**Final Research Project Proposal Paper**

**The Effects of Ad Length and Age on Video Enjoyment**

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**Abstract**

Recently YouTube has implemented changes to how they showcase advertisements, even against the wishes of the content creators. Furthermore, the duration and quantity of advertisements have been steadily increasing. Years ago, users would only have to watch a quick 5 sec ad prior to a video. However, today, users have to sometimes have to watch two 15 sec video ads prior to a video. Video advertisements have led to user’s becoming more frustrated and impatient, prior to the video actually beginning. The goal of this paper is to run an experiment that will test the extent to which ads, and age, have an effect on the participant’s enjoyment of a video post-ad. The results will indicate if Ad duration and or age has an effect on enjoyment of a video, and to what extent.

**Introduction**

Video advertisements are the subject of this research. Specifically, YouTube video advertising, and how it effects a user’s enjoyment of a video, post-ad. According to a Nov 18, 2020 article on Forbes.com, by John Koetsier, titled, “*YouTube Will Now Show Ads on All Videos Even If Creators Don’t Want Them”*, YouTube has made multiple changes to video monetization over the past few years. One of these changes allows for ads to be shown on videos, even if the content creators don’t want the ads to be shown. Furthermore,the duration of Ads preceding a video has steadily risen. In previous years, there was generally one 5-second commercial or a 15-second commercial that could be skipped after 15 seconds. Nowadays, YouTube videos include two 15-second advertisements, the first of which cannot be skipped and the second of which can only be skipped after 5 seconds.

**Research question:**

The longer advertisements have led made me to question if the duration of video advertisement on YouTube, prior to a video, would have an effect on a person’s enjoyment of the video, after the ad. Furthermore, would the duration of an ad have a larger effect on video enjoyment if the participant was younger or older; which would lead to less or more enjoyment of the video?

**Relevant articles:**

The three articles used were found from the PSU library database. The articles used conducted experimental designs, regarding different aspects of video advertisements. The first article is from a December 2020 journal, titled, *The Effect of Ad Content and Ad Length on Consumer Response towards Online Video Advertisement*, by Djoko Raditya, Willy Gunadi, Dennis Andariski Setiono, and Jonathan Andreas Rawung.

**Abstract of first article:**

“The research aimed to determine the moderating effect of advertisement (ad) length on the relationships between ad content and the intention of skipping, as well as ad irritation. The research attempted to fill in the lacuna in the academic literature on the said issue. In doing so, it examined consumers' responses towards the consumers' intention of ad skipping and irritation. The experimental research utilized four video ads with varying durations and containing both entertaining and boring content, with long and short ad length. The research sample comprised 120 respondents spend at least more than 1 hour online. The research employed convenience sampling and the method of Univariate Analysis of Variance Linear Model. IBM SPSS Statistics was used for data analysis. The results reveal that the content and length of an online video ad have a direct effect on consumers' ad irritation and intention of skipping. The research concludes that the perceived entertainment of an online video ad significantly affects consumers' intention of skipping and ad irritation. Furthermore, the length of video ads has a major impact on their intention of skipping and ad irritation.”

**Why the first article is useful:**

The moderating influence of ad duration on the interactions between ad content, skipping intention, and ad annoyance is investigated. This article found that the entertainment value of an advertisement has a significant impact on a consumer's inclination to skip and displeasure. This article is important since it runs an experiment with a variable to the ones I'm interested in testing; ad length.

The second article is from an April 2012, Journal of Marketing Research, pp. 144-159, titled *Emotion-Induced Engagement in Internet Video Advertisements*, by Thales Teixeira, Michel Wedel and Rik Pieters.

**Abstract of second article:**

“This study shows how advertisers can leverage emotion and attention to engage consumers in watching Internet video advertisements. In a controlled experiment, the authors assessed joy and surprise through automated facial expression detection for a sample of advertisements. They assessed concentration of attention through eye tracking and viewer retention by recording zapping behavior. This allows tests of predictions about the interplay of these emotions and interpersonal attention differences at each point in time during exposure. Surprise and joy effectively concentrate attention and retain viewers. However, importantly, the level rather than the velocity of surprise affects attention concentration most, whereas the velocity rather than the level of joy affects viewer retention most. The effect of joy is asymmetric, with higher gains for increases than losses for decreases. Using these findings, the authors develop representative emotion trajectories to support ad design and testing.”

**Why the article is useful:**

The study examines how advertisers might use emotion and attention to entice viewers to watch online video advertising. This article is important because it examines how the emotions elicited by an advertisement might alter a viewer's recall. As a result, the style of video might influence whether or not a viewer is likely to skip or continue viewing an ad.

The third article is from a November 2014 Elsevier journal article, titled, *Be careful what you wish for: The impact of advertisement choice on viewers’ expectations*, by Stephen C. Nettelhorst, Whitney K. Jeter, and Laura A. Brannon.

**Abstract of third article:**

“Advertisement choice is an online marketing technique where viewers of videotaped content are allowed to choose the advertisement they want to watch during a commercial break. The purpose of this study was to examine how this choice influenced viewers’ expectations of the content they were about to witness. Two hundred seventy-one students participated in a between-participant quasi-experimental study. After watching a YouTube video, one group of participants chose to watch a MP3 advertisement instead of an advertisement for a digital camera. The other group of participants was not given a choice and watched the same advertisement. Participants’ expectations were measured using six 7-point Likert items. The results of the study found that participants who chose to watch the MP3 option had significantly higher expectations of the upcoming advertisement than the participants who did not get a choice. These results parallel previous findings for female but not male online viewers. As a result, female viewers may go through a different series of cognitive processes when encountering advertisement choice compared to their male counterparts. Regardless of any cognitive differences, increases in advertisement expectations could potentially influence other important online marketing outcomes such as advertisement avoidance behaviors.”

**Why the article is useful:**

In the third article, the influence of allowing viewers to choose whatever sort of advertisement they want to see is investigated. The findings of this experiment are important to my own study since they examine whether the style of advertisement matters, as well as how ad choice and expectations might lead to a more unfavorable response to an advertisement. These findings may have an impact on a person's rating of a video they view after seeing the ad, which is one of the main theories I'm attempting to test.

**Hypothesis:**

**H1 Question:** Does the length of video advertisement prior to watching a video, affect a person’s overall rating of that specific video?

**H2 Question:** Does the duration of an ad have a larger effect on video enjoyment if the participant was younger or older; would age lead to less or more enjoyment of the video?

**H1:** The longer the ad is, the lower a participant will rate the enjoyment of the video. However, not to the extent that it is a significant interaction.

**H2**: The older a participant is, the less likely they are to rate the enjoyment of video negatively. However, the effect won’t be drastic enough to be significant.

The two independent variables for this study are Ad duration/length and age. The one dependent variable will be video enjoyment; measured on a rating of 1-10; 1 being the most negative and 10 being the most positive. Ad duration will be the IV that is manipulated, while age will be measured. The IVs should interact because frustration is expected when participants have to watch longer ads. It would be rational to assume that watching a video, when frustrated, would lead to less enjoyment of the video. Furthermore, older participants might be less effected by longer ads, and thus have less fluctuation in their ratings on video enjoyment, due to being less likely to be tech savvy and invested in technology, when compared to the younger participants.

**Method**

**Participants:**

There will be a total of 60 participants. 30 young adults (18-21 years old) and 30 senior citizens (60+ years old). The young adults will be college students at the Penn State University main campus. The senior citizens will be nursing home residents at the closest nursing home near the PSU main campus; Foxdale Village. The participants will be randomly chosen from both areas. Prior to conducting the experiment, each participant will be asked to provide valid identification (driver’s license or some type of ID that can prove age).

**Design:**

The experiment will utilize a 2 x 3 factorial design. 2(age: young adult, senior citizen) X 3(Ads duration: 5 sec, 15 sec skippable after 5 sec, and two 15 sec ad; can’t be skipped until 5 sec into second ad).

IV #1: Ad duration - manipulated

IV #2: Age – subjective and measured

DV: Enjoyment video provided user

**Operationalizations:**

* **IV #1:** **Ad duration**: Participants will be split into 3 groups (20 people per group). One group will be watching the 5 sec ad before the video. The second group will watch the 15 sec ad that is skippable after 5 sec prior to the video. The last group will watch the two 15 second ads that are skippable 5 sec into the second ad, prior to the video.
* **IV #2: Age:** As mentioned earlier, there will be two age groups, selected at two different locations. The 30 young adults will be randomly selected at the PSU main campus. ID will be checked to make sure they fall into the 18–21-year-old age group. At the Foxdale nursing home, 30 senior citizens aged 60+ will be randomly selected. Age info will be verified through some type of ID.
* **DV: Video Enjoyment:** After the video finished, the participant’s will be asked to measure how much they enjoyed the video, by answering a 1 question survey that asks to rate the enjoyment on a scale of 1-10. A score of 1 is the lowest, and a score of 10 is the max enjoyment.

**Procedures/ Materials:**

* This experiment requires a tablet with 4g connection, video with specific ad length preload (ad hasn’t started playing yet), an experimenter, and 60 participants (not all at once).
* PSU Campus: The experimenter will go to campus and talk to a random student. The experimenter will ask the student if they could spare a couple minutes to help them with a quick and easy experiment.
  + If the participant agrees, then the experimenter will ask for some type of verification.
  + After the age is verified, the experimenter will give the participant a small two question survey that asks whether they like or dislike dogs, and if they like or dislike the contents that will be played on the ad. For example, if the 5 sec ad is a Geicko insurance ad, then the survey will ask if the participant have strong feelings about car insurance.
    - This process is important because it will reduce bias or strong outliers in the survey. Companies often use ads that illicit emotion, and the most viewer retentive ads, illicit some type of excitement and joy (Teixeira, Wedel, and Pieters 2012). In order to reduce strong emotions caused by ads, the survey is necessary. The survey will be measure with a 7-point Likert scale.
  + Once the survey is completed and the participant’s responses don’t indicate any type of bias, then the experimenter will ask the participant if they could watch a 1-minute video on the tablet. Once, the participant agrees, the experimenter will start the ad, let the viewer watch the ad, then let the viewer watch the video.
  + Once the video finishes the participant will be given another survey that asks them to rate how much they enjoyed the video on a scale of 1-10.
  + Once the survey is filled out, the experimenter will thank the participant, tell them what they just tested, and then asks if they could use these studies for the research.
  + The first 10 participants that agree to take part in the experiment, and complete it, will be shown the 5 sec ad, and a 1-minute video of puppies playing.
  + The second 10 participants (10-20) that agree to take part in the experiment, and complete it, will be shown the 15 sec ad, and a 1- minute video of puppies playing.
  + The last 10 participants (20-30) that agree to take part in the experiment, and complete it, will be shown the two 15 sec ads.
* Foxdale Nursing home:
  + The experimenter will contact the nursing home and get permission to conduct an experiment.
  + Once the nursing home agrees, the experimenter will speak to each person on a 1 on 1 basis, just like at main campus.
  + The process is the same as the process at University Park. However, the main difference is getting approval by the nursing home, and meeting their requirements. Also, ID can be verified easier than at the Campus.
  + Survey handed out to eliminate bias prior to watching the ad and video
  + Ad is shown, then video is shown (process happens smoothly and without delay)
  + Once again, the first ten that are interviewed will be shown the 5 sec ad and 1-minute video with the puppies.
  + The second 10 participants (10-20) will be shown the 15 sec ad and 1-minute video with the puppies.
  + The last 10 participants (20-30) will be shown the two 15 sec ad and 1-minute video with the puppies.
  + Once the participants have finished the video, they will give a rating of 1-10 on the enjoyment the video provided.
  + The experimenter will then explain the experiment and ask for permission to use the results.

**Results and Data Analyses**

The proposed analyses will be a 2 X 3 ANOVA. I expect the main effect IV#1 has on the DV to not be statistically significant. I expect some interaction between IV#2 Age and the DV, but not enough to be statistically significant. There will be some interaction between Both IV’s. I expect that older age will be less frustrated with longer ads, and rate the enjoyment of the video higher.

Overall, I expect that ad length will have some effect on a participant’s enjoyment of the video, post-ad, but not enough to be significant. I predict that the older a participant is, the less likely they will be affected by the frustration of longer ad length, thus have higher ratings on enjoyment. However, age isn’t enough of a factor to be significant. The age of the participants will not be a large factor on video enjoyment when comparing both age groups.

**Figure 1**

*Results of participants*



*Note.* Numbers indicate averages of the scores for all members

**Figure 2**

*Effect Of Ad Length On User Enjoyment Of Video Post-Ad Line Graph*

*Note*. Number of participants are 60. Blue is young adult group, and orange is senior citizen group

**Figure 3**

*Effect Of Ad Length on User Enjoyment of Video Post-Ad Column Graph*

**Discussion**

**Implications:**

The results of the study indicate that there is an effect of Ad length on user enjoyment, however it is not statistically significant. Also, there is a very small effect age has on ad length, that is also not statistically significant. Lastly, age didn’t have a significant effect on user enjoyment on the video post-ad. Currently, the longer an ad is, then the lower the enjoyment on the video is, but it is not significant right now.

However, the study shows longer ads do have an effect on user enjoyment. Increasing an ad by 25 secs lowered the user enjoyment of videos by 1.5 by the young adult group, and 2 by the senior citizens. YouTube and other advertising companies should take into consideration that increasing the ad length will lead to user’s not enjoying videos, which can lead to dislikes. Interestingly enough, YouTube recently took away the dislike button. If the advertisements consistently increase, then it is expected that people will start to enjoy videos less and less. This study can help set a limit to ad length, without drastically affecting how videos will be enjoyed by the users.

**Limitations:**

The experiment uses procedures that limit privacy issues and ethical concerns. One experimenter might not be valid, since there is room for tampering results, so another experimenter to record and confirm the validity of the experiment might be needed.

There are other factors that might be difficult to account for. For example, the survey is meant to reduce bias towards specific ad content, however, the more a user enjoys an ad the less likely they are to skip (Raditya, Gunadi, Setiono, and Rawung, 2020). Even if the participants didn’t showcase bias on the survey, they will likely skip the ad even if they enjoy it. This means it was rare to record the effects of a complete 15 sec or two 15 sec ads on user enjoyment.

The external validity might be questioned. Perhaps a different location where there is less technology, might not be affected by ad length as much. Furthermore, different age groups might lead to a significant interaction. For example, I predict that children would be affected by ad length more than the senior citizens.

Another concern is that these results might’ve been completely different if the participants, were able to choose the ads they wanted. This would lead to higher expectations on the ad, and the participant would be more likely to watch it by (Nettelhorst, Jeter, Brannon, 2014). Even if this study proves ad length effects user enjoyment on video, companies are also starting to implement choosing your own ads to negate this concern.

**Alternative results:**

It was expected that the main effects would not be statistically significant for this experiment, however, I think if the ad duration was longer, than there would’ve been a significantly larger fluctuation in the user enjoyment ratings. Furthermore, since YouTube was used to showcase the video and ads, it was not possible to have complete control over the ads. Meaning, the participants who watched the 15 sec and two 15 sec ads were choosing to skip the ads as soon as possible. The reason the experimenter did not allow no skipping of the ads, was because it might’ve made what the experiment was about, obvious. A more accurate way of testing this experiment would be to utilize software that allows the experimenter to control whether an ad can be skipped or not, such as, a different video streaming site, etc. The entire process took less than 5 minutes for each participant, and there was no reason for the participants to lie in this experiment. A different IV, such as gender, or ethnicity, rather than age, would’ve likely led to different results which would’ve potentially made the main effects on the DV statistically significant.

**Future research:**

Since the Hypothesis were proven, the next step would be to more accurately run the experiment again with a different video streaming site or software, that allows for no skipping of the ads, and for custom ad durations (10 sec, 45 sec, etc.). By having more control over the ad duration, then the results would be more accurate. Furthermore, increasing the number of participants, and covering a wider demographic and area, might lead to unexpected results that could be beneficial. For example, what if certain genders react to ad duration in a more extreme way? Or what if children respond to ad duration far more negatively than teenagers? There are multiple different ways in which this experiment can be slightly changed.

**Conclusion:**

Video advertisements are becoming increasingly commonplace all over the world. Advertisement agencies are becoming cleverer, and imposing more ads, with longer duration, consistently. It is important that these advertisement agencies, can have large consequences on user enjoyment from the videos being watched, post-ad. This experiment showcases that within a particular demographic, there is a slight decrease in enjoyment of a video post-ad, when the ad increases in duration. If video streaming platforms like YouTube, continuously increase the ad duration and quantity, there will eventually be a point where consumers might not use that particular video streaming platform again. Or people might feel forced to buy services that completely reduce ads. I think advertising agencies and video streaming platforms should use the content of this research, and expand on it, to utilize ads in such a way that doesn’t lead to a decrease in user enjoyment on a video post-ad.

**References**

Koetsier, J. (2021, June 28). *YouTube will now show ads on all videos even if creators don't want them*. Forbes. Retrieved December 9, 2021, from <https://www.forbes.com/sites/johnkoetsier/2020/11/18/youtube-will-now-show-ads-on-all-videos-even-if-creators-dont-want-them/?sh=666b2d6c4913>.

Nettelhorst, S. C., Jeter, W. K., & Brannon, L. A. (2014). *Be careful what you wish for: The impact of advertisement choice on viewers’ expectations*. Computers in Human Behavio*r*, *41*, 313–318. <https://doi.org/https://doi.org/10.1016/j.chb.2014.10.009>.

Raditya, D., Gunadi, W., Setiono, D. A., & Rawung, J. A. (2020). *The effect of ad content and ad length on consumer response towards online video advertisement.* The Winners, 21(2), 119-128. <https://doi.org/10.21512/tw.v21i2.6797>

TEIXEIRA, T., WEDEL, M., & PIETERS, R. (2012). *Emotion-Induced Engagement in Internet Video Advertisements*. Journal of Marketing Research, *49*(2), 144–159. <http://www.jstor.org/stable/23142841>