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Quick, Stop Scrolling: The Impact of Short-Form TikTok Video Characteristics on Video Engagement and Teenagers' Focused Attention

Max Sheynin

Abstract: On social platforms, short-form content has grown to be one of the most dominant forms of media. This study investigated how the different content characteristics (video length, pacing, text overlay, format, music) of short-form videos influenced both video engagement and the focused attention of teenagers aged 14 to 18 years old. A content analysis was conducted to analyze how the characteristics influenced a video's engagement metrics. In the analysis, 100 TikTok videos were collected and a codebook was developed to assign characteristics to the videos. A TikTok Video Engagement Score (TVES) was then calculated for each video to standardize and compare their engagement metrics. To examine how the characteristics affected teenagers' attention, a quasi-experimental survey was taken by 438 respondents. Participants watched two TikTok videos–one with "desirable" characteristics and one with "undesirable" characteristics–to gauge how the characteristics differed in maintaining attention. The results of the content analysis and survey suggest that a medium video length, fast-pacing, present text overlay, vertical format, and music without creator speech are the most desirable short-form video characteristics for maximizing engagement and retaining teenagers' attention. These findings can be used by short-form content creators and advertisers to better optimize their videos for a teenage audience.

Keywords: Short-Form Video, Video Characteristics, Focused Attention, Engagement Metrics

Introduction

In the past decade, the popularity of short-form video applications has increased. TikTok (formerly Musical.ly) is a social media platform launched by ByteDance in 2018 (Bobrowsky et al., 2022). As the most downloaded app of 2022 with 2 billion users and 150 million daily users (Dong & Xie, 2022; Zhang et al., 2019), TikTok's popularity plays an essential role in driving cultural trends and influencing social developments (Minadeo & Pope, 2022). TikTok's exponential growth is partly attributable to TikTok's role as an important social space for youth, helping it to become an international mainstream rival to other short-form platforms such as Instagram, Facebook, and YouTube (Kaye et al., 2024). A recent Pew Research Center survey of 1453 United States teenagers aged 13 to 17 revealed that 95% of the participants had access to a smartphone, and 63% of them used TikTok (Anderson et al., 2023).

Given that the majority of TikTok's users are children and teenagers (Blackburn & Hogg, 2024), it is imperative to understand the characteristics of these short-form videos and their influences on the digitally engaged youth.

According to Shamloul (2024), short-form media is a type of "brief video content" that generally has a runtime of a few seconds or minutes (p. 48). On TikTok, short-form videos are shown to users through the platform's unique recommendation system and

algorithm, known as the "For You Page" (FYP), which distinguishes TikTok from its competitors (Kaye et al., 2024). Nevertheless, Shamloul (2024) warns that frequently consuming this "concise video content" has the possibility of altering the attention spans and other information-processing abilities of users (p. 48-49). In addition to weakened attentional functioning, Carstens et al. (2018) expands upon Shamloul's claim by stating that there has been an increase in "attention deficits" as a result of the rapid information overload individuals experience from consuming short-form media (p. 21).

With some adolescents using short-form applications for over 11 hours a day (Carstens et al., 2018), it is necessary to investigate how the varying characteristics of short-form videos on TikTok affect general user engagement and teenagers' focused attention to better understand the underlying implications associated with viewing short-form content.

Literature Review

This literature review identifies the five main characteristics of short-form videos (video length, pacing, text overlay, format, and music) and examines how each aspect influences the user's viewing experience and the video's engagement. In this study, video engagement is defined as the quantity of likes, comments, saves, shares, and views a video receives, and focused attention refers to an individual's ability to concentrate on a specific stimulus.

Content Algorithm

Similar to other social media platforms, TikTok's algorithm and FYP are shaped by a user's "digital identity," which is crafted by three factors: online behavior, content preferences, and provided personal information (Klug et al., 2021, p. 85). Compared to other research regarding short-form applications, TikTok's algorithm is insufficiently researched and is mostly based on assumptions about preexisting users (Klug et al., 2021). However, it is understood that the FYP can be personalized through user interactions, such as liking or commenting on related videos (Blackburn & Hogg, 2024). In addition to these factors, Lookingbill & Le (2024) argue that the algorithm is constantly learning, further factoring in video information and specific account settings to customize a user's feed. The algorithm is proficient at creating customized feeds, and this personalized content can contain addictive qualities for frequent viewers (Liu et al., 2021). However, Klug et al. (2024) believe that the majority of TikTok users understand the "algorithm's functionality" and can optimize their feed to mitigate addictive behaviors (p. 89).

By understanding how the content algorithm works, creators employ varying techniques and specific characteristics to increase their videos' engagement, popularity, and appearance on the FYP (Klug et al., 2021).

Content Characteristics

Video Length & Pacing

Short-form videos differ from other types of media due to their unique characteristics related to the design of the video. One of the most defining characteristics of short-form videos, compared to traditional long-form media, is their shortened length (Chen et al., 2024). Video length is an important aspect of media consumption, as it can influence a user's memory, attitudes, and intentions (Maenhout, 2022). In the existing literature, sources disagree on the most effective video length for user engagement. For instance, one study evaluated the most favorable characteristics of scientific short-form videos, concluding that video lengths longer than 60 seconds had higher engagement rates (Velarde-Camaqui et al., 2024). In contrast, Gu & Zhao (2024) determined that the relationship between video length and user engagement follows a "U-shaped curve," typically performing best at the 15-second duration (p. 15). Because the definition of a short video length is inconsistent across studies, media researchers declare that video length likely influences video performance only to some extent (Meng et al., 2024).

Additionally, pacing, or the speed of a short-form video's narrative, is another prominent characteristic of short-form videos, as they are typically faster-paced than traditional text-based media (Nguyen et al., 2024). Although fast-paced media is seen as more engaging (Nguyen et al., 2024), content too quick could also lead to varied attention, cognitive decline, and decreased performance of users (Qi et al., 2024).

Moreover, the quick speed of short-form videos can overwhelm and entrap users, leading to a loss of time management (Tan & Hu, 2022).

Text Overlay & Video Format

Few studies have evaluated the impacts of text overlay on the performance of short-form videos. The presence of on-screen text is a characteristic that creators take into consideration when creating short-form content, but typically, short-form videos contain purely visual information. Despite pictures attracting more attention from users than textual information (Qi et al., 2024), due to the short nature of TikTok videos, creators can include more information and content in their videos through the use of captions, video descriptions, or other forms of text overlay. According to Daele et al. (2024), maximizing video performance through captions is underdeveloped and users may negatively see it repetitive or it may interfere with the pace of short-form videos. Additionally, most on-screen text for short-form videos is typically used for extended information instead of transcribing the video's auditory information (Daele et al., 2024).

Similarly, there is little research regarding the impact of a short-form video's format on its performance and user engagement. On the TikTok platform, creators have the choice between uploading videos in a vertical or a horizontal format. Since the rise of short-form video applications, users are increasingly shifting from a horizontal format, typically viewed on computers, to a vertical format, typically viewed on hand-held devices (Zhu et al., 2022).

Furthermore, Shi (2024) claims that short-form video applications are designed for vertical content as they can capture attention easily due to the convenience of scrolling on a hand-held device. Of the few studies investigating short-form video format, there is a general agreement that vertical formats produce higher engagement than horizontal formats due to ease of accessibility, increased interest, and minimal effort to interact (Menon, 2022; Mulier et al., 2021). However, Mulier et al. (2021) argue that there is a discrepancy in video format preference across generations, with older mobile users, such as those of Generation X and Y, being less fluent in processing vertically formatted content than Generation Z. ***Music***

Finally, short-form video creators have the option of adding no music, background music, or music as the sole audio to their content. According to psychology researchers Salamé & Baddeley (1989), the presence of background music in advertising media can interfere with "immediate verbal memory" or the ability to quickly encode spoken information, and disrupt viewers' cognitive abilities (p. 119). Contradictorily, in a study investigating the most successful factors of short-form videos, the researchers discovered that the use of background music can increase the viewer's empathy, create an immersive experience, and gain more attraction

(Hsin-Cheng et al., 2024). Although both groups of researchers investigated the impacts of background music on viewer engagement, a plausible explanation for the difference in conclusions is likely based on the type of media that was analyzed. Notably, Mou et al. (2021) conclude that short-form content is especially different from other types of media due to the frequent inclusion of background music, meaning that viewers are likely more accustomed to the presence of music in short-form media. Additionally, users on TikTok believe that the inclusion of prominent trending music as the sole audio in short-form content can increase the video's chances of being watched on the FYP, furthering video engagement (Klug et al., 2021).

Therefore, it is reasonable to conclude that the existing literature agrees that both forms of music can increase short-form video engagement. However, the researcher was unable to find sources in the literature that evaluated how short-form videos without music would perform in contrast to videos that contained music.

Summary

A review of the literature demonstrates that the main characteristics influencing a short-form video's engagement are video length, pacing, text overlay, format, and music.

However, as seen in the pre-existing research, multiple inconsistencies exist over the most influential aspects of each characteristic, as scholars disagree as to what specific traits enhance video engagement most positively. Additionally, a majority of sources evaluating the attentional impacts of short-form videos overlook one of TikTok's largest populations, teenagers aged 14 to 18 years old, instead primarily exploring the impacts on users between the ages of 19 to 30

years old (Fillmore, 2015; Kies, 2018). Therefore, this study hopes to fill the research gap by investigating the question: How do the content characteristics of short-form videos on TikTok influence video engagement and the focused attention of teenagers aged 14 to 18 years old in the United States?

Hypotheses

After examining the literature, the researcher hypothesizes that the following characteristics are desirable for maximizing a short-form video's engagement: short video length, fast pacing, no text overlay, vertical format, and background music. This prediction was derived from the most consistent findings across the body of knowledge, as characteristics with a greater consensus among researchers were considered more desirable. Furthermore, the researcher hypothesizes that videos with these desirable characteristics will retain teenagers' focused attention more effectively than videos with undesirable traits, as prior research suggests that these characteristics are more likely to appeal to viewers.

Method

Overview

This study aims to identify which aspects of the characteristics are desirable or undesirable, to examine the relationship between specific content characteristics and video engagement, and ultimately investigate whether the desirable or undesirable characteristics sustain the focused attention of teenagers more effectively.

Study Design

To address each aspect of the research question, this study combined a statistical content analysis with a quasi-experimental survey, predominantly based on quantitative data. A quantitative content analysis was chosen because these analyses are the most common research method used by researchers investigating short-form video engagement (Zhang et al., 2022).

Through a quantitative approach, the researcher can calculate significant differences between variables and assess how individual characteristics could influence video engagement differently.

Additionally, to measure how the content characteristics influence teenagers' focused attention, a quasi-experimental survey was employed because the researcher could not control the participants' existing experience with short-form content. Short-form content researchers use surveys to understand the "preferences" and "consumption habits" of users (Rugrien, 2022, p.

32), which is an essential component of this study, as the researcher will be investigating how the respondents' perceptions of the content characteristics influence their focused attention.

Finally, TikTok was chosen as the primary source of analysis because of its widespread popularity and familiarity among American users compared to other, non-American short-form platforms, such as Douyin and Kuaishou. Although other American-owned social media platforms with short-form content were considered, such as YouTube Shorts and Instagram Reels, TikTok was selected because short-form content is the predominant form of media on the entire platform.

Content Analysis

Video Collection

Various video collection methods were considered for the study. For example, Minadeo & Pope (2022) collected videos through TikTok's hashtag system, purposefully selecting videos they deemed as relevant to their study by looking at videos under select hashtags. Another study collected videos and their information through a "scraping tool," selecting predominantly trending videos without the use of a TikTok account (Klug et al., 2021, p. 86). In both circumstances, the researchers used video collection methods that were not entirely random, instead relying on intentional choosing. By contrast, this study employed a modified version of Shutsko's (2020) method, where the researcher's video collection relied on sampling videos that appeared on the FYP, a more randomized method of video collection. Adapting Shutsko's video collection method is most beneficial for this study because it allows the researcher to gather TikTok videos in a moderately randomized way, which is more represen-

tative of the short-form videos on TikTok as a whole.

In adopting this method, a new TikTok account was created on December 23rd, 2024, to refresh the content algorithm and create an un-customized FYP. Collecting the videos on a newly created account by scrolling through the FYP imitated an authentic user's experience, further allowing the selected videos to be randomly sampled by means of TikTok's content algorithm instead of by nonrandomized selections. Videos were collected in succession by scrolling through the FYP, with the first video that appeared on the FYP being Video ID 1, the second video appearing being Video ID 2, and so forth. Since the researcher was working alone and relied on manual selection instead of using automated technological tools for video collection, such as the TikTok Application Programming Interface, only the first 100 videos on the FYP were collected to be coded. Collecting 100 videos was a reasonable, manageable number as it allowed for a variety of content characteristics to be considered, created a realistic sample size, and produced a practical number for statistical analysis. All 100 videos were collected on the same day that the account was created to limit confounding variables such as drastic changes in engagement, different trending content, and inconsistent platform versions. Since this study focused solely on short-form videos, the following types of content were not collected and were skipped altogether: advertisements (videos marked with a sponsored tag), slideshows (content that contained purely pictures), and TikTok Lives (real-time user broadcasts). After the first 100 videos of the FYP were collected, they were organized into a Google Spreadsheet for coding.

Ethical considerations were considered regarding the use of the collected videos and the creators' intellectual property (IP) rights. According to the University of Vermont Committee, TikTok videos are publicly available for analysis, meaning informed consent for the use of their videos can be waived (Minadeo & Pope, 2022). Additionally, the original links to the collected TikTok videos were recorded in the Google Spreadsheet to respect the creators' IP rights.

However, it is essential to note that the creators of the TikTok videos can unpublish their videos, either through deletion or privatization, meaning that some links may become obsolete, and certain collected videos may not be watchable in the future. To resolve this issue, the collected videos were coded the same day as the selection, allowing all 100 of the original collected videos to be usable in the content analysis.

Coding Scheme

After the 100 TikTok videos were collected into a Google Spreadsheet, a codebook was developed to allow for qualitative analysis and to assign characteristics to the collected videos.

Based on the literature review and the researcher's preexisting knowledge, Table 1 was created as the coding scheme. The coding scheme consists of video length, pacing, text overlay, format, and music, each divided into smaller subcategories. For this study, video length is defined as the duration of the video, pacing refers to the speed of the video's editing, text overlay describes the use of on-screen text, format indicates the video's orientation, and music represents the presence of accompanying audio.

		Explanation
Video Length	Short	0 to 20 seconds
	Medium	21 to 59 seconds
	Long	60 seconds or longer
Pacing	Slow	Relaxed pace, minimal or no frame changes
	Moderate	Average pace, some frame changes
	Fast	Quick pace, rapid frame changes
Text Overlay	Present	Text is shown at some point in the video
	Not Present	No text appears at any point in the video
Format	Vertical	Media that is taller than wide
	Horizontal	Media that is wider than tall
Music	None	No music is present
	Background	Music is present, overlaying the creator's actions
	Only	Music is present, without the audio of the creator's actions

Table 1. Short-Form Video Characteristics: Coding Scheme

$$\text{TikTok Video Engagement Score} = \left(\frac{[(\text{Likes} \times 0.4) + (\text{Comments} \times 0.3) + (\text{Saves} \times 0.2) + (\text{Shares} \times 0.1)]}{\text{Views}}\right) \times 100$$

Equation 1. TikTok Video Engagement Score (TVES) Calculator

All 100 videos were watched in their entirety and coded by a single coder, the researcher, so that intercoder reliability did not apply. Each video was assigned five sub-characteristics, or one option from each main characteristic. The video's engagement metrics were also recorded (number of likes, comments, saves, shares, and views) to allow for correlational analysis.

Finally, a TikTok Video Engagement Score (TVES) was calculated for each video based on the video's engagement metrics using Equation 1. Each metric was weighted according to the effort required by users to interact with it. More accessible metrics (e.g., liking a video) were given a higher weight due to their greater likelihood of being used by viewers. In contrast, metrics that required more effort (e.g., sharing a video with a friend) were given a lower weight due to the lessened likelihood of being used by the average viewer.

To the researcher's knowledge, no engagement score calculator exists specifically for TikTok videos; therefore, the researcher developed Equation 1, which took inspiration from other studies' video engagement score calculators (Chen et al., 2024; Liikkanen, 2014). By dividing the engagement metrics by the video's views, the TVESs would become normalized, effectively allowing posts' engagement metrics to be compared relative to one another and preventing biases in higher-viewed posts.

Survey

After the content analysis, a five-section survey was designed on Google Forms. The survey was open for approximately 8 weeks to maximize the number of responses. The first section of the survey contained an informed consent letter and a checkbox for participants to agree to take the survey. The second section used multiple-choice questions to gauge the demographics of the respondents, including questions regarding their TikTok usage. This section was implemented because it allowed the researcher to see who was eligible to take the survey, as participants who responded as being outside of the desired age range were deleted.

For the third section, the researcher selected two videos out of the 100 collected from the content analysis to be used in the survey, based on their levels of *desirability*. In this study, desirability refers to the degree to which a video characteristic enhances a video's appeal and ability to sustain viewers' attention. While desirability may also involve subjective factors such as aesthetic preference or emotional response, this study operationalizes the construct using engagement-based metrics. Specifically, for each content characteristic, the sub-characteristic option with the highest average TVES (see Table 3, Results) was designated as "desirable," and the option with the lowest average TVES was labeled as "undesirable." If a characteristic had a third option, the middle-value TVES was considered "neutral." These classifications assume that desirable characteristics enhance video performance, while undesirable characteristics reduce it. This operationalization is appropriate because the TVES equation was specifically designed to measure engagement outcomes relative to short-form TikTok videos, making it a practical and quantifiable proxy for desirability in this context. By assigning desirability through this method, each sub-characteristic is evaluated based on its actual performance, rather than subjective labeling. The desirability of each characteristic is summarized in Table 11 (see Discussion), where they serve as predeterminations that are subsequently tested and validated through the survey.

The first selected video, Video ID 11, was chosen as it contained the majority of the desirable characteristics identified from the TVES procedure (see Fig-

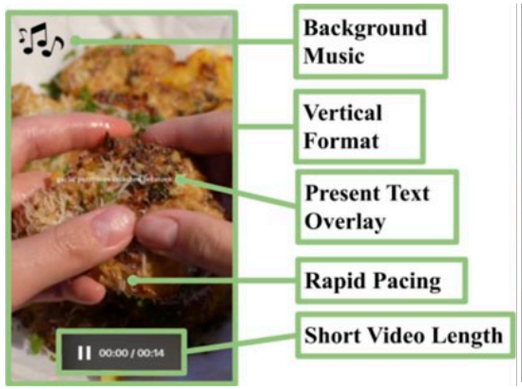

Figure 1. Characteristics of Video 1 (Video ID 11)

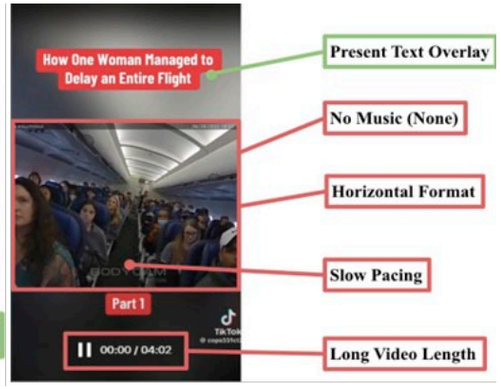

Figure 2. Characteristics of Video 2 (Video ID 94)

ure 1). The second selected video, Video ID 94, was contrarily chosen for containing the majority of the undesirable characteristics (see Figure 2). The selected videos were also chosen as they contained the majority of the desirable and undesirable options. None of the collected videos from the content analysis contained all five desirable or undesirable traits, so Video ID 11 and Video ID 94 were selected as they fit the requirements best. In section three, respondents were asked to watch each video and then answer four Likert scale questions for each to measure how well their attention was held comparatively. These questions took inspiration from Lehmann et al. (2022), as they used a similar method in which they evaluated participants' attention after watching a video. All of the questions had five response choices ranging from strongly disagree to strongly agree, including a neutral option, and two of the four Likert questions were designed to be reverse-scored to reduce response bias.

The fourth section directly asked respondents to choose which video they believed was more engaging and better retained their attention. Additionally, "select all that apply" (SATA) questions were implemented to better identify the characteristics respondents believed positively contributed to their preferred video's engagement. In the fifth section, respondents were asked to answer two SATA questions that were unrelated to the videos shown earlier in the survey. The SATA questions asked respondents to choose which characteristics (from Table 1) they believed positively impacted or negatively impacted a short-form video's engagement.

After the survey, a debriefing statement was provided to participants, as information regarding why the videos were selected was omitted from the respondents at the start to ensure unbiased responses.

Participants

The sample consisted of N = 438 teenagers aged 14 to 18 years old who lived in the United States. To gather a wide range of respondents, the researcher employed various methods.

First, the researcher emailed teachers at the high school they attended, asking them to share the survey with their students because high schoolers fit the researcher's demographic of investigation. Secondly, the researcher emailed teachers at high schools across the country to further diversify the geographic distribution of respondents. Finally, the researcher posted the survey in relevant online forums to maximize the number of responses.

Results

Content Analysis

A total of N = 100 TikTok videos were collected, coded, and analyzed on Google Sheets.

Table 2 demonstrates the descriptive engagement metrics of the videos as of December 23rd, 2024. The average video collected had about 2.1 million likes, 23K comments, 164.5K saves,

Engagement Metric	Min	Max	Mean	Standard Deviation	Standard Error
Likes	6585	21700000	2096983.76	3432456.91	343245.69
Comments	215	730000	23062.08	84556.68	8455.67
Saves	526	2100000	164498.73	346924.66	34692.47
Shares	74	3100000	142109.41	369832.38	36983.24
Views	121200	204700000	21819008	36117759.90	3611775.99
TVES	0.17	10.39	4.36	2.30	0.23

Table 2. Short-Form Video Engagement Metrics (N = 100)

142.1K shares, 21.8 million views, and a TVES of 4.36. The TVESs varied the least (STDEV ≈ 2.30), and the number of views varied the most (STDEV ≈ 36,117,759.90).

Table 3 depicts the frequencies of the video characteristics across the 100 collected videos. The most common characteristics were short video length, slow pacing, present text overlay, vertical formatting, and only music. The least common characteristics were medium video length, fast pacing, not-present text overlay, horizontal formatting, and background music. To calculate the average TVES of each characteris-

Characteristic	Option	Frequency	Average TVES
Video Length	Short	57	4.354473684
	Medium	14	4.885642857
	Long	29	4.118758621
Pacing	Slow	54	4.391685185
	Moderate	37	4.268405405
	Fast	9	4.551777778
Text Overlay	Present	73	4.439794521
	Not Present	27	4.146037037
Format	Vertical	97	4.370010309
	Horizontal	3	4.052333333
Music	None	42	3.699642857
	Background	14	5.126714286
	Only	44	4.747477273

Table 3. Short-Form Video Characteristics: Frequencies (N = 100)

tic, the researcher used Google Sheets'=AVERAGEIF function to compute the average TVES of each video with the associated characteristic. Videos with background music had the highest TVES on average, and videos without music (none) had the lowest TVES on average.

Next, five separate single-factor ANOVA tests were conducted, one for each content characteristic. Because the independent variables were primarily categorical, ANOVA was selected as the appropriate statistical test. These tests were used to evaluate whether each characteristic had a significant effect on short-form video engagement by comparing the characteristic categories to their corresponding TVES. All tests were conducted using a significance level of $\alpha = 0.05$. Tables 4 to 8 display the results of the ANOVA tests. Video length, pacing, text overlay, and format were found to be statistically insignificant ($p > 0.05$), meaning that in this specific TVES model (Equation 1), these characteristics did not have a measurable effect on engagement. By contrast, music produced a statistically significant result ($p < 0.05$), and therefore likely influences engagement to a measurable extent.

Survey

438 respondents in total completed the survey. All respondents were teenagers aged 14 to 18 years old who lived in the United States. Figure 3 illustrates

Source	SS	df	MS	F	p-value
Between Groups	5.56	2	2.78	0.52	0.597
Within Groups	518.93	97	5.35		
Total	524.49	99			

Table 4. ANOVA Results: Video Length (N = 100)

Source	SS	df	MS	F	p-value
Between Groups	0.7	2	0.35	0.06	0.938
Within Groups	523.79	97	5.4		
Total	524.49	99			

Table 5. ANOVA Results: Pacing (N = 100)

Source	SS	df	MS	F	p-value
Between Groups	1.7	1	1.7	0.32	0.574
Within Groups	522.79	98	5.33		
Total	524.49	99			

Table 6. ANOVA Results: Text Overlay (N = 100)

Source	SS	df	MS	F	p-value
Between Groups	0.29	1	0.29	0.05	0.815
Within Groups	524.2	98	5.35		
Total	524.49	99			

Table 7. ANOVA Results: Format (N = 100)

Source	SS	df	MS	F	p-value
Between Groups	33.15	2	16.58	3.27	0.042
Within Groups	491.34	97	5.07		
Total	524.49	99			

Table 8. ANOVA Results: Music (N = 100)

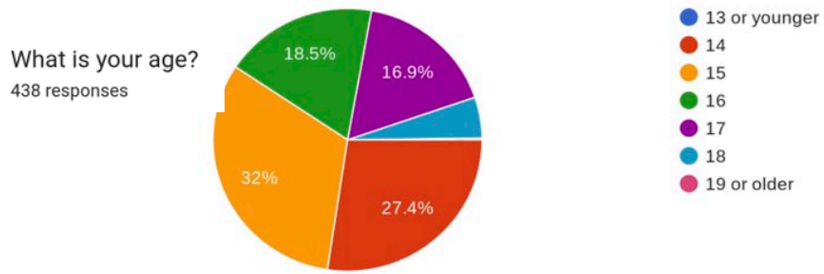

Figure 3. Ages of Respondents

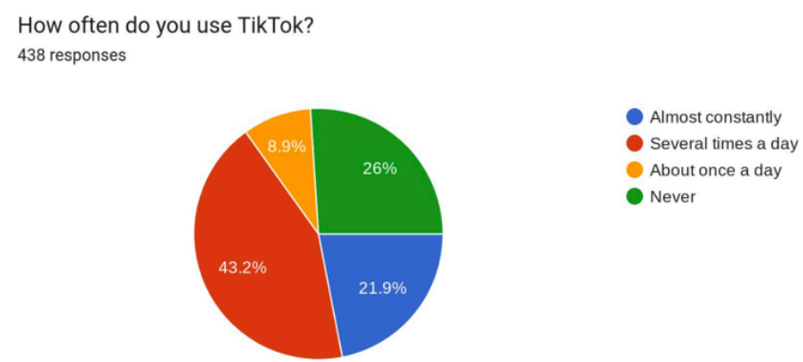

Figure 4. Respondent's TikTok Usage

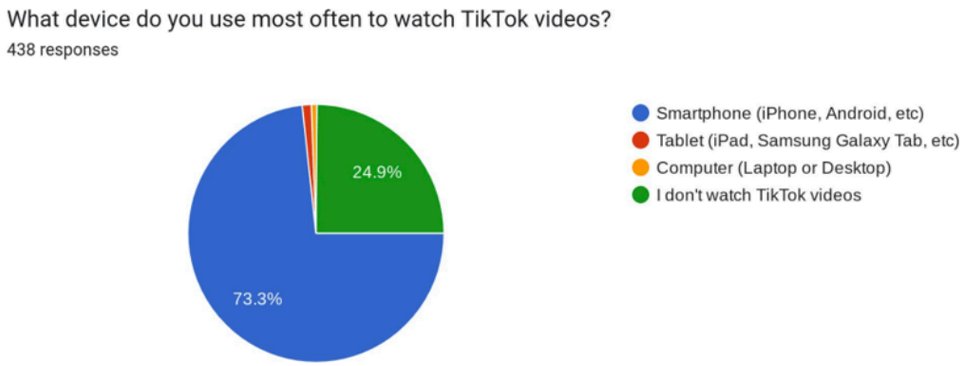

Figure 5. Respondent's Device Usage

the roughly equal age distribution of the participants aged 14 to 17 years old; however, 18-year-olds were underrepresented (5%). Figure 4 demonstrates that most participants used TikTok at least once a day (74%), and Figure 5 shows that smartphones were the most frequently used device to watch TikTok videos (73.3%). Participants who responded "I don't watch TikTok videos" (Figure 5) were still included in the analysis, as their lack of TikTok usage did not detract from this study's goals.

Table 9 displays the participants' varying focused attention levels between videos 1 and 2. Generally, participants exhibited a higher focused attention to Video 1, the desirable video, compared to the undesirable video, Video 2. Table 10 demonstrates that most participants believed that Video 1 was more engaging and effective at holding their attention than Video 2. Participants who responded with the option that stated the videos were equal in engagement and attention were omitted from the table for easier observational comparison.

Question	Video 1	Video 2
Which video was more engaging?	69.20%	19.90%
Which video held your attention better?	74.90%	16.70%

Table 10. Comparison of Engagement & Attention (Row 1: N = 390, Row 2: N= 401)

Figures 6 and 7 illustrate respondents' views of which characteristics contributed to their preferred video's engagement. The majority of participants who found Video 1 more engaging believed that fast pacing contributed the most to the video's engagement (81.7%). For participants who found Video 2 more engaging, most participants believed that on-screen text, a desirable short-form video characteristic, contributed most to the video's engagement (39.7%).

Question	Video	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I found it easy to stay focused from start to finish	Video 1 (ID: 11)	43.40%	41.60%	8.40%	5.50%	1.10%
	Video 2 (ID: 94)	10%	26.30%	16.40%	32%	15%
I lost interest before it ended	Video 1 (ID: 11)	3%	14.80%	8.20%	42%	32%
	Video 2 (ID: 94)	22.60%	39%	11%	19.60%	7.80%
My full attention was held throughout its duration.	Video 1 (ID: 11)	27.60%	43.80%	11.60%	13.90%	3%
	Video 2 (ID: 94)	7.50%	18.90%	15.80%	36.50%	21.20%
I noticed that I missed some parts because my mind wandered.	Video 1 (ID: 11)	3.40%	16.20%	11.90%	39.30%	29.20%
	Video 2 (ID: 94)	14.40%	39%	13%	22.60%	11%

Table 9. Comparison of Participants' Focused Attention on Each Video (N = 438)

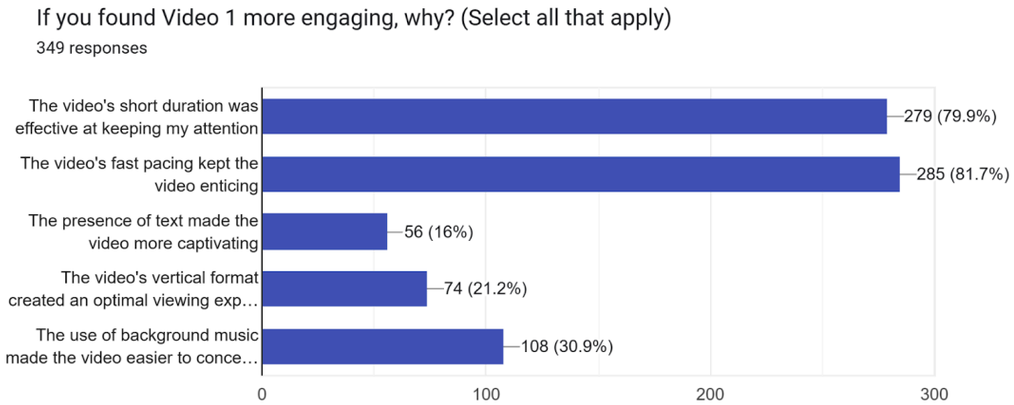

Figure 6. Respondent's Perceptions of Characteristics & Engagement: Video 1

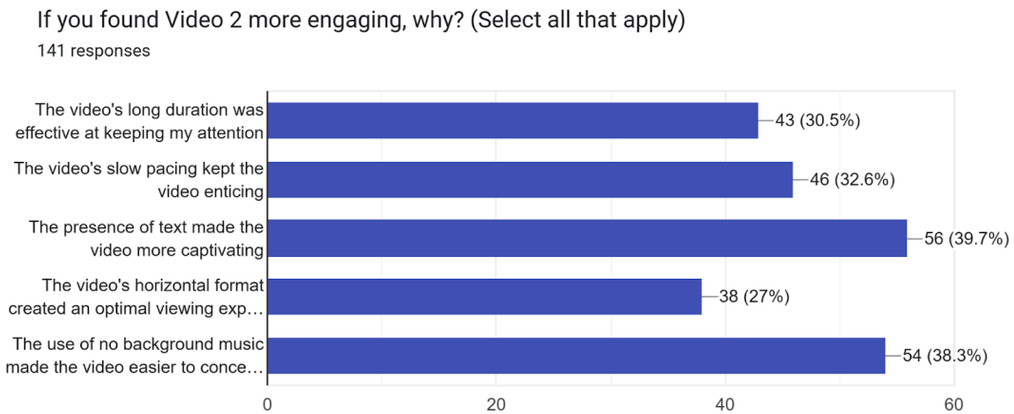

Figure 7. Respondent's Perceptions of Characteristics & Engagement: Video 2

Discussion

This study aimed to examine how the content characteristics differed in enhancing short-form video engagement and sustaining teenage viewers' attention. The findings shown in Table 11 are consistent with those of Liang et al. (2022), as their study similarly considered present text overlay and background music to be desirable traits in maximizing TikTok video engagement. Additionally, the desirability of vertical format aligns with Maenhout (2022), as he stated that users prefer short-form videos because of the seamless "vertical integration" of the content (p. 2). Finally, Table 11 contributes to the discussion in the literature over the most optimal video length and pace. These results suggest that a medium video length and fast pacing are most effective for maximizing engagement, but other studies disagree (Maenhout, 2022; Yang et al., 2024).

Next, it is important to acknowledge the relationships between each characteristic and its TVESs. According to Tables 4 to 7, video length, pacing, text overlay, and format, are statistically insignificant, meaning that each individual characteristic likely does not influence video engagement. Additionally, Table 8 reveals that music is the only statistically significant characteristic, and the other characteristics' results

may be due to chance. Overall, using this specific TVES formula, music seems to be the only characteristic that influences a video's statistical engagement, and the remaining characteristics (video length, pacing, text overlay, format) require further investigation from a different model of measuring short-form video engagement.

Finally, Table 10 demonstrates that Video 1, the video with desirable characteristics, was more favorable in terms of engagement and retaining attention than Video 2, the video with undesirable characteristics. In examining Figure 6, the majority of respondents believed that the short video length and fast pacing of Video 1 contributed most to the engagement. Only some respondents believed that the background music, vertical format, and text overlay contributed to maximizing Video 1's engagement. In Figure 7, respondents were more divided than in Video 1 over the most influential characteristics of Video 2's engagement. For instance, the largest group of respondents believed that the presence of text overlay was the most influential factor (39.7%), but present text overlay is a desirable characteristic, and so this result was expected over the remaining undesirable characteristics of Video 2. Therefore, the researcher accepts the hypothesis: teenagers' focused attention is better retained with short-form videos containing desirable characteristics rather than undesirable characteristics. However, the researcher's other hypothesis is only partially accepted: among the researcher's initial guesses, only fast pacing, vertical format, and background music were found to be most desirable.

Characteristic	Option	Desirability
Video Length	Short	Neutral
	Medium	Desirable
	Long	Undesirable
Pacing	Slow	Neutral
	Moderate	Undesirable
	Fast	Desirable
Text Overlay	Present	Desirable
	Not Present	Undesirable
Format	Vertical	Desirable
	Horizontal	Undesirable
Music	None	Undesirable
	Background	Desirable
	Only	Neutral

Table 11. Short-Form Video Characteristics: Desirability

Limitations

Although some portions of the data were statistically significant, several limitations reduced the effectiveness of the study. Firstly, content analysis is a highly subjective process, and without a team of coders, the reliability of the results may be undermined. Most notably, for coding the pacing of each video, what the researcher may have deemed as slow, another coder may have seen as moderate. Secondly, and most importantly, the characteristics that the researcher investigated do not represent the exhaustive list of qualities of short-form videos that can influence engagement and retention. For example, the content itself in each video is likely a larger contributor, and it should be taken into account that the investigated characteristics are only predictive correlations, not causations of engagement. Therefore, other factors may have influenced the results of both the content analysis and the survey. Lastly, the study was focused solely on videos from the TikTok platform and teenagers aged 14 to 18 years old in the United States. As a result, the findings may only be generalizable to short-form videos found on TikTok and populations that fit the researcher's demographic of investigation.

Implications and Future Research

This study offers valuable information for people who create short-form video content. For instance, by identifying the desirable and undesirable characteristics, casual content creators can learn more about how to optimize their videos' engagement. Additionally, with short-form video advertisements growing as a marketing practice (Meng et al., 2024), this study can inform advertisers on which characteristics to include in their short-form content to better maximize their video's engagement, retention of viewers, and profits for their advertisement. Finally, the creation of the TVES calculator could be used by other researchers investigating the engagement of short-form TikTok videos, as an equation specifically for the TikTok platform likely did not exist prior.

Future researchers could investigate and replicate this study on different short-form social media sites to see if the results change significantly. For instance, researchers can investigate whether the desirability of the characteristics changes on different platforms, such as on Instagram Reels or YouTube Shorts. Another area of investigation for future researchers is exploring characteristics that were not analyzed in this study using the same framework. Some characteristics in the body of literature that could be similarly investigated are voiceovers, the presence of hooks, and calls to action. Finally, different demographics should be examined to determine whether all populations prefer desirable characteristics over undesirable ones.

Conclusion

From the content analysis and survey, the researcher concludes the following. Firstly, in the realm of short-form content creation, a medium video length, fast pacing, present text overlay, vertical format, and background music are all desirable characteristics that likely contribute to maximizing a video's engagement and enhancing the retention of teenagers' focused attention. In contrast, a long video length, moderate pacing, not-present text overlay, horizontal format, and no music likely minimize engagement and retention. As mentioned in the discussion, in comparison to the body of literature, some of the desirable traits (present text overlay, vertical format, background music) correspond with other studies of short-form video engagement, while other traits (video length, pacing) enhance the debate and share a new perspective researchers can consider.

Secondly, the researcher determined that according to this specific TVES calculator (Equation 1), music is the only characteristic that can influence a short-form video's engagement. This conclusion supplements the study conducted by Radovanović (2022), as she claims that music is one of the most important factors in "optimiz[ing] content" and its virality (p. 56). The other characteristics were statistically insignificant (see Tables 4 to 7), meaning that a different model should be used by future researchers to better determine the characteristics' predictive and influential roles in video engagement.

Lastly, through the survey, the researcher determined that TikTok videos with desirable characteristics are more likely to be seen as engaging and to retain the attention of American teenagers more effectively than short-form videos with undesirable characteristics, as determined by the TVES calculator and Table 11.

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