

# Video Performances and Interactive Features as Contributors to Tik Tok's Online Environment

Lingxin Kong<sup>1, \*, †</sup>

<sup>1</sup>Essex Business School, University of Essex, Southend-On-Sea, SS11BF, United Kingdom

\*Corresponding author: lk20330@essex.ac.uk

**Abstract.** With the rising concern of Tik Tok videos propagating misinformation to younger viewers, research on the adversary effects of the platform of Tik Tok has been few and far between. This research applies a simplistic approach of gathering and observing numbers related to 60 content creators on YouTube and Tik Tok (30 on each platform) for the comparative analysis. The analysis is largely built upon the average video length of each creator's most recent 50 videos and the frequency of numbers of lines of each top comment. The correlation between the two is found relatively weak within one platform. However, videos on YouTube have significant lengthier top comments than those on Tik Tok most of the time, which suggests a higher level of thinking and commitment on the former in general. The two factors along with different features on the two platforms that are tailored towards different types of audiences contribute to the levels of discussion and the ways users treat information and misinformation. Implications and recommendations in regard to Tik Tok's environment are further discussed.

**Keywords:** Video length; Commentor engagement; Short video platform; Self-representation; Misinformation.

## 1. Introduction

### 1.1 Research background

This research circulates around the popular social media platform, Tik Tok, in its controversial existence and the notion that the platform has intoxicated the young audience in western countries such as the UK. Although commenced in China in 2017 under the supervision of Chinese government and served as a way of pushing propaganda [1], it has found its way into many other parts of the world with variance in quality and message of content other than what it was originally intended for, be it ethical or not. The influx of information shared online or on social media platforms, especially in this digital age, has incentivized scholars to consider it a socio-economic phenomenon. The usage of social applications is slowly transforming how people think and act. As of 2019, 69% of UK teenagers (age 12-17) are on at least one social platform [2]. The aim of this research is to find out if the online environment of Tik Tok contributes to the low interactivity of UK audience and propose strategies to alleviate the negative effects. Therefore, various social media platforms more tailored for video streaming are put into comparison, such as YouTube, Tik Tok, Facebook, and Instagram are compared. Numerous content creators on YouTube have expressed concerns for users of Tik Tok surrounding the constant urge of scrolling through short videos, suggesting that it is a trend that needs to be addressed [3]. According to Nuzuli (2022), in the past, the occurrences of cyberbullying and other adversarial effects on young audience on Tik Tok have led to the platform being banned by the government in Indonesia, and it is likely that similar or even more severe shortcomings occur on other servers as well.

### 1.2 Literature review

To better understand how Tik Tok can be toxic for the younger generation, it needs to be established here that Tik Tok is an outlier from the rest of the most popular mobile social media applications, and that the incentives driving the users on the platform are different from those on other platforms.

### **1.2.1 YouTube Motivations of University Students in The Context of Uses and Gratifications Approach**

A study conducted by Kötener and Algül [4] has testified the main purposes university students use YouTube for, in the case of Turkey. The authors acknowledged that students using different platforms would result in different outcomes; hence, the research is to distinguish the young audience on YouTube from the general social media consumers, especially since its blooming rate of use since 2017. It is interesting to note that Tik Tok does not fall under the most popular social media platforms on the authors' list, which could be due to how Turkish students perceive the brand and its relatively lower range of content. This research can potentially look into the aspects that YouTube utilizes more effectively than Tik Tok does.

### **1.2.2 The effects of social media usage on attention, motivation, and academic performance**

Another study conducted by Barton et al [5] examines the change in university students' behaviors as a result of social media use. This is particularly relevant to the topic of toxic online environment, as the authors have suggested an arguably strong relationship between excessive use of social media and mitigated productivity. It has in agreement with other studies on the subject that the motivation behind using social media in general lies in the little effort one pours into it as opposed to completing less favorable tasks, such as school and work. The study's use of students' time spent on social media accurately predicted their GPA and has seen an inverse relationship between the two. In the case of Tik Tok, it is possible that the short video format leads to more time wasted on the Internet and causes its audience to lose more concentration in the long run, when compared to YouTube.

## **1.3 Research gap**

Previous studies have delved deep into the motivators and the consequences of over stimulation aroused by social media applications, but hardly have they touched on how contaminated a certain online platform can be and how the platform encourages irrational behaviors. Moreover, limited research has explored the long-term causal effects of the short video format on the younger audience to resort to absorbing fragmented information. For example, severely mitigated attention span. Tik Tok relies on short videos (or reels) and live streams to earn its audience, whereas Facebook, Instagram, and YouTube added short videos later to acknowledge the existence of more Tik Tok users on these platforms [6]. Therefore, Tik Tok in this research will be excluded from the general preconceived notion of social media and referred to as a short video platform (SVP) instead.

## **1.4 Research framework**

This research will draw upon primary and secondary data online due to the limited time frame. It is assumed that YouTube content is perceived and consumed differently from Tik Tok content, and it becomes imperative to set certain metrics in place for measurement. The methods to be used in this research will be discussed in detail in the following section, with theories of marketing research applied. Then, the findings in the measurements will be analyzed and interpreted. Ultimately, this research will give recommendations on ways Tik Tok can rectify its features for it to become a more engaging and positive platform.

## **2. Methods**

### **2.1 Analysis framework**

Unlike what studies mentioned in the literature review section have targeted at, which are university students, this research will concentrate on the demographic of selected content creators and their respective fandoms on YouTube and Tik Tok using comparative analysis, seeing as teenagers and young adults make up most of the users of said platforms [7]. Comparative analysis uses at least two items to rule out their differences, although the two items are similar in nature to each other [8]. The items being compared in this research are the average video lengths (in seconds)

of selected content creators on YouTube and Tik Tok, the average top comment lengths (in lines) on those videos, and the implemented features and feedback loop of the two platforms. -

## 2.2 Data collection

Data in regard to video length is to be extracted directly from YouTube and Tik Tok, primarily based in the UK region. The secondary data will be obtained online via various websites, along with studies that have included statistics of the two platforms. Although data gathered from these video platforms can be categorized as primary data and has its constraints, it is less time consuming than conducting a survey. It is important to note that the average content distributed on YouTube differs vastly from that on Tik Tok, because YouTube is not an SVP. To meet their counterpart to the content creators on Tik Tok, the selected content creators on YouTube need to be found uploading short videos as well. A study dated back in 2008 has investigated multiple statistics of YouTube's platform including the categories provided to users and the distribution of lengths of all videos uploaded as of March 2006 [9], in which it is discovered that the typical length of a YouTube video lies below 5 minutes. It is much higher than the maximum video length allowance for Tik Tok, which is 3 minutes. However, it is safe to assume that the lengths of YouTube videos today have changed considerably since its initial launch in 2005 [10].

To ensure that the selected content can be representative of its native platform, the sample for each platform is extracted from a large list. 30 out of 100 UK-based content creators on YouTube from FeedSpot's list (ranked miscellaneously) will be selected by randomization [11]. Likewise, 30 out of 100 UK-based content creators on Tik Tok from Tokfluence's list (ranked by followers count) will be selected by randomization [12]. For this research, the two lists are updated with the latest possible statistics. The list of content creators on YouTube may be based on the relevancy of their videos, who may already be referenced in others' videos. An example may come from a creator on YouTube who makes commentaries off of influencers' videos on Tik Tok, like AugustTheDuck. On the other hand, it is less likely to find a creator on Tik Tok who refers to YouTube videos thanks to its saturation of self-representation [13].

## 3. Results

Even though both lists for YouTube and Tik Tok have been narrowed down to 30 out of 100 selected top content creators, the variance in quality of videos can be significant. The distinctions can be drawn from the video lengths the creators on these two platforms tend to resort to, the amount of effort viewers put into their responses, as well as the goals the two platforms are to achieve with their interactive features. No timeframe for the selected videos uploaded is set, due to the varying uploading frequencies the creators follow; thus, the statistics to the latest 50 videos are extracted; or in case the number of videos on the creator's page falls short of 50, the statistics to all the videos on the page are extracted. To best identify and organize the names of the content creators, only their usernames are included. For YouTube, these are found in the URLs of respective channel pages; for Tik Tok, these are found in the first line of their profile pages. The average length of videos is rounded up to 0.1 seconds. In the data analysis, the independent variable is the average length of the creator's most recent 50 videos (in seconds), and the dependent variable is the frequency of the number of lines that the top comment on each video has. Any comments left by the creators themselves do not count. In the case of YouTube, the durations of shorts have been excluded for the lack of time stamp.

### 3.1 Video lengths on YouTube and commenter engagement (301)

Data to YouTube videos were recorded prior to 11th of September. As a platform not primarily tailored towards short video consumers, it is worth mentioning that when a content creator on YouTube switches the video format to a short video, the performance of the video and the engagement level in the comment section are likely to take a dive immediately. One example can be found on geofftech2's channel, when he uploaded a video in his traditional format that is approximately 8

minutes long and garnered over 295,000 views between 26th of January and at the time of record, the video has a top comment of more than 5 lines; he switched temporarily to uploading a short that has immediately seen a drop in number of views and comments. Channels that have disabled comment sections are opted out of the analysis, and the list is left with statistics of the 27 valid content creators. The descriptive statistics denote that the selected YouTube creators upload approximately 1,144.4 seconds (19.07 minutes) of content each time. As seen in Figure 1 representing a distribution of all video lengths recorded for this research, most of the creators upload videos between 560 and 1,210 seconds (9.33 and 20.17 minutes). The numbers are significantly higher than the average of 5 minutes from March 2006 as previously stated. The most common type of channels of the list is vlogs that focus on self-representation but are injected with substantiated subjects that deem them discussion worthy. Furthermore, it can be observed that most of the videos on YouTube garner a high level of attention, with around 85.2% of channels having commentors inserting more effort into their comment sections over 80% of the time. The lowest frequency of having comments with at least two lines is 8 and the highest is 50.

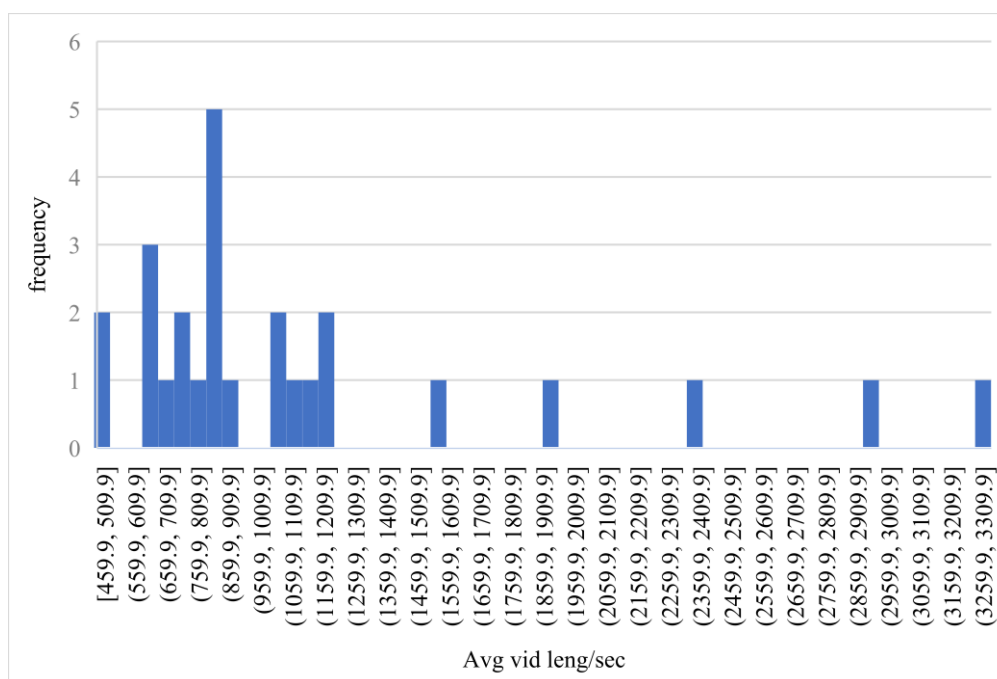


Figure 1. Distribution of selected video lengths on YouTube

### 3.2 Video lengths on Tik Tok and commenter engagement (266)

Data to Tik Tok videos were recorded by 9th of September. Since the list provided by Tokfluence was compiled in 2018, 4 of the creators’ pages at the time who earned their places on the list is no longer accessible. Therefore, the results display the statistics of the 26 valid content creators in. It is found via descriptive statistics that the average Tik Tok creator uploads approximately 27 seconds of content each time, which falls under the category of self-entertainment approximately 65% of the time. Finding top comments with only one line is typically true with a SVP, as self-representation is both the most dominant and the least discussion-worthy format, despite some videos being longer than others with the exceptions of ericwakeham and yungblud, whose commentors can be seen inserting more effort into shorter videos over 20% of the time. As represented in Table 1 when examining the correlation between average video length (Column 1) and frequency of top comments with 2 lines or above (Column 2), the correlation is around 0.43. Creators with the highest average video lengths tend to have the highest frequency of top comments with 2 lines or above. In this case, the average lengths of playadoptme’s videos of 52.7 seconds and thep001guy’s videos of 59.5 seconds have 16 and 15 occurrences of lengthier top comments, respectively. These creators are the

closest to hitting the 1-minute mark, but their videos still vastly fall short of the maximum 3-minute mark that was mentioned in data collection. Moreover, short videos from the sample have yet to reach over 5 lines of a top comment.

**Table 1.** Correlation between video lengths and comment lengths

	Column 1	Column 2
Column 1	1	
Column 2	0.430122	1

## 4. Discussion

### 4.1 Lengths and engagement

The distinction has been made clear from the start that the average video lengths on an SVP almost always pale in comparison to those on a more fully fledged video platform. Creators on YouTube generally take full advantage of the platform and combine elements of self-representation, video editing, and area-specific knowledge for their content. This is evident in the platform's flexibility to upload length that gives creators the opportunity to turn their channels into their own entities such as shows, live streaming events, music playlists and podcasts. Both the creators and the audiences can take the time they need to absorb the content, which requires more attention to detail on content for creators, and more attention to finish videos for viewers. Although the average video lengths on both platforms are not entirely indicative of the amount of effort the viewers insert into their comments, videos on YouTube generate significantly lengthier discussions than those on Tik Tok.

### 4.2 Features

The user interfaces (UI) on YouTube and Tik Tok are differentiated by the elements that the developers intend users to focus on. One glaring discrepancy in the layout of each profile or channel is that the videos on Tik Tok is arranged in a similar manner to Instagram, where the creators about information sits right below the username, followed by two tabs for videos uploaded and videos liked. The layout of a YouTube channel is much more personalized, and videos can be either sorted by popularity or recency. Dedicated tabs for home page, customized banner, popular uploads, playlists and about information missing on Tik Tok indicates a less diverse composition of content, which is true considering that 53.8% of content uploaded in 2020 were classified as 'entertainment' [14]. In addition, many content creators on YouTube personalize their thumbnails and titles on videos, enabling the audience to be better informed of the nature of content. Tik Tok users can choose to swipe up and down videos until they come across content of their interests. When YouTube had like and dislike ratios on videos visible to everyone, viewers could more easily decide the portion of the information to be taken lightly. Creators could more easily take feedback from the comments as well. However, since YouTube has removed like and dislike ratios for viewers, viewers might be less sharp and more skewed to judgements. Tik Tok has never enabled a dislike button, creators and viewers therefore are more likely to create or consume content without pointing out mistakes, as suggested by less wordy responses and the lack of educational value. It is exacerbated by the loose approval and monetization system, which contributes to the spread of misinformation [15]. Videos on Tik Tok featuring stunts or less discussion worthy topics may not see an immediate effect on the viewers' part, but as long as the creators are supported by a high number of likes and a large following, especially if they are driven by profit [16], they are more likely to resort to making the same type of videos. Videos that are advertised as educational may be the creators' attempt to fit their own agendas.

### 4.3 Implications

Upon closer inspection of the differences in features between YouTube and Tik Tok, content review measures on Tik Tok should be implemented to keep the volume of toxic material at a

minimum level, and to set a minimum upload length to prevent mindless swiping. Viewers should be given the option to dislike videos to discourage negative and less substantial content, and it will also improve the algorithm to recommend higher quality content. Viewers should also be able to preview the next video in the corner of the screen. Tik Tok can also learn from YouTube's customizable thumbnails for videos to better inform the viewers of the content, although they may bear the risk of being relied on for clickbait [17].

## 5. Conclusion

### 5.1 Key Findings

This research used comparative analysis on the various interactive aspects of YouTube and Tik Tok to reflect on the shortcomings of the latter. To a moderate degree, longer videos bring in more points of discussion, and it was assumed that the longer the video is, the more likely lengthier top comments are found. More importantly, the nature of each platform forms mostly what the content will be about. For an SVP such as Tik Tok, videos are expected to be more brief and less substantial when compared to YouTube. Therefore, comments under a Tik Tok video show a lower level of engagement overall. YouTube content creators that make traditional long videos can typically expect an immediate drop in numbers of views and or comments when they switch to a short. Longer videos on each platform does not directly translate into generating longer or more thoughtful responses.

### 5.2 Significance

Past studies have largely tackled the mental health issues that social media has brought, rarely have they touched on the behavioral changes and intellectual impacts to the current generation. One article that addresses the attention span in relation to the usage of social media among university students has failed to find a meaningful link between the two. This research helps identify the structural and fundamental flaws in the interactive elements on one platform so that it can be easier to examine the matter from both marketing and neuroscience perspectives.

### 5.3 Limitations

The list of YouTube creators not being ranked by their subscribers counts made the results inconsistent with its Tik Tok counterpart. Specifically, the correlation analysis for YouTube is made less favorable. A sample size of 30 caused visible gaps and a positive skew in the distribution of video lengths on YouTube. The limited timeframe given for this research made it difficult to run a sentiment analysis on comments, which would likely result in a more accurate depiction of positivity and negativity in an online environment. Future studies can lean towards the changes in thinking process and behaviors of young adults after the consumption of one SVP over a certain period.

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