance for your time and assistance.

1. Rate the change in your level of enjoyment of the audio description for Odd Job Jack over all three episodes you watched. The audio description of Odd Job Jack:

    - ❑ Got more enjoyable with each episode.
    - ❑ Got somewhat more enjoyable.
    - ❑ Didn't change over the episodes.
    - ❑ Got somewhat less enjoyable.
    - ❑ Got a lot less enjoyable with each episode.

2. Rate the change in the level of trustworthiness of the information provided to you through the audio description over the three episodes.

    - ❑ Got more trustworthy over time.
    - ❑ Got somewhat more trustworthy.
    - ❑ Did not change over time.
    - ❑ Got somewhat less trustworthy over time.
    - ❑ Got much less trustworthy over time.

3. Over those three episodes, did the audio description provide better/worse quality information about the plot?

    - ❑ The quality of the information about the plot got much better over the three episodes
    - ❑ The quality of information about the plot got somewhat better over the three episodes
    - ❑ The quality of information about the plot was about the same for all three episodes.
    - ❑ The quality of plot information got somewhat worse over the three episodes

- ❑ The quality of plot information got much worse over the three episodes

4. Over those three episodes, did the audio description provide better/worse quality information about the setting?
   - ❑ The quality of the setting information got much better over the three episodes
   - ❑ The quality of setting information got somewhat better over the three episodes
   - ❑ The quality of setting information was about the same for all three episodes.
   - ❑ The quality of setting information got somewhat worse over the three episodes
   - ❑ The quality of the setting information got much worse over the three episodes

5. Over the three episodes, did the audio description provide better/worse quality information about the characters?
   - ❑ The quality of the character information got much better over the three episodes
   - ❑ The quality of character information got somewhat better over the three episodes
   - ❑ The quality of character information was about the same for all three episodes.
   - ❑ The quality of character information got somewhat worse over the three episodes.
   - ❑ The quality of the character information got much worse over the three episodes

6. When comparing the overall audio description style of Odd Job Jack to the conventional style of audio description on television, it is
   - ❑ More Enjoyable
   - ❑ Equally Enjoyable
   - ❑ Less Enjoyable
   - ❑ Neither style is enjoyable

7. When comparing the trustworthiness of the audio description style of Odd Job Jack in this study to the standard style of audio description, it is
   - ❑ More trustworthy
   - ❑ Equally trustworthy
   - ❑ Less trustworthy

- ❑ Neither technique is trustworthy

8. Did you enjoy Odd Job Jack
   - ❑ I really enjoyed it
   - ❑ I enjoyed it
   - ❑ I am neutral about it.
   - ❑ I disliked it
   - ❑ I disliked it very much.

9. If you had to recommend genres of television programming that could benefit from the style of audio description used in Odd Job Jack, which would you recommend?
   - ❑ Comedy
   - ❑ Drama
   - ❑ Mystery
   - ❑ Horror
   - ❑ Action
   - ❑ Commercials/advertisements
   - ❑ Educational
   - ❑ Romance
   - ❑ News

10. Which genres would you not recommend for the style of audio description used in Odd Job Jack?
   - ❑ Comedy
   - ❑ Drama
   - ❑ Mystery
   - ❑ Horror
   - ❑ Action
   - ❑ Commercials/advertisements
   - ❑ Educational
   - ❑ Romance
   - ❑ News

11. Rate your level of agreement or disagreement with the following: "I would pay an **extra** dollar for a television show or movie DVD if it used the same style of audio description as Odd Job Jack"
   - ❑ Strongly Agree
   - ❑ Agree
   - ❑ Neutral

- ❑ Disagree
- ❑ Strongly Disagree

12. Which style of audio description do you prefer to be used for television shows and movies?
    - ❑ Conventional Style
    - ❑ Odd Job Jack Style
    - ❑ An alternative style

13. Please provide us with a few general comments (both positive or negative) about your experience with audio description for Odd Job Jack.

Appendix E: Comprehension Questions Episode 3

The purpose of this questionnaire is to evaluate whether the audio description is providing you with strong understanding of the show's plot, and characters. There are seven questions on this questionnaire and it will take you approximately ten minutes to complete. Thank you in advance for your time and assistance.

1. Why does Leo go on the trip with Jack
   - ❑ Jack asked him to help drive
   - ❑ He likes a good time
   - ❑ His house was being raided by police
   - ❑ He likes wieners

2. What kind of car does Jack drive?
   - ❑ 1978 Chrysler Le Baron
   - ❑ Refrigerated Truck
   - ❑ A Wiener Mobile
   - ❑ Corvette

3. What happened when Jack visited Detroit?
   - ❑ He roasted wieners
   - ❑ Thugs stole his wieners
   - ❑ Jack won a wiener eating contest
   - ❑ Jack didn't visit Detroit

4. How did Jacks vehicle get across the cliff to the other side
   - ❑ He drove it really fast
   - ❑ His vehicle sprouted wings
   - ❑ Alien intervention
   - ❑ He didn't make it across

5. Who eats the special wieners
   - ❑ Jack
   - ❑ The Hitch Hiker
   - ❑ Bobby
   - ❑ Leo

6. What happened to Jacques when he and Jack were fighting?
   - ❑ Jacques falls down.
   - ❑ Jacques gets hit in the nose.
   - ❑ Jacques hits an underpass.

- ❑ Nothing happens.

7. Please Provide a brief synopsis of the Episode

-

Appendix F: Comprehension Questions Episode1

The purpose of this questionnaire is to evaluate whether the audio description is providing you with a strong understanding of the show's plot, and characters. There are seven questions on this questionnaire and it will take you approximately ten minutes to complete. Thank you in advance for your time and assistance.

8. Who wants to see the blue man group?
   - ❑ Jack
   - ❑ Dario
   - ❑ The children who are beating up Jack
   - ❑ Jack's fleas

9. What does Leo receive in the mail?
   - ❑ An eviction Notice
   - ❑ Letters from his mother
   - ❑ Flyers for free pizza
   - ❑ Magazines

10. Jack falls in love with a girl selling?
   - ❑ Mattresses
   - ❑ Leather Jackets
   - ❑ Mustard
   - ❑ Trips to Mexico

11. Why can't the character get out of the ape suit?
   - ❑ The zipper broke
   - ❑ If he takes off the ape suit he will get fleas
   - ❑ The ape suit impresses the ladies
   - ❑ His boss pays him more to wear it all the time

12. Who goes to Mexico?
   - ❑ Bobby and Leo
   - ❑ Dario and Jack
   - ❑ Jack and the Girl
   - ❑ The Alligator Mascot and The Girl

13. Why does Jack fight with the Alligator?
   - ❑ They both want the same job
   - ❑ They both want to date the same girl
   - ❑ Jack crossed the territory line
   - ❑ The Alligator thinks Jack doesn't deserve to be a mascot

14. Please Provide a brief synopsis of the Episode

-

Appendix G: Comprehension Questions Episode 2

The purpose of this questionnaire is to evaluate whether the audio description is providing you with strong understanding of the show's plot, and characters. There are six questions on this questionnaire and it will take you approximately ten minutes to complete. Thank you in advance for your time and assistance.

1. What kind of guitar does Jack play?
   - ❑ A double necked guitar
   - ❑ An acoustic guitar
   - ❑ Jack doesn't play guitar Leo does

2. In which country is Jack's career counselor in?
   - ❑ Canada
   - ❑ USA
   - ❑ India
   - ❑ China

3. What does the Magic talisman do?
   - ❑ Allows Leo to be comfortable in his own skin
   - ❑ Switches Leo and Bobby's brains
   - ❑ Gives Jack Magical Power
   - ❑ Nothing at all

4. Which of the following **DOES NOT** happen to Bobby while he is in Leo's body?
   - ❑ Burn's his hand
   - ❑ Plays Basketball
   - ❑ Gets chased by villagers
   - ❑ Dances on a hillside covered in flowers

5. What happens when Jack's assistants warn him against the dangers of his final trick
   - ❑ He cancels the show
   - ❑ He fires them all
   - ❑ He tricks the real magician into doing the trick
   - ❑ He just walks away

6. Please provide a Brief Synopsis of the episode

_____

Appendix H – Consent Information

Project Title:

Principal Investigator: John Riccio, Graduate Student, Ryerson, Masters of Management Science
(416) 979-5000 ext. 2522 or jriccio@ryerson.ca

Supervisor: Deborah Fels, P.Eng., Ph.D., Ryerson University
(416)-979-5000 ext. 7619 or dfels@ryerson.ca

Consent to Participate in Study from Subject

Information Form

The purpose of this study is to evaluate different styles of audio description, and to evaluate which of these styles provides the best entertainment experience for the audience. In order to do this, I ask that you watch three episodes of an animated comedy series called Odd Job Jack. Each of these episodes runs approximately 20 minutes long. Immediately after watching each episode you will be asked to complete a short survey. You are also asked to complete two additional surveys, one prior to the study and one at the conclusion of the study.

Confidentiality

All raw data will be kept strictly confidential; however a summary of the data will be published in academic venues but no individual details will be identified in this summary. Your email address will be recorded with participant ID for administration purposes. This list will be destroyed at the conclusion of the study. The information gathered from surveys will be strictly used for research and academic purposes with only the principal investigator and his supervisor having access to it

Risks and Discomforts

The risks associated with participating in this study are minimal. As part of measuring the value of audio description, you will be asked comprehension questions about the plot, and characters of the episodes. You may experience some frustration or stress if the questions become too difficult. However, you are able to take breaks at any time or even stop participation in the study without penalty.

Expected Benefits

Individual participants will receive $40 to cover travel expenses. This study will benefit the general community of audio description users. This study will test different styles of audio description that will assist in developing new practices for audio

description. We hope that this information may lead to improvements in audio description technologies and techniques.

Voluntary Nature of Participation:

Participation in this study is entirely voluntary. If you do not wish to participate in this study it will not affect current or future relations with Ryerson University or The Centre for Learning Technology. If you choose to participate, you have the ability to leave the study at any time and for any reason without penalty. In addition, you may refuse to answer any questions or participate in any task at any point of the study without penalty.

Questions about the Study:

If you have any questions or concerns, about this study please feel free to contact John Riccio at (416) 979-5000 ext. 2522 or Deborah Fels at 416.979.5000 ext. 7619. If you have any concerns or complaints about this study in regards to its ethical nature please contact the Research Ethics Board, c/o Office of the Vice President, Research and Innovation, Ryerson University, 350 Victoria St., Toronto, ON M5B 2K3, Tel: 416-979-5042

I have been informed of the alternatives to participation in this study, including my right not to participate and the right to withdraw without penalty. I hereby consent to participate in the study.

I agree (sign here) _____

I disagree (Sign Here)_____

Group Discussion Consent

At the completion of the post study questionnaire we will be holding a optional discussion group for all those who want to stay. This discussion will help to further our understanding of how you experienced the audio description, as well as offer you a venue to provide feedback and input. We will be recording this discussion using microphones, a mixer and Adobe Audition software. This recording will be transcribed, for further analysis. The information gathered from this transcription will be strictly used for research and academic purposes with only the principal investigator and his supervisor having access to it.

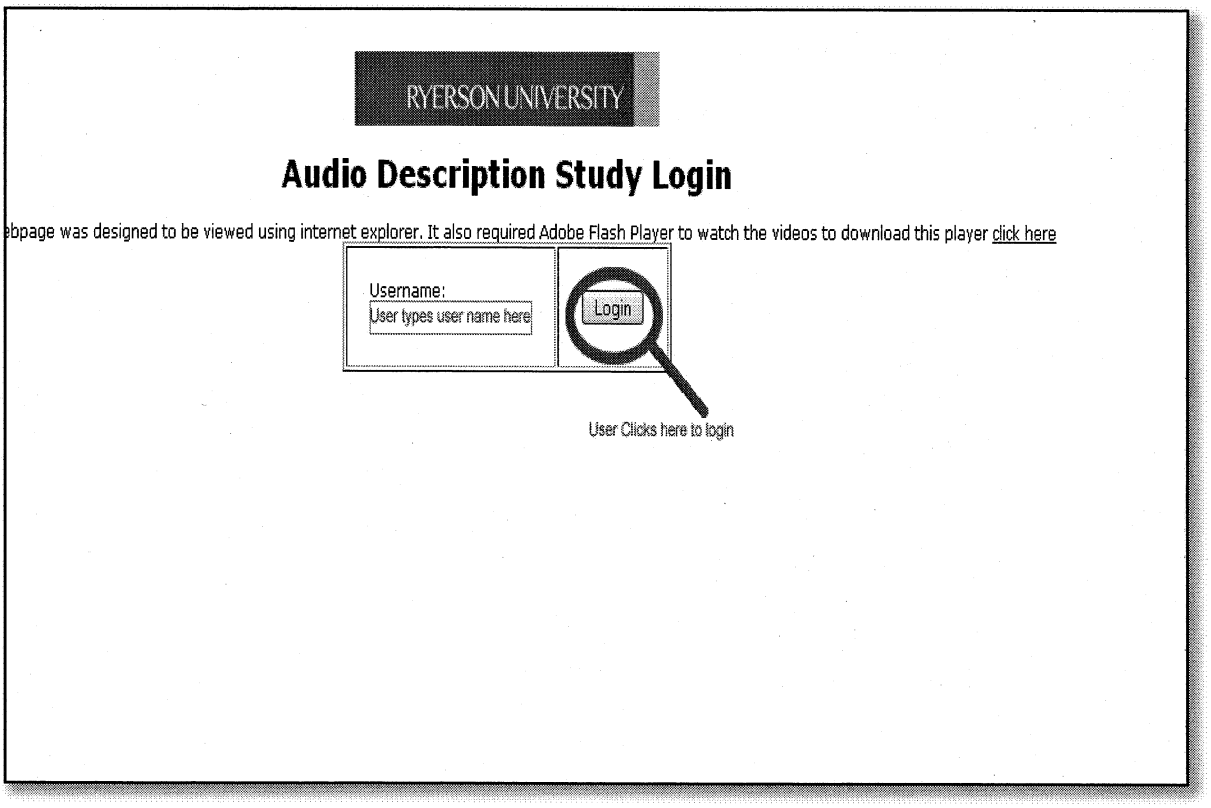
I have been informed of the alternatives to participation in discussion, including my right not to participate and the right to withdraw without penalty. I hereby consent to participate in the discussion and be recorded.

I agree (sign here)_____

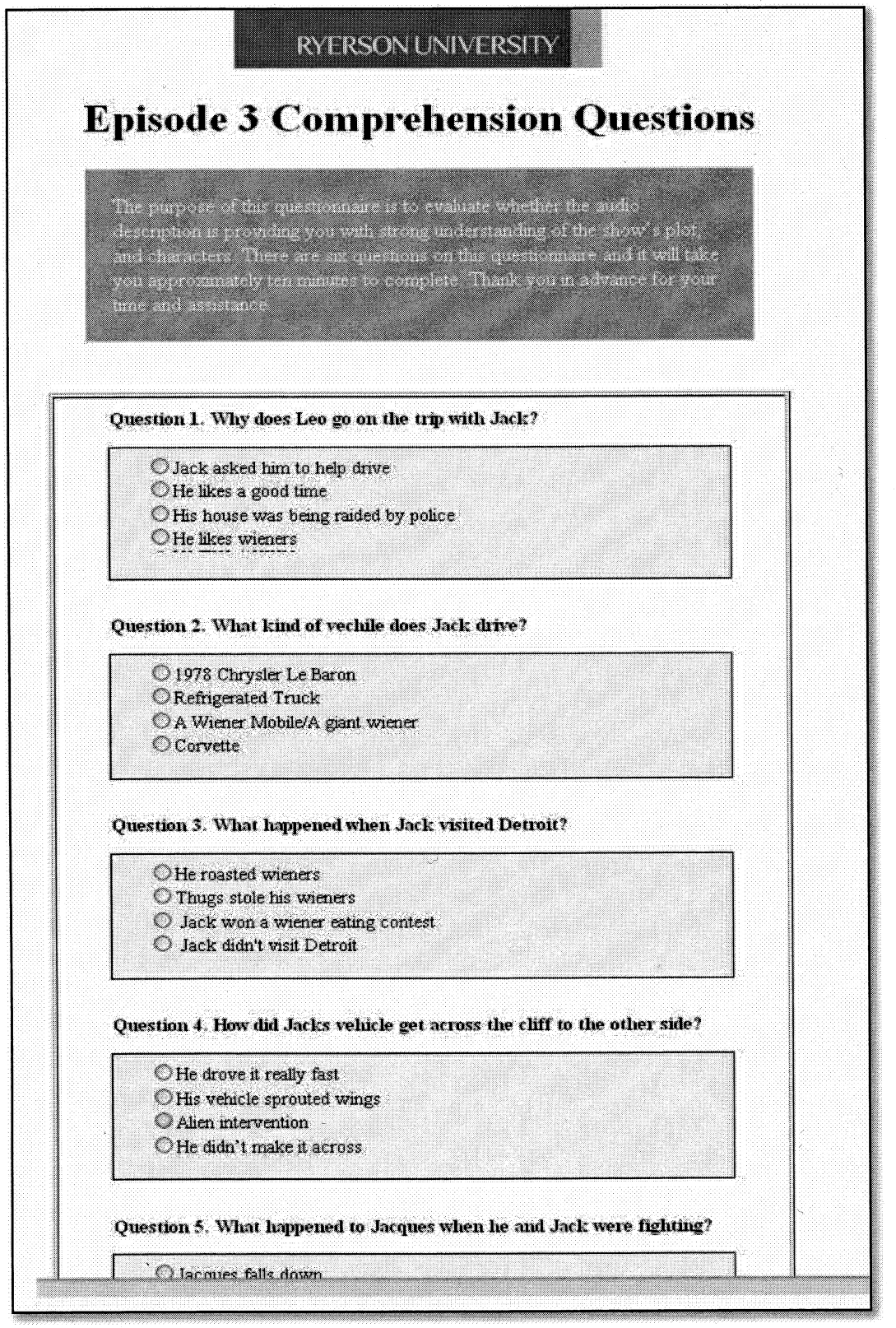
I disagree (Sign Here)_____

Appendix I Screen Prints

Log in



Quiz



RYERSON UNIVERSITY

Episode 3 Comprehension Questions

The purpose of this questionnaire is to evaluate whether the audio description is providing you with strong understanding of the show's plot and characters. There are six questions on this questionnaire and it will take you approximately ten minutes to complete. Thank you in advance for your time and assistance.

Question 1. Why does Leo go on the trip with Jack?

- Jack asked him to help drive
- He likes a good time
- His house was being raided by police
- He likes wieners

Question 2. What kind of vechile does Jack drive?

- 1978 Chrysler Le Baron
- Refrigerated Truck
- A Wiener Mobile/A giant wiener
- Corvette

Question 3. What happened when Jack visited Detroit?

- He roasted wieners
- Thugs stole his wieners
- Jack won a wiener eating contest
- Jack didn't visit Detroit

Question 4. How did Jacks vehicle get across the cliff to the other side?

- He drove it really fast
- His vehicle sprouted wings
- Alien intervention
- He didn't make it across

Question 5. What happened to Jacques when he and Jack were fighting?

- Jacques falls down

References

Audio Description International. (2003). *Audio Description Guildlines.* Retrieved June27th , 2008, from ADInternational.org: http://www.adinternational.org/ADIguidelines.html.

Audio Publishers Association. (2007). *Americans are tuning in to audio: Audiobook sales are on the rise nationally.* Retrieved May 21st, 2008, from Audio Publishers Association: http://www.audiopub.org/resources-industry-data.asp.

Baguley, T. (2004). An Introduction to Sphericity. Retrieved September 12, 2008, from University of Aberdeen: http://www.abdn.ac.uk/~psy317/personal/files/teaching/spheric.htm.

Baldwin, C. (2003). *Stage Direction.* Ramsbury: The Crowood Press Ltd.

Ball, W. (1984). *A Sense of Direction.* New York: Drama Book Publishers.

Benedetti, R. (1985). *The Director at Work.* Englewood Cliffs: Prentice-Hall Inc.

Brockett, O., & Ball, R. (2004). *The Essential Theatre.* Belmont: Thomson Learning: Wadsworth.

Burgstahler, S. (2008). *Universal Design Process, Principles and Applications .* Retrieved July 15, 2008, from University of Washington: http://www.washington.edu/doit/Brochures/Programs/ud.html.

CNIB. (2008).FQA. Retrieved September 3, 2008, from CNIB's Official Website: http://www.cnib.ca/en/faq/vision-loss/default.aspx#3.

Csikszentmihalyi, M. (1990). *Flow: The Psychology of Optimal Experience .* New York : HarperCollins Publishers.

Disability Arts in London. (2002). *Audio Description: Art or Industry?* Retrieved May 21, 2008, from Raina Haig's Official Website: http://rainahaig.com/index.php?id=55&tx_jppageteaser_pi1[backId]=2.

Fiske, J (1987). *Television Culture.* London: Routledge.

Fels, D., Udo, J. P., Diamond, J., & Diamond, J. (2006a). A comparison of Alternative Narrative Approaches to Video Description for Animated Comedy. *Journal of Visual Impairment & Blindess,100(5)* , 295-305.

Fels, D., Udo, J., Ting, P., Diamond, E., & Diamond, J. (2006b). Odd Job Jack Described: A universal design approach to described video. *Univ Access Info Soc* , 5(1)73- 78.

Haig, R. (2005). *Verbalising the Visual: The construction of meaning in audio description.* Retrieved June 27th, 2008, from RainaHaig.com: Http://rainahaig.com/index.php?id=60.

Hall, S. (2006). Encoding/Decoding. In M. Durham, & D. Kellner, *Media and Cultural Studies: Key works* (pp. 163-174). Malden: Blackwell Publishing.

Independent Television Commission. (2000). *Guidance on Standards for Audio Description.* Retrieved June 25th, 2008, from OfCom.org: http://www.ofcom.org.uk/static/archive/itc/itc_publications/codes_guidance/audio_description/Index.asp.html

Industry Canada. (2007). *What is CSR.* Retrieved August 20th, 2008, from Industry Canada Official Website: http://www.ic.gc.ca/epic/site/csr-rse.nsf/en/h_rs00094e.html.

Johnson, D., & Wiles, J. (2003). Effective affective user interface design in games. *Ergonomics* , 46(13-14), 1332-1345.

Jumisko-Pyykko, S. (2008). I would like to see the subtitles and the face or at least hear the voices: Effects of picture ratio and audio-video bitrate ratio on perception for quality in mobile television . *MultimeTools Appl* , 36(1-2), 167-184.

Katz, E., Gurevitch, M.,& Haas, H.(1973). On the use of the mass media for important things. *American Sociological Review*, 38, 164-181.

Kirchner, C., & Schmeidler, E. (2001). Adding Audio Description: Does it Make a Difference? *Journal of Visual Impairment & Blindness*, 95(4) ,197-212.

Kozloff, S. (1995). Audio Books in a Visual Culture. *Journal of American Culture,*18(4), 83-99.

Moerk, C. (2005). *The DVD's bonus feature creates stars of their own.* Retrieved June 12 2008, from International Herald Tribune : www.iht.com/articles/2005/04/03/business/dvds04.php.

Neary, L. (2005). *Heard Any Good Books Lately? An Industry Booms.* Retrieved May 21, 2008, from National Public Radio: http://www.npr.org/templates/story/story.php?storyId=4460548.

Neuman, W. R., Crigler, A. N., & Bove, V. M. (1991). Television and Viewer Perceptions. *9th International Conference: Television Sound Today and Tomorrow.* Audio Engineering Society.

Packer, J. & Kirchner, C. (1997). *Who's watching?* American Foundation for the Blind. Retrieved 15 November 2007 from http/www.empowermentzone.com/watching.txt.

Pettitt, B., Sharpe, K., & Cooper, S. (1996). *Audetel: Enhancing Television for visually impaired people*. Retrieved October 12, 2007 from *British Journal of Visual Impairment*: http://www.visugate.biz/bjvi/may1996/may1996.html

Pfanstiehl, M., & Pfanstiehl, C. (1985). The Play's the Thing: Audio description in the theatre. *The British Journal of Visual Impairment*. 91-92.

Preiser, W., & Ostroff, E. (2001). *Universal Design Handbook.* McGraw-Hill Professional.

Snyder, J. (2007). *Audio Description: The visual made verbal.* Retrieved June 27, 2008, from Audio Description.com: http://www.audiodescribe.com/about/articles/ad_international_journal_07.pdf

The Hollywood Reporter. (2003). *DVD Roundtable: Extra Extra.* Retrieved May 21st, 2008, from Hollywood Reporter. http://www.hollywoodreporter.com/hr/search/article_display.jsp?vnu_content_id=2043433.

VSA Arts Of Texas. (2007). *Audio Description for People who are Blind or have Low Vision*. Retrieved October 12th, 2007, from VSA Arts of Texas: http://www.vsatx.org/audio.html

Wall, J. (2002). *European Information society* . Retrieved October 11th, 2007, from European Commission: http://ec.europa.eu/information_society/topics/telecoms/regulatory/publiconsult/comments/barriers_to_widespread_access/anec3.pdf.