

Final Project Proposal

W201 Research Design Final Project

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Project Title: Social Commerce: Engaging with Gen Z

Overview

Target Audience: Retail company executive board looking to reach Gen Z with their product online.

The COVID-19 pandemic completely changed the way Americans shopped. As civilians were advised to stay home and could not make purchases in-store, they turned to online shopping. Even as the United States recovers from the pandemic, it seems that online shopping is still a preferred method for many people, especially Generation Z (Gen Z) consumers. Gen Z is a term coined for the generation born between 1997 and 2012 [14]. This digitally native generation of consumers has never known a world before smartphones and social media. As they continue to grow, so does their spending power. According to a *Forbes* article written by Jeff Fromm, Gen Z currently accounts for 40% of all consumers in the United States, which equals an estimated buying power of \$143 Billion [8]. Bank of America projects that by 2030, the combined Gen Z income will reach \$33 Trillion, accounting for almost 30% of the global economy [11]. It has become apparent that marketing to Gen Z is no longer a recommendation, but a necessity for companies going forward.

Gen Z is constantly connected online, with social media platforms dominating their time spent on smartphones. Over 98% of Gen Z owns a smartphone, and average more than 4 hours per day on apps [4]. Victoria Petrock, of *Insider Intelligence*, claims that the social media platforms with the most monthly Gen Z users were Snapchat (42 million), TikTok (37.5 million) and Instagram (33.3 million) [15]. Due to this high social media traffic, brands have begun to target Gen Z consumers by engaging with them through social media platforms, where users are introduced to product recommendations while scrolling through their personalized news feeds. Social media commerce allows these users to seamlessly purchase products directly through various social media platforms. In fact, the majority (97%) of Gen Z consumers say they now use social media as their top source of shopping inspiration [4].

All these platforms allow users to create posts. Posts are user uploaded pictures and videos which can be seen by other users, who can then engage with the post. Advertising through these platforms allows brands to use photos and videos to display their products to consumers. Users engage with the brand's content through "likes", "comments", "shares", among other methods. Research has shown that videos are most effective for engaging Gen Z consumers [1, 10]. According to Google, 85% of Gen Z uses video when researching products [10]. While videos are the best way of engaging Gen Z, these consumers have limited attention spans. The average attention span for Gen Z has been reduced to 8 seconds, down from 12

seconds in Millennials (previous generation) [10]. Getting your advertisement out to the consumer in a short period of time is more important than ever.

These social media platforms not only help Gen Z consumers learn about new brands, but also allow them to research products prior to purchase. A recent poll by NCR found that 75% of Gen Z will do research prior to purchasing a product [3]. Gen Z consumers are attracted to brands that seem “cool” and “exciting”, and stand for social issues they find meaningful. 90% of Gen Z consumers polled said that companies should help to combat social and environmental issues and 33% stated that they have stopped buying products from a company which contributes to causes they do not believe in [3]. About 66% of Gen Z will make purchases online after doing research, and 37% of Gen Z increased their social media use for decision making [3]. Gen Z consumers are making educated purchases and choosing brands which align with their personal beliefs and interests.

Marketing strategies used for past generations (commercials, printed ads. etc..) are becoming outdated as Gen Z is starting to use social media to drive their consumer decisions. It is important for brands to revolutionize their marketing strategies in order to have a bigger presence of social media and engage the Gen Z consumer. While prior work has shown that Gen Z consumers prefer video content when making shopping choices, the best delivery method of this video content has not been investigated. In this work, we outline a research study to understand which video delivery methods (i.e. story, post, live video) increases brand engagement with Gen Z users. This research is meaningful because it can shed light on social media marketing strategies which can increase Gen Z engagement with a brand, and hopefully increase sales amongst a new and growing generation of consumers. Due to Gen Z's perceived loyalty to brands, if you can win them over early, you may be able to keep their business for years to come.

Research Question: Can new social media video advertisements increase brand engagement amongst Gen Z? *The goal of this research study is to understand the effect of new Gen Z targeted video content on the engagement of Gen Z users with a brand.*

Sub Questions:

- What type of video content led to increased engagement amongst Gen Z? *Want to understand which video content type most increased engagement amongst Gen Z users.*
- Which platform led to increased engagement amongst Gen Z? *Want to understand which platform had the most increased engagement amongst Gen Z users.*
- What combination of content and platform led to increased engagement amongst Gen Z compared to similar content on other platforms? *Investigate if a specific platform and video content type which most increased engagement amongst Gen Z users*
- Do certain video content types and platforms increase engagement differently amongst demographic groups? *Compare across age, gender, location to determine if a specific platform or video content type was most common among certain demographics.*
- What type of active-engagement was most used amongst Gen Z (likes, comments, shares)? *Investigate across platforms and video content types to understand how Gen Z is actively engaging with brand content.*
- What determines a Gen Z user's perception of brand value? *We want to understand what Gen Z perceives and values in a brand.*

Key terms:

Post: Content (status update, video, photo, etc.) shared on social media through a user's profile [17]

Active Engagement: Likes, shares, comments (or subscription - snapchat) on a post [18]

Passive Engagement: Impressions - How often content is displayed on a user's profile (does not need to be engaged with) [18]

Likes: Form of social media engagement where a user can "like" the post of another user [19]

Comment: Form of social media engagement where a user can comment on a post from another user [19]

Newsfeed: A constantly updating list of posts from the accounts a user follows (need to be manually removed) [19]

Story: Videos and images that appear outside of your regular news feed and last appx 24hrs. (For brands no time limitations) [19]

Shares: Form of social media engagement where a user can share a post with other users [19]

Live: A user's live recording which can be viewed by other users in real time. [19]

Brand Affect: A customer's affective feelings towards a brand. [16]

Brand Experience: A customer's perception of their purchase and experience with a brand. [16]

Brand Trust: A customer's belief that purchasing from a brand will result in positive consequences. [16]

Image-Brand Congruence: A consumer's perception of consistency between brand's image and the consumer's self-image. [16]

Data

We will require social media engagement metrics, public user profile information, and the clients sales records for this project.

Ahead of the study, the client will arrange to collect the required consent from customers that fall within the eligibility criteria of this study (Gen Z residing within the United States). Users that consent will be considered for the study sample. This can be acquired through the client's regular communication channels with its customer, such as emails through a mailing list, opt-in forms on it's website, and/or social accounts. The form will detail what data will be collected, and what it will be used for (as indicated below).

The required engagement metrics will be collected through the client's social media accounts. In order to keep identifiable records of participants in this sample, we will only consider "active engagement" metrics. Active engagements are those where content is generated by users, and is publicly available to users on the platform in question. Examples include comments, likes and shares on sponsored posts. Standard metrics such as impressions or views will not be considered as they can not be mapped to individual users in our sample. Some of the data collected will vary between platforms as there are different forms of engagement for each.

The age, gender, and location will be required from the user's profile data. This data will be collected from users' social media accounts. Age and location will be used to select users in the sample, and to set the targeting for the campaigns. Analysis on the difference between baseline and experimental groups will also be stratified by age group within the Gen Z bracket and location of user profiles.

Sales records will be used to identify which users in our sample have made a purchase from the client. The attribution of a sale to a particular social media channel will be gathered from third party marketing attribution software (example [here](#)). Purchase data will be used to select participants for the qualitative portion of the study.

The qualitative portion of this study will seek to assess the perception of brand value among Gen Z customers. A group of those who have and have not made purchases from the sample will be selected for interviews. Semi-structured interviews will be recorded. The structured portion will include questions about brand experience, brand image-congruence, brand affect, and brand trust [6] [7].

Sample

For this research, our population of interest is Gen Z social media users. Our sampling frame is a list of users (provided by our client) for each platform (TikTok, Instagram, Snapchat) filtered to only include Gen Z users of ages between 13-24 (13 is the Internet's age of adulthood) that reside in the US. We want our sample to represent the entire population of Gen Z users as much as possible. When determining our sample population size, we want to set a margin of error of 5% and a confidence level of 95% for our research. This gives us a sample size of about 400 users per platform. We will consent 20% more than this sample size to account for attrition and to meet our demographic thresholds determined in our stratified sampling results.

We are sampling from the following:

- Engagement metrics on brand's Ad's provided by our client
- Interviews with US Gen Z users who have engaged with our partner's brand directly through social media (sales data used to select participants)

Study Design

We will conduct a controlled experiment using A/B testing to identify the type of content that increases our audience's engagement with our client's brand within each social platform. We are interested in understanding the type of video content within platforms that affect Gen Z engagement. This will include a two-phase explanatory sequential approach of collecting our brand's qualitative and quantitative data from the largest platforms Gen Z is using: Instagram, Snapchat, and TikTok. We will first focus on Quantitative data where we will begin with running the A/B tests and checking for differences in engagement and sales data. Then, we will begin our qualitative portion of conducting surveys, using the sales data collected to identify our sample. Users we are analyzing are those who have had active engagement with the brand in the past 6 months.

Each platform's sample will be split into 4 groups of users: 2 controls and 2 treatment groups, for a total of 16 total groups. Our control groups will all receive the same type of content and delivery within each platform. For example, assuming our client's have only used sponsored video posts, our control groups for Instagram will include the original, generic video post displayed on users' newsfeeds. The treatment group will receive the same video content on each platform as well but with a different delivery of the product (e.g. a video in an instagram story).

Control Group: Group will be presented original/existing video Ads from client

Treatment Group: Group will be presented the same video content, but in a different form for delivery

We will use proportional stratified sampling to choose our treatment and control groups. To do this, we will divide our sample of Gen Z users by age. Then, to stratify our sample we will randomly select proportional amounts of users from each group. This allows us to make sure each age group is represented within the whole sample population. Age groups will be binned into sets of 2 (13-15,16-18,19-21,22-24) to account for maturing during human development.

During the experiment we will execute the following to each group to gain a better understanding of the increase/decrease in engagement with the different variations applied to the treatment group:

- Conduct semi-structured interviews with Gen Z users, selecting from our initial sample groups that have, and have not purchased from our client's brand. The structured portion of the interview will seek to assess the Gen Z user's brand experience, brand affect, brand trust [7], and brand-image congruence [6]. As Gen Z users exhibit different behaviors to previous generations, the unstructured portion of the interviews will seek to understand how they form their brand perceptions. To increase the amount of observations, we will include an incentive of a 15% discount code if a user participates in the interview.
- Collect social media engagement metrics on the post the digital native receives on their newsfeed.

Variables and Intervention

For each platform, users in our selected sample will be split into control and intervention groups. The control groups will be exposed to the clients standard social media posts on each platform. The sample will be created from the clients existing audience on social media (e.g. subscribers or followers). A baseline for engagement will be established by the historical engagement metrics of those users in the sample, with the clients posts, over the previous 2 months. This can be used to account for the difference in engagement due to content of the creative / video.

For the purposes of this project, we will consider an active user engagement to be either a like, share, comment (or subscription in the case of snapchat) on one of the client's social media

posts that are prepared for the purposes of this study, by a user in the selected sample. For each platform, the following will be considered:

Platform	TikTok	Instagram	Snapchat
Posts			
Video post to company page / user feeds	<ul style="list-style-type: none"> • Likes • Comments • Shares 	<ul style="list-style-type: none"> • Likes • Comments • Shares 	NA
Stories	NA	<ul style="list-style-type: none"> • Messages • Quick reactions 	<ul style="list-style-type: none"> • Likes • Comments • Shares
Live	<ul style="list-style-type: none"> • Likes • Comments • Shares 	<ul style="list-style-type: none"> • Likes • Comments • Shares 	NA
Spotlight	NA	NA	<ul style="list-style-type: none"> • Shares • Subscriptions

A social media post in this context will be defined as a video published through one of the above four methods (video post to feed, stories, live sessions or snapchat spotlight - similar to posts on other platforms).

We operationalize the concept of engagement by looking at two outcomes of interest:

1. **[Primary]** The total number of active engagements performed - for example consider that a user can leave multiple comments on a single post
2. **[Secondary]** The number of users in our sample that perform any of these active engagement actions mentioned above

Within the control and intervention groups for each platform, the following variables will be fixed to avoid biases in the results:

- The video content of the ads (the same visual and audio presentation will be played for each different type of post)
- The run-time of the ads (the duration of the video will be limited to 8 seconds for all posts [10] - live videos will be run in a loop for the same impact as a video that appears on a user's news feed)
- The budget allocated to each sponsored post (for the control and experimental)
- The dates through which both ad-sets will be run (same duration, same dates)
- The region where the ads will be deployed (within the US only, will be determined by clients user base - targeting region will be identical for both control and experimental groups)
- The proportion of sampled users in each age group within the wider Gen Z sample
- The gender split of users in group (control and experiment) and each sub-age group

The target is to identify which delivery method for the ad content results in the most engagement across platforms. As such, our post-analysis will look for percentage differences in the total number of engagements between control and intervention groups.

The following variables will also be considered in relation to their impact on engagement in the post-experiment analysis:

- Age distribution users that account for active engagements (from each bin)
- Gender split
- Region of that user in the United States (if publicly available on a user's profile)
- Previous purchasing behavior of that user (as identified in the client's previous sales records)
- The number of channels on which a user in our sample follows the client's social accounts

Statistical Methods

Our Null Hypothesis will be that type of post has no impact on the number of active engagements on the clients posts. We will aim to assess the statistical significance of the post-type with regards to the number of engagements with the post by calculating the p-value for each A/B test. As we are not sure of the direction in which our treatment will impact the number of engagements (i.e. to expect more or less engagement with the applied treatment), we will run a two-tailed alternative hypothesis test. Depending on the number of engagements collected, we will choose between **Fisher's exact test** or **Pearson's Chi-Squared test** to compute p-values for each A/B test (one for each platform). Fisher's Exact test will be more suitable for a smaller sample size, whereas Pearson's Chi-Squared test will be preferred if we have a larger sample size. A statistician will be consulted to ensure best practices are followed with the collected data.

There are multiple potential confounding variables in this study. Aside from the type of post (the primary factor of interest), other factors may impact our engagement results. These include participants' age, gender, geographic spread, individual frequency of social media use, individual propensity to actively engage (as opposed to passively engaging by consuming/viewing content only), the contents of the video itself, etc. As such, we will also attempt to identify a weight for each variable that can be collected, as assign other potential factors to an error term. For this, we suggest the use of a **Weighted Least Squares Method** to attribute an impact size to each factor.

Potential Risk

Privacy: We must ensure that the data sources we use have data that was collected based on that platform's agreement with the user, specifically user profile data that gives personal information. We want to ensure that our data source is linked to the platform's API directly or via downstream sources. This will ensure that the data we are using was collected with the user's consent via *statements of agreement* for each platform.

Ethics: Generation Z ranges from ages 13-24 and conducting a study on subjects that are on the lower end of the range may initially raise ethical concerns. The general scope of our project revolves around working with a brand that is attempting to sell products to consumers and our advertisement may influence a participant to buy. It is important to highlight that our research question relates specifically to how we can generate engagement with a post, and our results are not necessarily dependent on sales as both groups will be interviewed in our qualitative research.

Incentive-caused Bias: Although we do believe that interviewing our participants can provide us with valuable information regarding sentiment towards a brand's and its posts, we are aware that a 15% off discount code will not necessarily give the same incentive to every group of Gen Zers, for example, a 14 year old high school freshman may be more likely to take the discount code as an incentive compared to a 24 year old professional with more passive income, hence providing us with a smaller and potentially less normally distributed sample by age. We hope to add extra incentive to all participants by marketing this piece as a way to improve the brand and serve the consumer.

Cross-Platform Data: We are collecting data across various social media platforms where not all features and functionalities are the same, for example, Instagram has 10 second stories that users tap through with a lot of static content, while TikTok builds off of videos with music that users can scroll through. Because of this we cannot necessarily interpret results the same way cross-platform. Even a metric as simple as "likes" must be interpreted relative to the platform in question, and we will provide platform specific recommendations where we can. In order to control for this we will perform our A/B testing by media platform, and will only use the change in baseline engagement as a marker to compare the efficacy of the content cross-platform.

Social Data: The algorithms that operate social media platforms are inherently biased in various ways, a simple example would be how users are more likely to receive region specific advertisements, and the order in which they will see them in the scrolling process will change depending on different observed liking and sharing patterns. This could have an impact on our study, as we are able to target our videos to specific participants, but will not be able to distinctly manage every part of their experience because of these inherent algorithmic biases. We will account for this in our results, and will be aware that if a participant in the treatment group did not engage with our post at all, the algorithmic bias may be in effect.

Applying Results: Our study acquires participants on a volunteer basis, hence, our selection process will inherently be non-random. This means our results may not necessarily generalize to the larger population due to selection bias and it may be difficult to make conclusions on the general population of Gen Z social media users. We will ensure that our scope is narrow as we focus on current customers of our client as participants to mitigate this bias.

Deliverables

The final deliverable of this research would be a presentation to our retail partner. This presentation would include a discussion of our findings while incorporating a smartphone screen

demonstration on how Gen Z users interact with the brand's highest engagement vs. lowest engagement posts. We would also provide a list of recommendations in the form of actionable insights from our research findings. We would ensure that we provide clear feedback regarding what a brand should and shouldn't do to increase their engagement, and disaggregate our results to a platform grain.

Example Results:

- *Posting an advertisement as an Instagram story vs a post on your Instagram feed increases engagement by 20%*
- *Overall posting video A on TikTok bumps engagement by 30% compared to the control vs posting video A on Instagram as a story, which only increases engagement by 10%*

Statement of Contribution

- **Sofia:** With my domain knowledge in brand usage on social media platforms, provided ideas on how brands utilize these platforms, available metrics, and type of content platform's provide. This is helpful in understanding how to provide our client with valuable insights on targeting Gen Z with each platform. With research of Gen Z and their purchasing behaviors/preference, provided ideas on what they care about when purchasing/engaging with a brand. Worked on documenting our sampling technique and the study design of our proposal.
- **Julia:** With some experience in data ethics and privacy, worked on breaking down our research questions and study design to isolate areas of potential risk in our research process, an important factor in shaping the ethical and responsible design and execution of our study. I also documented the deliverables that we are expecting to produce after we acquire our results.
- **Dimitrios:** With my experience conducting due diligence as a researcher, I executed background research on recent changes to the product marketing landscape and the new challenges in marketing to Gen Z. This work is essential in educating our audience on the new challenges in marketing to Gen Z using social media, and characteristics of Gen Z consumers. I prepared the overview section of the report, outlining the justification of this proposed research project. I also prepared our research question section, and identified the respective sub-questions.
- **Ayman:** With some experience running social media marketing campaigns, considered what data could be collected, and how users could be tracked across different platforms. Contributed the data, variables, and statistical methods sections and made some additions to research questions. Researched how brand value is studied and perceived to outline the qualitative data collection section.

Reference Material

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Appendix:

Sample Qualitative Questions:

- What is your experience with our brand?
- What determines your perception of brand value?
- What do you like/dislike within a brand and their social media presence?
- What makes you trust a brand?
- Do you think our brand and image are in sync?
- What content do you view the most?
- Which current national issues are you interested in?