

# Do Not Worry Too Much about Short Video- How Watching Short Video Affects Junior High School Students' Grades through Content, Time-consuming and Involvement

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## ABSTRACT

Watching short video has become one of the most popular leisure activities in China, especially among teenagers. However, some previous researches pointed out the possible negative impacts on students' grades brought by watching short video. This paper focused on the 3 main elements in watching short video, namely content preference, sense of time-consuming and level of involvement, using Likert Scale and SPSS as tools to do quantitative analysis of the connections between watching short video and junior high school students' grades. This paper mainly conducted a questionnaire survey on senior high school students in Shanghai, and obtained 199 questionnaires. The results show that there is a positive correlation between watching short video and poor performance, but this relationship is not strong. In addition, watching short videos may have some indirect effects on students' performance through affecting students' sleep, emotion and participation in learning. This study will further discuss other new aspects concerning watching short video in order to establish a more comprehensive conceptual model. This paper will provide some enlightenment and case value for the research on the relationship between new media and education.

**Keywords:** Short video, Education, Students' grades.

## 1. INTRODUCTION

Until June 2019, the number of online video users in China has reached 759 million. The number of short video users reached 648 million, accounting for 75.8% of the total netizen [1]. Some short video apps became more and more popular. One typical example is Tik-Tok, which has developed rapidly in recent years and has been widely used by teenagers. A survey indicates that 85% of Tik-Tok users are under 24 years old, and "post-95s" and "post-00s" are the main users [2].

With the popularization of short video, worries come as well. One of these worries is how does the use of short videos affect the school performance of teenagers. The impact has received more attention in recent years. Sorting out existing research findings, most of them stayed at the expression of theoretical perspectives, and the researches based on the empirical results are fewer. For example, Hu Zhifeng proposed that short videos

need to be used as a "double-edged sword". Young students should avoid the negative impact of short video apps [3]. The real-name registration system. The author wants to analyze the adolescents in school through empirical investigation the current status of the use of short videos, so as to allow all parties to target the reality of youth Follow-up education on the actual situation. This study uses a quantitative research method, based on empirical surveys on young people.

The research on short videos is mostly about the status quo and strategies of the platform's own development, while the research from the perspective of audience is relatively few, and most of them focus on college students or adults, and the research on high school students is even rarer. As an active group in the network and an important subject of social media, senior high school students are in a critical period of socialization. Due to the rapid development of media technology and increasingly fierce competition in the

mobile short video platform industry, short video content of mixed quality is constantly infiltrating into the daily life of high school students, and problems such as Internet addiction, blind imitation and distorted values are gradually revealed.

This study combines the two, focusing on the important group of high school students from the perspective of the use of short videos, discusses its influence on high school students, analyzes the influence of the use of short videos on high school students' self-cognition, academic achievement and psychological development, and explores the important role of short videos in the growth of high school students, hoping to provide reference for society and parents to guide high school students to use short videos reasonably.

This study can bring convenience to further relevant researches on reasons and approaches. Through correlation analysis, the three possible dimensions concerning short video which affect students' performance will be examined. Then, further researches to explore the reasons behind can be done, and possible solutions to reducing the negative effects on students from short video can be found.

## **2. LITERATURE REVIEW**

With the rapid development of short video industry, the research on short video has gradually become a hot spot in the field of communication. At present, the domestic research materials on short videos are increasing year by year, mainly focusing on the following aspects.

### ***2.1. Research on the development status and trend of mobile short video platform***

On the rise of short video platform, Zhang first sorted it out. They think that the emergence of short video, a social media based on smart mobile terminals, has given news media a brand-new form, but how to better combine it with news reports needs further exploration in practice [4]. The development of short video applications in China has formed a trend of competing for hegemony. Wang Xiaohong pointed out from the technical level that short video has the characteristics of instant shooting, convenient operation, short and refined, real-time sharing and various forms [5]. From the perspective of the trend of media convergence, the emergence of mobile short video platform broadens the discourse space of traditional media, and at the same time creates a new form of public opinion guidance.

With the advent of Web3.0 era, Chang starting from the characteristics of short video industry, explored the future development direction and improvement strategy

of China's short video platform from various angles from platform development, content production, communication strategy and business development mode [6]. They believed that the traffic dividend of short video had become a thing of the past, and the content was destined to be the main battlefield in the next stage, so we should upgrade the content form to solve the problems of content homogenization and infringement. At the same time, Gao believes that the marketing model is also an important issue that cannot be ignored. Short video marketing should first have accurate positioning. Content production should not only be creative but also need superb shooting skills [7]. It is also necessary to establish a marketing matrix, pay attention to introducing head users, set up professional creative and marketing teams, and maintain active interaction with fans to enhance brand user stickiness.

### ***2.2. Research on short videos and teenagers***

Although the related research on media communication and adolescent development has gradually become a research hotspot in recent years, there are not many related researches on short videos and adolescents in China at present, and they mainly focus on the negative effects of short videos on the formation of adolescent values and the cultivation of their media literacy. Liu thought that a large number of vulgar short videos produced by fierce competition in short video industry will have great negative effects on teenagers who are in the stage of forming values, including direct harm caused by excessive addiction or even blind imitation, and the influence of pan-entertainment on their mental health and values. These problems urgently need to be corrected by relevant administrative and law enforcement departments [8]. Ma and Gao discussed the motivation, habit and the relationship between stress and addiction of short videos on the basis of the theory of use and satisfaction, putting forward reasonable suggestions for teenagers to use them [9]. Ma and Liu analyzed the reasons why short videos are favored by teenagers from the dissemination characteristics, and then put forward that short videos have negative effects on teenagers' life, aesthetics, morality and communication values. They believed that schools, parents, short video platforms and teenagers themselves should play their own roles to promote teenagers to establish correct values and moral consciousness [10].

## **3. METHOD**

In order to seek out the quantitative relations between watching short video and junior high school students' grade, a clear, reliable and specific conceptual model should be built. Hence, quantitative analysis is a must. Therefore, a survey was designed to collect relevant data.

### **3.1. Questionnaire design**

The 3 estimating dimensions concerning watching short videos (content preferences, level of involvement, sense of time-consuming) are all related to a person's subjectivity. Consequently, in order to carry out quantitative analysis in this topic, quantifying these 3 subjective estimating dimensions should be the first step. To achieve this goal, 5-level Likert Scale is a good tool. 5-level Likert Scale has 5 response categories from strong disagreement to strong agreement for participants to choose, using numbers 1 to 5 to reflect the degree of agreement of the participants with the option [11]. Then, people's attitudes towards questions about the 3 dimensions can be quantified with the assistance of these numbers from 1 to 5.

With the help of Likert Scale, we design the questionnaire. In the questionnaire, 21 items are divided into 6 main dimensions to require the participants to choose levels between strong disagreement, disagreement, neutrality, disagreement and strong agreement. In the narratives of relevant questions, words concerning attitudes and actions are examined to prevent possible misunderstanding and ambiguity. All the questions require participants to assess negative aspects of watching short videos in our hypothesis to reduce the difficulty of analysis.

#### **3.1.1. Content preference**

As a previous survey carried out by Jevtic and Milosevic indicated, the content of media will affect adolescents' value orientations and actions [12], which may possibly include their attitudes towards study and life, affecting their grades. Additionally, students from different background have different preference in short video contents [12]. Some may have close relations to the in-class knowledge while others may not. It could also be an influencing factor to their grades. Therefore, we use 3 items to evaluate these two aspects.

#### **3.1.2. Sense of time-consuming**

Evidences has shown that the time spent on reviewing and time spent on completing homework plays important role in affecting students' grades [13][14]. Apart from the time spent on learning-related things, there is also significant positive correlation between hours of sleep and final exam score [15]. Watching short video, in our hypothesis, will more or less occupy students' time used in sleep and learning, influencing their grades. Consequently, we use 4 items in this aspect to estimate students' sense of time-consuming in watching short video. Why choosing the sense of time-consuming instead of the specific length of time as analyzing materials is for the convenience of using Likert Scale.

#### **3.1.3. Level of involvement**

Content gratification can lead to addiction to short video [16]. Then, students may cannot stop watching short video when they need to rest or study, which causes low learning efficiency. Moreover, when watchers are highly involved, complex short video contents is one of the causes of mood swing. Emotions have positive relationships with learning efficiency [17]. As a consequence, mood swings may also bring swings in grade. Hence, level of involvement is also a possible affecting factor. In this aspect, 5 related sub-questions are designed.

#### **3.1.4. Other 3 aspects**

All the elements concerning watching short video are estimated from the 3 aspects above. Apart from these 3 aspects, 3 other aspects are designed as well to make the questionnaire more overall.

Watching short videos does not have direct influences on students' grades but affects students' grades indirectly. It, as mentioned above, tends to have impacts on students' sleep, learning efficiency, emotion and time-allocating strategy firstly. Then, these direct-affecting factors will have further influences on students' grades. Hence, it is necessary to figure out the degree of influences of these direct-affecting factors on students' grades. Therefore, we design 6 sub-questions concerning this aspect.

Short video has some characteristics. One important is short videos should be very short and less than 10 minutes [18]. Another significant characteristic is short videos are "unconstrained", which means most of them are not well-designed and well-edited [19]. Some samples may have little access to the short video or mistake other forms of videos as short videos. To exclude the invalid samples, we designed 3 questions to assess the characteristics concerning videos the samples watched.

In order to carry out correlation analysis, students' grades should also be quantified based on the same quantitative standard-5 level Likert Scale. As a result, 2 questions are designed in this aspect to estimate students' gratification of their grade.

### **3.2. Sample Choice**

In order to eliminate the bias, simple random sampling was chosen as the principle to choose participants. All the participants were from Shanghai and they are all high-school students, which guaranteed the relevance to our topic. Questionnaires were sent to students and 199 questionnaires were completed and took back.

#### 4. RESULTS AND DISCUSSIONS

For each dimension of each sample, we use the average of the scores of all the items as final score of this dimension. Then, quantitative analysis can be started by using these final scores.

After preprocessing the data, samples were sorted by the samples' scores of the fifth dimension-elements of short video. Students who got low score in this dimension means they might have little access to the short video or mistake other forms of media as short videos. Hence, those who scored 1 in this dimension were excluded from the samples.

For all the samples, most of their final score of each dimension is around the median number 3. It means that the data is normally distributed, which is a valid material for quantitative analysis.

Because the data is normally distributed, we choose Pearson model as our model to analyze the direct correlations between the 3 dimensions mentioned above and the students' grades [20]. As the following graph reveals, the coefficients between all the 3 factors and the sense of grade was greater than 0.05. The coefficients of the dimension Time-consuming is even 0.831, which is close to 1. It means that all the 3 dimensions have nearly no direct impacts on students' grades. The least relevant factor, namely the time-consuming, may has something to do with students' parents. In China, parents tend to have powerful supervision on their children [21]. Hence, they may control the children's time spent on watching short video, which lead to the effects from time-consuming is very limited. Another evidence could also support this assertion. There are more than 30 samples (From sample 165 to sample 199) scoring lower than 2 in time-consuming dimension, which means that the short video will take up nearly no time for sleep or study.

Although the direct correlation is very weak, the positive relationships still could be observed. As to the value of correlation, all the values concerning these 3 factors are positive. It indicates that these 3 factors may affect the grades in a weak or indirect way.

Then, I choose some factors having direct connections with grades and explore the effects on them from watching short videos. In the first state, I examine if the factors I list in our questionnaire could truly be related to grades. Hence, correlation analysis was carried out and the P is 0, which means that the correlation is very strong. In other word, the sleep, emotion, mastery of knowledge can explain the students' performance in exams.

The correlation analysis was also carried out between short video elements and the factors affecting students' grades directly. In the process, I noticed that the level of involvement has strong connections with the direct-affecting factors. It might help demonstrating my

idea in designing questionnaire that high level of involvement may lead to mood swings, and the mood swings then influenced the students' grades.

Other two elements, namely the content preference and time-consuming, have moderate connections with the direct affecting factors. Hence, linear regression analysis was also done to examine the level of model fit. The square of R, as shown in the graph, is 0.5. It means that the model fit is 50 percent, which is a very big number. It reveals that the 3 elements in watching short video have great influences the direct-affecting factors of students' grades. Hence, watching short video, although have no direct effects on students' grades, may affect it through indirect way.

#### 5. CONCLUSION

This study used quantitative methods to analyze the connections between watching short videos and students' grades. Different from the results in previous researches, the result of the survey indicates that the connections between watching short video and grades is weak and the previous assertion that watching short videos may lead to poor grades seems to be invalid. However, the indirect connections still exist and the relationship between watching short video and poor grades, although weak, is positive. Therefore, students' use of short video still needs to be directed to the right track.

Additionally, this study only investigated 3 important elements of watching short video. It is possible that some other significant affecting factors are waiting to be found.

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