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**VIDEO CLIPS AS NEW MEDIA APPLICATION IN K-12
COMMUNICATIVE PROCESSES (ON THE EXAMPLE OF ENGLISH
LEARNING ON CHINESE HIGH SCHOOLS)**

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INTRODUCTION

Video clip is a multimedia teaching resource composed of sound, image and animation. With the introduction of modern information technology based on computers, networks, and multimedia into the classroom, video editing has also been widely used in English classroom teaching. It can break through the limitations of teaching materials, greatly enrich classroom teaching activities, and make the 45-minute classroom colorful. In teaching, teachers should combine the laws of language teaching with the characteristics of video clips, a special language, and cultural carrier, to select film and television materials, carefully design classroom activities, and make them an important resource and means of English teaching. Special attention should be paid to cutting some short and close-to-classroom teaching content from films and various educational CDs, and insist on using them together with PPT courseware in English classroom teaching, Good teaching results have been achieved.

As a leading example of online education, "short video + education" shows many characteristics different from traditional education. The market-oriented supply and demand connection, UGC resource generation and fragmented content, extensive user coverage, diversified teacher groups, and the practice of the inclusive education concept provide a new case for the integration of the information technology platform and the education industry. The emerging education and teaching model provides new ideas and inspiration for the expansion of the education market, the implementation of lifelong education, and the exchange of experience and skills.

As the educational video clips have considerable advantages compared to traditional classroom instruction in terms of accessibility, attractiveness, effectiveness, etc., they are regarded as teaching support that has been widely used in different levels of education, especially for K-12, the primary and secondary education from kindergarten for 5-6 year-olds to 12th grade for 17-18 year-olds. While in non-native English-speaking countries, English language education in K-12 has been valued and rapidly developing in recent years, especially for high school students. For instance, English has been a testing subject for the National College Entrance Examination of China since 1983. The emergence of video clips leads to a negligible impact on high school English language education in China, and modes of teaching and learning English are changed consequently. However, applying video clips as an instructional mode is still controversial as its positive and negative influences on education are coexisting. Therefore, the application and influences of video clips on K-12 education are investigated in this paper, using English learning in Chinese high schools as the research sample.

The reasons for the popularity of video clips need to be studied using the theories of communication to evaluate whether video clips are an applicable and appropriate means of communication for educational purposes. The mechanism and principles of educational communication are also crucial to researching the influences of video clips on teaching and learning. These are the theoretical supports for the discussion on the application of educational video clips.

As the educational video clips have not been systematically and overwhelmingly applied to English instruction in China, the purpose of this paper is to investigate the influences of video clips on high school English education and study the practical applications of video clips on English education for high school students. English instructors and students will benefit from the results of this research by understanding how video clips could be used as an effective tool or media for English teaching and learning. The current and potential market of educational applications of video clips is also studied which advises educational institutions on how to develop video clips as a source of learning materials.

This research is mainly focused on the spheres of communication and education. The theories of communication are used to investigate why video clips are more efficient and popular than traditional media and to study whether educational video clips are more practical than traditional instruction modes. The theoretical sources of education are also cited to support the hypothesis and experimental results of this study.

The following problems are majorly researched in this paper:

1. What are the opinions, concerns, and attitudes of Chinese high school students, their parents, English teachers, and educational institutions regarding the use of video clips as instructional support for high school English teaching?
2. Compared with traditional classroom teaching, do video clips have better teaching performance and effect according to the leading factors that affect the teaching effect of video clips (such as length, topic, presentation mode, teaching language, etc.)?
3. What are the positive or negative effects of educational videos on English education in Chinese high schools? Is the video clip suitable, convenient, and suitable for High school English education in China? If video clips perform a better teaching performance and effectiveness compared to traditional classroom instruction?

The goal of this research is to use both theoretical principles of communication and education and experimental and analytical results to research and answer the specific questions of how video clips facilitate and interfere with English learning for high school students? What is the attitude of students, instructors, and parents toward using video clips as a learning medium? And how to effectively apply video clips to

English learning? The results of this paper are expected to be referable and creditable for China's education institutions who propose to develop video clips as an educational communicative media.

The tasks to achieve the goals of this research include attaining the relevant and supportive theories of communication and education, searching for the existing data regarding educational video clips, designing surveys and conducting experimental to obtain first-hand data, synthesizing schematics and discussions to illustrate the results of this research, and eventually stating the feasible applications of video clips on high school English education.

The methods of surveying, interviewing, and analyzing big data are used to collect data for research, and a series of experiments were conducted to observe the English learning efficiency of high school students using video clips.

A series of questionnaires are designed and distributed to students, parents, English instructors, and education institutes, and the opinions and attitudes of surveyed people are analyzed and studied to synthesize statistical and data-oriented reports. Specific thoughts regarding video clips from different inquired targets are gathered and recorded through field interviews and discussed in the thesis.

High school students are invited to a set of experiments by watching various educational video clips of different lengths, presenting patterns, instructing languages (in English or native languages), etc., and experiment volunteers' attention to these video clips are observed and recorded. A quiz on the English knowledge lectured by video clips is given to students to evaluate the teaching and learning effectiveness which is also analyzed in the paper. Comparison trials between the traditional classroom instruction and the educational video clips lecturing the same lesson are also conducted and studied.

The expected novelty of this research is to utilize high school English education in China as a representative example to study the application and influences of video clips on secondary education. A series of experiments and interviews are conducted to attain first-hand data which is currently unavailable to scholars. The statistical data and analytical results on the opinions of relevant people on educational video clips are applicable to other relevant studies.

MASTER'S THESIS SUMMARY

Video clips are defined as any short videos of seconds or minutes in length that are shorter than the length of a traditional television program. In recent years, with the development and spread of communication technologies, video clips are becoming more and more popular all over the world and are considered a new way of communication.

The use of video clips or short films is nothing new in teaching and learning. Visually appealing videos help educators and students understand the meaning of the phenomenon in many ways. In the past few decades, video media has been used as a learning resource to improve English language learning. Video clips have been defined as a type of multimedia material, including oral and non-verbal presentations, that simultaneously display images, narration, and on-screen text. The continued growth of online video benefits educators as they gain access to a wide and ever-expanding range of topics. In recent years, the ratings of instructional videos have been rising. This shows that educators are using online video and its benefits.

More and more scholars and educators believe that due to rapid change and the impact of Internet technology and media consumption, today's younger generation is fundamentally different from the previous generation. Therefore, it is believed that rapid technological progress has changed the thinking abilities of students, and new teaching methods are required. Although researchers are slowly realizing the usefulness of online video editing in the classroom, research on the relevance of free online video editing is limited.

A large number of video clips available online creates new benefits in education. Online video is not only a place for amateurs to download materials but also a free resource center for teachers and students. The optimistic attitude and keen eye also clearly indicate that this generation of teachers considers online resources such as video clips to be important resources for facilitating the learning process. Video enhancement courses have the potential to be a very effective method of capturing the learning interest and enthusiasm of today's online generation.

ОБЩАЯ ХАРАКТЕРИСТИКА РАБОТЫ

Видеоклипы определяются как любые короткие видеоролики продолжительностью в секунды или минуты, которые меньше продолжительности традиционной телевизионной программы. В последние годы, с развитием и распространением коммуникационных технологий, видеоклипы становятся все более популярными во всем мире и рассматриваются как новый способ общения.

Использование видеоклипов или короткометражных фильмов не является чем-то новым в преподавании и обучении. Визуально привлекательные видеоролики помогают преподавателям и учащимся во многих отношениях понять значение явления. В последние несколько десятилетий видеоносители использовались в качестве учебного ресурса для улучшения изучения английского языка. Видеоклипы были определены как тип мультимедийного материала, включая устные и невербальные презентации, которые одновременно отображают изображения, повествование и экранный текст. Продолжающийся рост онлайн-видео приносит пользу педагогам, поскольку они получают доступ к широкому и постоянно расширяющемуся кругу тем. В последние годы рейтинги обучающих видео растут. Это показывает, что преподаватели используют онлайн-видео и его преимущества.

Все больше и больше ученых и педагогов считают, что из-за быстрых изменений и воздействия интернет-технологий и потребления средств массовой информации сегодняшнее молодое поколение коренным образом отличается от предыдущего поколения. Поэтому считается, что быстрый технический прогресс изменил мыслительные способности учащихся, и требуются новые методы обучения. Хотя исследователи постепенно осознают полезность онлайн-редактирования видео в классе, исследования уместности бесплатного онлайн-редактирования видео ограничены.

Большое количество видеоклипов, доступных онлайн, создают новые преимущества в образовании. Онлайн-видео — это не только площадка для загрузки материалов любителями, но и бесплатный ресурсный центр для преподавателей и студентов. Оптимистичный настрой и острый взгляд также ясно указывают на то, что это поколение учителей считает онлайн-ресурсы, такие как видеоклипы, важными ресурсами для облегчения учебного процесса. Курсы по улучшению видео потенциально могут стать очень эффективным методом привлечения интереса к обучению и энтузиазма современного онлайн-поколения.

CHAPTER 1

VIDEO CLIPS AS NEW MEDIA

1.1 Emergence and popularity of video clips

A short video is a new method of Internet information exchange. Generally, a short video is a video-sharing content that is played on new media such as the Internet short video platform for less than 5 minutes. With the wide application of mobile terminal equipment and the acceleration of mobile networks and broadband networks, the transmission channels of short video with large traffic are broadened, and the information content transmitted is deeply loved by various Internet platforms and users.

Although the origin of online short videos can be traced back to the end of the 20th century, it was difficult to upload, share, and watch online videos at that time due to the lack of equipment and integrated platform. In 2005, YouTube, the online video-sharing platform was founded in America, stimulating the development and popularity of short videos. YouTube not only established an easy-to-use sharing platform with the practical features of rating, adding tags, accepting different video formats, and commenting, but also created a social network, enabling communities and groups to produce and share video clips. By mid-2006, YouTube had more than 25 million video clips available online and became one of the fastest-growing websites. An average of 100 million video views per day at that time.

The potential markets of video clips caught the attention of traditional movie studios. In 2006, the producers of Lucky Number Slevin, a film with Morgan Freeman, Lucy Liu, and Bruce Willis, made an 8-minute clip for YouTube. Celebrities in traditional media have proven to confer bigger popularity in clip culture than most amateur video makers.

The emerging potential for success in web video caught the eye of some top entertainment executives in America, including former Disney executive and current head of the Tornante Company, Michael Eisner. Eisner's Vuguru subdivision of Tornante partnered with Canadian media conglomerate Rogers Media on October 26, 2009, securing plans to produce upwards of 30 new web shows a year. Rogers Media would help fund and distribute Vuguru's upcoming productions, thereby solidifying a direct connection between old and new media.

In the 2010s, the rapid development of communication and mobile devices technology such as social media apps, 4G, and 5G technologies created a portable platform for producing, watching, and sharing short videos using a mobile phone. It significantly boosted the popularity and redefined the functionality of short videos which are more accessible to more people using their mobile phones.

In 2022, millions of short videos have been uploaded and shared on different platforms and apps including Instagram, TikTok, YouTube Shorts, Facebook,

Snapchat, etc. And the most common uses of short clips are product reviews, product demonstrations, commercials, entertainment, vlog, facility tours, corporate overviews, presentations, and teaching and training.

At present, the development of the short video industry is gradually transitioning from the incremental market to the stock market. The short video platform cooperates with the media and integrates with other industries. The whole industry presents a development trend of comprehensive promotion and multi-point breakthroughs. The entry of mainstream media, the rise of online consumption, the rise of live broadcast form, the broadening of application scenarios, the development of intelligent media, the expansion of industry boundaries, and the reshaping of media values. These typical trends in the media industry have played an important role in the development of short videos, and some have even been driven by short videos.

New pattern: the growth rate of the stock market is slowing down, and the "two superpowers and many strong" is stable and changing. The short video industry has a long history of development. Since the germination of "gif Kwai" short video in 2011, a short video has mushroomed in the media industry. During the ten-year development period from 2011 to 2021, the short video industry has experienced a transformation from the early "from nothing to an incremental market" to the current "from more to better" stock market.

In the process of changing from incremental market to stock market, the number of users of short video has increased steadily, although not as fast as before. According to the 48th statistical report on the development of the Internet in China, "by June 2021, the number of short video users in China had reached 888million, an increase of 14.4 million over December 2020, accounting for 87.8% of the total Internet users". Among many network applications, the growth rate of 12.9% in the number of users of short video applications is still significant. The short video is the most attractive to Internet users. 20.4% of people use short video applications when surfing the Internet for the first time. The short video has become the second-largest network application after instant messaging. Based on the huge user group and scope of use, it has become an important underlying application in the mobile Internet era.

With the expansion of the scope of use, the frequency of short videos is also increasing. According to the 2021 Research Report on China's online audio-visual development, short videos are used for more than two hours per person per day. With the change in the frequency and duration of short videos, the content ecology of short videos is also expanding. The video content is no longer simply limited to entertainment and comedy. News, film and television, life, food, online education, tourism, science popularization, and other content forms are gradually emerging. It has become normal for a short-term video to penetrate into the user's life and embed into society with multiple roles.

At present, the pattern of "two superpowers and many strong players" in

China's mobile short video industry is gradually taking shape, and the leading position of the "two superpowers" of Tiktok and Kwai is still stable. The short video users continue to concentrate on the head platform. According to the data, more than 80% of the users who often watch short videos on Tiktok, Kwai, and WeChat are combined, and the short video users tend to concentrate on Tiktok, Kwai, and WeChat video numbers. At the same time, many platforms present hierarchical distribution based on vertical segmentation and accurate communication of content and users: Tiktok and Kwai are still in the first echelon of leadership, watermelon video and good-looking video are in the second echelon of midstream, WeChat video number, Weibo video number and Tencent micro-video number, which rose in 2020, are in the third echelon, while WeChat video number is the next in 2021.

The "new" of the new pattern is reflected in the fact that the "entry" of the video number has promoted the dynamic adjustment of the pattern of "two superpowers and many strong powers". In 2020, Weibo released the "Weibo video number plan" as a support plan for video content creation, which includes account management, product services, equity sharing, and other content. As an early distributor of the domestic short video industry, the "ice bucket challenge", second shooting, and "little coffee show" were all the rage in the social media era. Microblog began to support creators and UGC in the form of short video layouts, and entered the market with its advantages. In January 2020, Tencent launched the video Number internal test platform, embedded it into the WeChat platform, and opened functions such as live broadcast and goods delivery. In 2021, the WeChat video number has become an important force in the pattern of "two superpowers and multiple powers". In addition, the "little red book" characterized by "grass planting traffic" and focusing on younger groups also launched its video number in August 2020, adjusting the video duration permission to 15 minutes, optimizing the content of the creators' open video data, and encouraging video creation in the form of traffic support. The social platform re-entered the short video game in a new mode, making the competition situation of the industry stable and changing. Although there is a certain gap between the video number of the social platform and the short video platform in all aspects, it shows strong momentum in the "two super and many strong" by virtue of its strong social and interactive mode.

New form: long and short video competition fusion, "short video + live broadcast" has become a popular communication form. With the continuous release of short video market dividends, TV media and online video platforms have also begun to layout the short video field relying on their unique long video resources. The long and short video games show a trend of integrated development in the form of competition and cooperation. Many TV media, video websites, etc. rely on large screen programs or network variety product resources to split long videos into medium videos, short videos, and vertical screen dramas, and move them to mobile

terminals or short video platforms to build short videos into their "convenient versions". Increasing the production proportion of short video content in video resources and content reprocessing, deep processing, and re-innovation based on mobile short video context have become important measures for media and platforms to optimize and upgrade with the help of short video. Since 2020, iQIYI has launched a short video content community "suike", and Youku has launched more than 100 Mini dramas.

At the same time, the short video platform is also involved in the long video and other comprehensive video businesses and has entered the long video field by testing the "micro drama", "micro variety" and other program forms. Tiktok opened the 15-minute video shooting permission, and Kwai launched the long video program produced by the professional team. The short video platform seeks diversified realization forms and accelerates the layout of the content industry, which reflects its courage and courage in innovation and development.

"Short video + long video" is becoming more and more integrated with technology, form, and content, and "short video + live" has also become a popular communication form at present. Under the background of the physical space flow restriction caused by COVID-19, the rapid development of 5g, artificial intelligence, and other technologies has given short video and live broadcasting opportunities in terms of technology, scene and demand. According to the user survey data of the 2021 Research Report on China's online audio-visual development, webcast users' short video + long videos are increasingly integrated with technology, form, and content, and "short video + live" has also become a popular communication form at present.

New ecology: the mainstream media has a strong entry, and the social value of short videos has become prominent. With the development of the short video industry entering a mature stage, the head platform has changed from entertainment to a diversified comprehensive platform, and the mainstream media have also entered the market relying on the content advantage. Short videos have become an important starting point for the mainstream media to innovate the communication form and reshape the discourse pattern. In 2019, mainstream media began to lay out short video clients and short video platforms to enter the short video market. On the basis of its own platform construction in 2019, the central media will continue to improve the aggregation and innovation functions of the platform. Among them, "central video" innovated the "slow live broadcast" mode and promoted it to become the norm of integrated communication. People's video on people's network launched many financial media programs such as "cloud living room of the two sessions" and "Lian Mai and the two sessions" during the national two sessions in 2021. The "bailing" short video sub-platform of the learning platform of the learning power learning platform has designed five columns of "dazzle, window, Tibet, beauty and show" at

the beginning of its establishment, which has rich connotations and covers a wide range of topics; In the follow-up development, columns such as party history, panda, food and rainbow were added. In addition, the central media solicited works for the whole society, the whole network, and the whole platform, creating a rich ecosystem of short video content.

1.2 Comparison between video clips and other media means

1.2.1 The Advantages of Video Clips

First, the short video content is diverse. In the new media era, short video shows the characteristics of the diversity of content. It is mainly manifested in the diversification of short video content topics. Due to the high openness of the Internet, the elements available for selection in content topics are very fresh and diverse, which can be entertainment topics, life topics, popular science topics, and of course, news topics. According to different themes, short videos cover diverse content from politics to entertainment, which can be independently selected by the public.

Second, short videos have concise narration. The rise of short videos in the new media era just caters to the characteristics of people's fragmented reading. Short videos have the characteristics of simple narration, which is different from some traditional news communication and long video production. Short videos do not pursue complete and grand narration, but a more intuitive and visual expression of core events and characters within a limited time, and brings more direct sensory stimulation and information transmission to the public in combination with pictures, screens, and, background sounds. It is also more convenient for users to communicate and forward between users, Therefore, short videos have very intuitive influence and communication power.

Third, the short video has strong timeliness. In the era of the mobile Internet, the speed of information transmission directly determines the value of information. Short video not only has the advantages of short time, convenient viewing, and refined content but also has the characteristics of flexibility. Compared with traditional news production, due to the openness of users of short video platforms, especially in the event of some emergencies, users of each platform can make use of the mobile intelligent devices around them anytime and anywhere to make on-site records, and quickly release relevant live information in the form of short videos. Although the quality of these short videos is uneven, and there is also a lack of professionalism, it can not be denied that the timeliness of their dissemination is unparalleled.

1.2.2 The Disadvantages of Video Clips

Sometimes short video is harmful. The short video platform spreads a lot of information every day, but the authenticity of this information is difficult to

distinguish, and it is easy to mislead public opinion. In addition, the investigation of relevant departments found that many short video users do not want to use short videos to spread positive energy. They just use short videos for entertainment, relaxation, and killing time. Without a strong sense of self-discipline, people will spend a lot of time browsing useless information, which will not only lead to mental depression but also cause some damage to the body. Moreover, the information transmitted by the short video platform is full of diverse values, which will have a certain adverse impact on the healthy growth of teenagers.

1.2.3 The Advantages of Traditional Media

The traditional media has been developing for a long time, with a mature development mode and market. The employees have rich work experience and have formed a strong brand effect in the market. The biggest advantage of traditional media lies in its credibility and authority, so it has a high position in the hearts of the audience. Moreover, the traditional media, mainly newspapers, television, and radio, have a wide range of communication and a wide audience.

The first is specialized operation. The traditional media has a professional news concept and the professional operation mechanism has strong human and material resources and has gathered a large number of professional excellent journalists. These traditional media workers have received professional standard education, have rich experience, and have strong news productivity. The depth, breadth, and height of their news reports are unmatched by new media journalists.

Second, the status of traditional media is high. Traditional media has always occupied a decisive position in the hearts of the people and has been widely recognized by the public.

Third, it is easy to carry newspapers and periodicals. When reading newspapers and periodicals, the audience does not need to use auxiliary tools, is not limited by age and educational background, and only needs to have a certain reading ability.

1.2.4 The Disadvantages of Traditional Media

Everything has relativity. Although the traditional media industry has made great achievements in society after a long period of development, it has also led to some employees' rigid thinking, overstaffed organization, and boring content, which has been difficult to attract the attention of the audience. For example, the way of news broadcasting in traditional media is too serious and rigid, and it is difficult to arouse the emotional resonance of the audience in the broadcasting process. Moreover, the news content takes a long time, which will bring the audience a dull feeling, and even make the audience's aesthetic fatigue. At the same time, due to time constraints, the broadcast volume of traditional media such as TV news programs is very limited, which can not meet the audience's demand for the number of news.

1.3 Video clips as an educational tool

As a cutting-edge example, "short video + education" caters to the trend of demand fragmentation, takes the short video platform as the carrier, drives the resource allocation with the market mechanism, and constructs a large-scale ecological system. According to the report on Kwai education ecology released by Kwai big data research institute, the cumulative production of educational short videos exceeded 200 million, the average daily broadcast volume exceeded 2.2 billion, and the average daily likes exceeded 60 million. On the basis of making full use of the high penetration rate of the short video platform, "short video + education" reaches more users, drives a wider range of groups to participate in the interaction, and shows many characteristics in line with the platform model.

The characteristics of "short video + education" can be summarized as follows.

First, Content fragmentation and system scale. The short video platform is characterized by fragmented content, which meets the fragmented use needs of mobile terminal users. Short video duration is measured in seconds and minutes, with significant fragmentation characteristics. The fragmented form reduces the threshold of content creation, stimulates the participation of the public, and then constructs a large-scale education ecosystem. First of all, the fragmentation of the content form is reflected in two aspects: first, the fragmentation of the content duration, which is a basic feature in line with the platform rules. According to the requirements of Tiktok, Kwai, and other platforms, there are clear restrictions on the video duration. The second is the fragmentation of the content range, from personal talents in music, dance, and singing to life skills in cooking, flowers, and driving; From the professional knowledge of a discipline, breeding, and finance to the experience and skills of maintenance, health preservation, and fishing, it is rich in content and inclusive. Secondly, the creation of fragmented content is not simple editing of long videos, but an innovation in the way of conception. Topic selection, structure design, and content conception all take the fragmented form of short videos as the basic starting point and transmit key knowledge with refined expression. However, the requirements for content generation are simple and the threshold is very low. This feature enables the fragmented knowledge, skills, and experience that originally existed in the general public to be transmitted and exchanged in the form of electronic information.

Second, the content of knowledge is practical and empirical. Due to the time limit, especially the user's preference for reading, educational short videos highlight the practicality of the content and are the practical and experiential integration of skills and views. The data from the Kwai platform shows that quality education, vocational education, three rural themes, and subject education are the four categories with a large number of broadcasts. The specific contents of these categories cover all aspects of people's life and production. To classify and analyze these contents, the

prominent feature is the practicality and experience of knowledge. Practicality refers to the practicality of knowledge acquisition approaches and knowledge services. Users can quickly acquire certain skills while watching short videos. Empiricism means that knowledge is produced in the process of effective experience accumulation, in which experience includes both personal experience and socialized experience; It includes both pure and direct experience and theoretical experience. The characteristics of the knowledge content system are significantly different from the systematic discipline and specialty, and more different from the rigorous academic research. The generation of a lot of content knowledge is often based on the summary and sharing of individual practical experience in some vocational skills, and the knowledge is difficult to form a systematic system and does not have theoretical significance. The essence of its mode is "communication and sharing" on the short video platform with "one skill", which is practical and empirical.

Third, broad user coverage and the trend of inclusive education. The user coverage of "short video + education" is wide. On the one hand, thanks to the high touch rate of the short video platform, it has penetrated into the user groups below the third tier; On the other hand, the simple and understandable content expression and knowledge selection of short videos provide opportunities for users at all levels to participate. Data from the Kwai platform shows that users under the age of 18 prefer subject knowledge, computer, animation, and hand-painted content; Users aged 18-30 prefer photography; Users aged 30-45 have a special preference for agricultural machinery, calligraphy, and saxophone; Users aged 45-60 pay attention to wealth, flower cultivation and erhu; Users over 60 like tea, chess, and opera. At the same time, there are also differences in knowledge preferences among people of different regions and different personalities. From the perspective of supply, the number of short video content creators is nearly one million. The threshold of education supply is very low. As long as you have a skill, you can exchange and share the knowledge surplus on the platform. On the platform, we can see that employees at different levels in various industries can have the opportunity to show their knowledge or skills. The "teacher", as the role of education supply, has also become a very broad concept, and the concept of "three people walking, there must be my teacher" has become a reality in the short video education platform.

CHAPTER 2

APPLICATION OF VIDEO CLIPS ON K-12 EDUCATION

In recent years, with the rapid development of science, technology and the Internet, a new era called short video has come. It is very common to use the online platform to output your own ideas. Among them, video clips plus dissemination of knowledge plays an important part in the market. People's learning with the help of intelligent terminals has become a new type of learning mode. Many bloggers who share knowledge have emerged on major network platforms one after another. In order to make money for themselves, they choose to share knowledge points with people. At the same time, short videos which include knowledge explanations have also contributed to the development and prosperity of China's online education market. Many new online education platforms are beginning to emerge, and a large number of original offline educational institutions, such as Xuersi and New Oriental, have carried out online education programs. Therefore, in today's China, it is clear that more and more students and educational institutions use video clips in teaching and learning.

Application for individual students

2.1 Application for individual students

The importance of education as one of China's basic national policies cannot be overstated. Generally speaking, every Chinese parent has this idea that their kids cannot be allowed to lose at the starting line and that the college entrance examination can change people's fate. Therefore, parents will try their best to create a good learning atmosphere and educational environment for their children. In the past, according to the experiences of most people, learning is nothing but in school or enrolling in a training course. Teachers' ability level and teaching content vary greatly, which is simply limited by time and region. To sum up, video clips are widely used in K12 education, providing parents with a hope and new way to improve their children's academic performance. This is a good thing for every student and their parents. There are four reasons as follows.

First, short videos enrich students' learning content. The cooperation between the short video platform and education is more about promoting the deeper educational reform of teaching and promoting the universal benefit of knowledge by changing the educational scene. For example, the "math physics palace teacher", who has more than 1.5 million fans, connects serious math physics knowledge points with the scenes in life, such as the Pythagorean theorem and the analogy of crayfish, ice sugar gourd, and electric power, which makes fans call "understand, so simple". Luo Xiang, a professor at the China University of political science and law, who is known as a "famous comedian in the criminal law circle", mentioned millions of fans on the

day he entered station B. Today, more than 13 million young people are watching the legendary life of "outlaw Zhang San" and immersing themselves in the ocean of criminal law knowledge. The rise of short video platforms has made knowledge production and dissemination more convenient. In the past, a team may be required to complete tasks, but now only one person and one mobile phone are required to achieve them. This convenience has not only stimulated the creative enthusiasm of creators, made more knowledgeable people with professional skills turn into knowledge producers and become knowledge network celebrities, but also made the dissemination of knowledge break the time limit and have a far-reaching impact on the promotion of knowledge inclusion.

Second, due to the short video, the enthusiasm for teacher-student interaction has increased. Recently, a middle school Chinese teacher became popular in "Tiktok". In her "Tiktok", she recorded the most beautiful videos of students' daily study and life, including fancy eye exercises, graduation VCR, and students' self-directed and self-performed sitcoms, which also recalled the dusty memories of high school for many netizens. At present, the teacher has more than 500000 fans, and the total number of likes has reached more than 6 million. In the eyes of many students, there is always a distance between teachers and students. In addition, there is great pressure on high school learning. How to let students learn in a relaxed atmosphere and also pull in the relationship between teachers and students is her original intention to shoot "Tiktok". In the singing competition, dancing competition, and host competition of the school, Han Xiao used video to record the process while guiding the students to rehearse. A very shy boy in her class signed up for the school recitation contest. The boy was very shy at first, he always made mistakes. The teacher made these into gags. After this video was posted online, there were more than 100000 likes all at once. Unexpectedly, it improved the student's self-confidence. After watching this video, the boy always actively participated in various activities later.

Third, it innovates teachers' teaching methods. The teaching application of short videos optimizes the traditional teaching mode to a certain extent, making the English classroom more interesting and active. Students can better integrate and participate in the classroom in multiple forms, which is conducive to the stimulation of students' interests and active learning. In the specific teaching application of short videos, teachers should actively open up and expand the ways and means of their application, build more diverse teaching classes for students, so as to better enhance students' English learning experience, enable them to achieve efficient interaction of English learning in more interesting teaching classes, and improve their basic skills and comprehensive literacy of language application ability. For example, teachers can collect relevant short videos, films, and other materials in combination with the teaching materials, so that students can carry out dialogue and exchange based on the topic content. In combination with the students' practical foundation, teachers can

also set up interactive activity classes with relatively low difficulty. For example, students can imitate the film clips they are interested in, and their tone, pronunciation, and other aspects are required to be highly similar to the original text. In this process, teachers can also encourage students to imitate the characters' expressions and sounds, so as to increase their interest in imitation. The classroom in this form can not only eliminate the students' resistance and fear of English learning, but also improve their language ability, so that they can gradually enhance their confidence in English learning in this process, and implement the training goal of English practical application.

In addition, in addition to the use of short videos in teaching, teachers can also encourage students to use short videos in innovative ways of learning. For example, teachers can let students make interesting short videos independently, requiring their language content to be mainly in English, and the plot content can be made according to the content of teaching materials. It can also allow students to give full play to their personality and create their own short video content to enrich English learning methods in the new media environment. In this way, in the production of short videos, students can gradually improve their English skills and cultivate their creative ability, which has a good overall training effect. In this process, teachers can not only allow students to apply the current popular software, such as Tiktok, Himalaya, etc., but also create a special new media platform inside the campus, encourage students to share and publish interesting learning content, build a large "circle of friends" under the campus mode, and create a unique personalized learning platform on the campus.

2.2 Application for educational institutes

The 21st century is the century of combining multimedia and education. It represents the development direction of modern education and the inevitable trend of educational technology development. If the bosses of educational institutes do not keep up with the frontier of the times, then educational institutions will sooner or later be eliminated from the market. In order to keep up with the trend of the times, after weighing the pros and cons, a large number of educational institutions choose to introduce video clips in the daily teaching process.

To begin with, teaching institutions prefer to choose video clips when they are teaching. The recording and broadcasting courses are the best examples of it. Nowadays, if you open your browser and search for basic, intensive, and sprint English classes for the college entrance examinations, there will be a lot of paid online course resources. If you search carefully, you can even find that enthusiastic netizen who summarizes which teacher's type of question is the best so that you can get a high score after listening to it. The most important thing is that you have to be able to get a good idea of what you want to do. It is very convenient for teenagers to choose the teacher that suits them. Spending the least amount of money for the most

benefit is the result that educational institutions are most happy to see. On the one hand, this method can effectively save the cost of hiring teachers and use the money where it should be spent. Such as spending more money on teaching research, how to attract students, etc. On the other hand, because the recording and broadcasting lessons do not require a large number of teachers, only one or a few teachers with rich teaching experience and knowledge reserves need to be trained for each subject. This choice involves the teachers in healthy competition. It not only motivates teachers to keep learning and enriching their knowledge all day but also allows them to take the initiative to improve their teaching methods to engage students and cultivate their interests in studying. Teachers who usually fish in troubled waters or whose teaching methods are not attractive enough will eventually be eliminated from the industry. Faculty is the core factor affecting education and teaching, but good resources are limited, leading to constant competition among platforms for excellent teachers. If the educational institution can train a group of their own excellent teachers, it will not only improve the competitiveness of the platform but also contribute to the long-term development of the business. And also this has a positive effect on improving the quality of teaching and the industry. As you can clearly see, it's a win-win for both sides.

Then, using video clips is also becoming one of the important ways to recruit students to educational institutions. As we all know, the cost of publicity is the largest part of expenditure in each educational institution. Instead of devoting itself to the study of educational methods and models, an education-oriented company pays attention to propaganda. This phenomenon is actually wrong. The advent of video clips can help educational institutions improve this problem that currently exists. Many educational institutions upload a small part of their recorded classes to social networking platforms, which can allow users to try them out for free. There is no denying that this is beneficial for both the educational institution and the students. For one thing, students have more choices, not just the large local educational institutions where they are located. Teenagers can also use trial classes to determine the right course which is suitable for them. This measure can not only reduce the amount of money that students spend on education but also save time on trial and error. For another, the educational institution's target audience is not limited to local students, but to students from all over the country. It has an expanded scope of profitability. In addition, it is free to post a trial on social media platforms. Educational institutions do not need to spend a lot of money to promote themselves. In the meanwhile, these savings in publicity costs can be spent on teaching and research. As the old Chinese saying goes, "The perfume of wine is not afraid of the deep alley." It means that if you are excellent enough, you will be discovered by human beings. This leads to the problem eventually coming back to the virtuous circle of improving teaching standards. Educational institutions are corporations. So they also have a social

responsibility to create value and benefit the general population in China. For instance, for students from poor families in remote rural areas, educational institutions can provide relevant public welfare courses for them. Children from poor families can get a better and more advanced education at home as well. Students are the future of a country and the backbone of the nation. So no matter what position or job you have, you should work hard to achieve educational equity. Besides, the audience of online education is not only students but also teachers and parents. Because of the rapid development of the Internet and the reality of recent trends: the use of multimedia and video clips in the teaching process is a trend in the future of education. Moreover, due to the outbreak of the covid-19, more and more school teachers and students are taking home quarantine measures in order to ensure the safety of the students and teachers. As a result, online classes have become the norm for teachers. That means teachers have to learn about it, too, such as: How to use online platforms? How to find video resources? How to download videos and classroom materials? How to edit videos and files? And how online education can attract students' attention and improve their performance? These are the challenges that teachers have to overcome. And this also brings business opportunities to educational institutions. Educational institutions can invite famous teachers to offer and share commercial or public welfare teacher training courses on the platform to help teachers quickly adapt to the teaching style of online classes and quickly enter the state and rhythm of online teaching.

Next, based on the use of video clips as a method in the teaching process, educational institutions have created new business opportunities. In addition to recorded classes, educational institutions can hire master teachers to explain the knowledge points in detail for specific students with specific problems. hiring master teachers to explain the knowledge in detail to them. For example, there are a variety of apps on the market that teenagers can download from their cell phone's app store, and when they finish their homework after school, they can take pictures of the questions they don't know and upload them to the app, and then the teacher on the platform will provide a video clip to explain this whole question, which will help them to quickly clarify their thinking and learn how to answer the question. This app will not only reduce the burden on the teacher but also effectively ease family conflicts. After all, some parents are very likely to get angry and scold their children for not being able to do the problem when they are tutoring them. It is also a harm to the child.

Although such search apps have many of the above advantages, at present, it is known that the development of search apps is not perfect enough and many problems have emerged one after another. For instance, it was reported in the news that a student took a picture of the whole paper and uploaded it to the app during the final exam, using the convenience of the search app to cheat instead of thinking about the

answers themselves. Or when doing homework, some undisciplined students do not think at all and just copy the answers through the Search app. Creating a false impression to teachers and parents that they have understood everything. All these are not good for children's character development and knowledge accumulation. Therefore, in the future, the relevant educational institutions should still introduce relevant measures according to the actual situation to avoid such dishonest incidents and not be an accomplice of dishonest students.

At last, the emergence and prosperity of the industry of online education is the best proof that educational institutions apply video clips during teaching. Online education, or distance education and online learning, usually refers to the use of a variety of technical means based on information networks to enable teachers to conduct distance education and training activities for specific students or to supplement the education and training process. The online education industry covers early childhood, K12, adult, and other educational stages. According to official data, China's online education market size has rapidly developed from 70.52 billion yuan in 2012 to 322.57 billion yuan in 2019. It is expected to exceed 400 billion yuan in 2020 and will reach more than 500 billion yuan in 2022. The recording and broadcasting classes are a single mode of widely used courses created by an educational institution to save money and ensure quality, while online education provides customized and personalized education services for students by integrating technologies such as cloud computing, big data, and artificial intelligence. There is no doubt that online education can meet the diverse learning needs of students. It can not only provide one-on-one services with targeted explanations for the knowledge points that students do not know, but also provide foreign tutor services that allow students to communicate face-to-face with foreign friends to exercise their own thinking skills, and speaking skills and improve their boldness. By sharing their text works with foreign teachers or communicating with foreign friends, students truly gain the opportunity to export their language and truly experience the joy of learning English, promoting the overall development of listening, speaking, reading, and writing. In addition, online education is cheaper than real-life educational institutions because there are no space costs, utilities, etc. This enables more ordinary and even poor families to experience online tuition. It can enhance the equity of education.

CHAPTER 3

INFLUENCE OF VIDEO CLIPS ON K-12 EDUCATION

3.1 K-12 education in China

“K-12”, in which “K” stands for kindergarten for 5- to 6-year-olds and “12” stands for twelfth grade for 17- to 18-year-olds, is a shorthand expression that is referred to primary and secondary education including elementary, middle, and high

school education. This shorthand originated from the education system in the United States and is also used to refer to the publicly supported school grades before college.

After Chinese reform and opening up in the 1980s, primary and secondary education were legislated as nine-year compulsory education which consists of 6 years of elementary and 3 years of junior-high-school education mandatory.

In the 1990s, the nationally supported compulsory education was no longer able to fulfill the continuously changing demands for education, and the more diverse, differentiated, and international education methods and contents were increasingly needed by people from developed regions. Thus, primary and secondary education in China has embarked on a decades-long reform. Simultaneously, an increasing number of private educational institutions such as New Oriental (est. 1993) and Giant School (est. 1994) have emerged in response to market demand, offering various extracurricular courses for primary and secondary school students. As English training and preparing courses for TOLFT, IELTS, College English Test, Teenage English Exam, etc. were the major focus of private institutions, the educational concepts and contents in Western English-speaking countries, including the shorthand of “K-12 Education”, were also introduced into China.

K-12 Education System in China

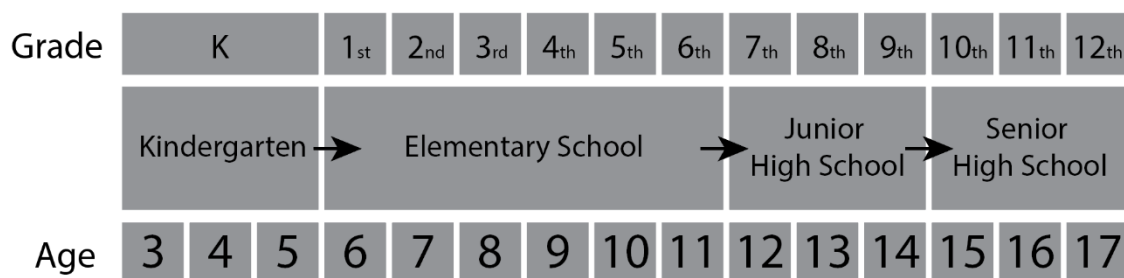


Figure 1 Diagram of K-12 Education in China

However, in China, “K-12 Education” is not limited to solely referring to the publicly supported education from kindergarten through twelfth grade but included all sorts of primary and secondary education, whether paid or compulsory, public or private. While K-12 education in China consists of three major categories: public K-12, private K-12, and K-12 extracurricular training.

In 2021, the alien shorthand of “K-12” has been acknowledged and utilized for the first time by Chinese authorities, as an industry standard with the title of *K-12 Online Education Service and Evaluation* was published by Tianjin Consumers Association. In 2022, “K-12 Education” is recognized as a common term that is widely used by not only teachers, parents, and private educational institutions but also

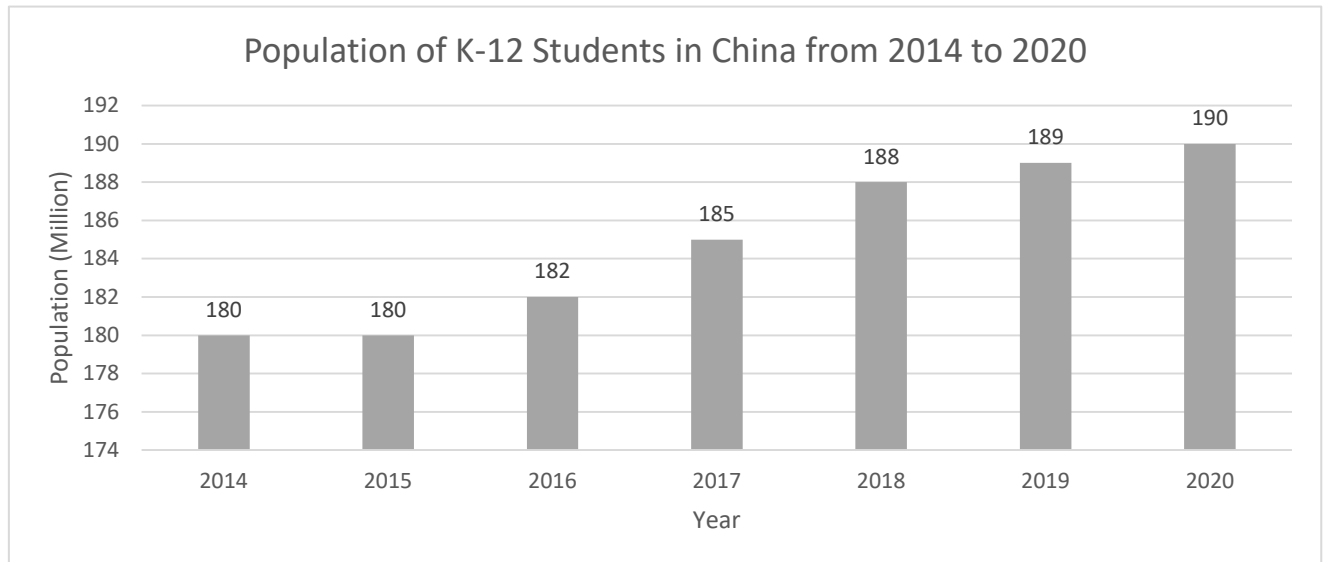


Figure 2 The population of K-12 Students in China from 2012 to 2020

Chinese authorities.

According to a market report on K-12 education in China, the K-12 population in China is mainly composed of youth aged 6 to 18 years old and reached 190 million in 2020 (Figure 2). The market for K-12 education was 762.9 billion CNY in 2019, and it is expected to reach about 946.8 billion CNY in 2025, indicating that K-12 education has been a great potential market in China.

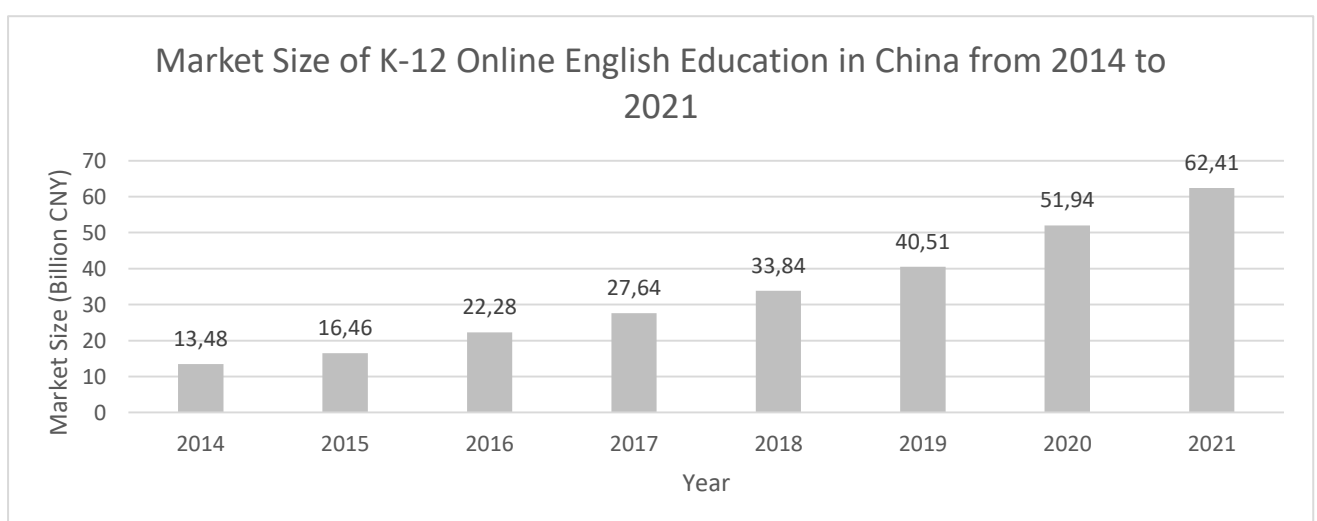


Figure 3 Market Size of K-12 Online English Education in China from 2014 to 2021

With the development of the Internet and mobile technologies, K-12 education in China has been transforming from offline teaching to online teaching, especially

for English courses. From 2015 to 2019, the market size of K12 English online education has grown steadily with an annual increase of about 6 billion (Figure 3). In response to the closedown policy of the Covid-19 pandemic, the majority of the K-12 schools in China have offered online courses since 2020, and pre-recorded educational short videos have been widely utilizing as an instructional tool by institutions. Thus, the market growth of the K12 English online education industry has increased significantly during the recent two years of the Covid-19 pandemic (Figure 3).

3.2 General influence on K-12 education in China

Education is the foundation of national development in the long run. The newly introduced New Curriculum Standards for High School English proposes that teachers should make full use of modern education technology, develop English teaching resources, broaden students' learning channels, improve students' learning styles, enhance students' learning efficiency, use computers and multimedia teaching software to explore new teaching models, develop and reasonably take advantage of modern information technology as a carrier of English teaching resources, and truly realize the integration of modern information technology and English teaching. In the background of the information era, the emergence of video clips is undoubtedly adding vitality to the education business, especially for K-12 education. The members involved in K12 education are roughly divided into three categories: school teachers, educational institutions, students and their parents. The introduction of this new technology has a huge positive impact on all four of these groups.

Students and children in this age group have distinctive characteristics. They are very lively and fashionable. At present, basically, every high school student has his or her own cell phone and most of them choose to play on the phone when they are free. Doing this can make them relaxed and relieve their study pressure. Therefore, compared to the normal dull teaching in the classroom, video clips can create a vivid and realistic teaching environment for kids. The reception of the information on the screen will be more interesting to students as well. After all, watching a video is like playing on the cell phone as you normally do. Learning easily in an entertaining way is the most important effect that students or teachers want to achieve. Short videos can maximize the benefits and supplement the knowledge that teenagers need. Teenagers are very curious about knowledge, especially when their body, mind, and three outlooks are fully developed. They have a natural desire for unknown knowledge. Short videos will form a key to encouraging them to explore unknown areas, and also enable them to understand the online world faster and find friends with similar aspirations. It also has a certain shaping effect on their three outlooks, and the power of big public opinion can also restrain and educate teenagers, and enable them to develop a good habit of independent thinking in primary and secondary schools.

For teachers, effective teaching behaviors are an important tool for optimizing teaching effectiveness and can promote teachers' professional development. And video clip is one of the most effective teaching behaviors available at present. The task of teaching in senior high school is heavy, and there is great pressure to advance to higher education. And every student the teacher meets has its own unique characteristics. It is difficult to take care of every student comprehensively in the process of explaining knowledge and to keep the class interesting and innovative all the time. In addition, there are too many students with different learning bases and levels to add much extra knowledge. Students are not at the same learning level, and blindly supplementing extra-curricular knowledge will add to the burden of low achievers and tend to blur teaching priorities. The advent of video clips can assist teachers in their usual teaching. Not only does it ensure the quality of the teacher's teaching, but also helps to expand their knowledge while improving their English listening and speaking skills. To sum up, teachers should enable their own students with different temperaments, interests, and potential to receive an education suitable for their growth. For teachers, short videos are undoubtedly a better way to spread knowledge. The knowledge that teachers fail to teach in class can be widely spread in the form of short video shooting. At the same time, it can be more conducive to preservation. It can be opened anytime, anywhere for review. The extremely low-cost investment and interest is given can also be better accepted by students. For students, short videos are more contemporary expressions of the original basis of teachers, and they are also more able to accept this emerging means of knowledge transmission. For the teaching of primary and secondary schools, short videos are also more common, which is a road destined to be in line with the times.

Short videos have a positive influence on parents. Parents' acceptance of their children's use of short videos is the first step to promoting a harmonious parent-child relationship. If parents can have more opportunities to accompany their children to watch short videos and enjoy and discuss the contents of the short videos with their children, they will have more effective guidance for their children. The content of short video platforms is uneven and governance is difficult to be in place, which is also a problem that parents are particularly worried about. What do the children think about the stars selling goods? Will you develop irrational consumption habits? Will the behavior of displaying luxury houses, luxury cars, famous bags, and watches on the Internet, as well as the legends of becoming famous overnight, enable children to form the value of getting something for nothing? Parents' fears are not unreasonable. It is precise because of these concerns that parents should accompany their children to watch short videos and discuss the contents of short videos with their children. Only in the process of watching and appreciating together can parents' educational ideas gradually penetrate into their children. Moreover, we found in the study that if parents know and understand more about their children's use of short videos, their

children will spend less time on short videos. On the contrary, if parents do not understand their children's behavior of brushing short videos, children are more likely to rely on short videos. Therefore, it is recommended that parents accompany their children as much as possible. They may as well brush short videos with their children after dinner, so that they can not only enjoy doing what their children enjoy doing, but also understand their children's browsing interests, and take the opportunity to guide their children. A parent said that she was very angry when she saw her child brush short videos at first until she saw a reading activity held on the Tiktok platform. She saw that many cultural celebrities shared their reading experiences in the activity, and she thought that she could guide her child to read. So she volunteered to "brush" short videos related to activities with her child and wrote down the interesting book titles she saw or discussed them with her child. Later, the child proposed to buy some books and made a list for her. With the combination of short videos and offline reading, her child not only takes the initiative to read books but also asks her to buy new books. It is due to the short videos that the parent has made her child form a positive learning consciousness.

For educational institutions, in addition to the traditional teaching model, there is no denying that the application of video clips to teaching offers more possibilities for educational institutions to make profits. At the same time, the owners and practitioners of educational institutions have more opportunities to explore the possibilities of teaching and learning as well. However, the first aim of educational institutions is to make every effort to strive to see that each and every student has fair access to good education. An industry calling for conscience should not become profit-driven.

3.3 Case studies: on the example of English learning in Chinese high schools

In contemporary society, it is universally believed that the issue of using video clips is increasingly severe. However, in the meantime, whether people can use the video clips during the study has sparked heated debate. Some claim that video clips play an increasingly important role in today's teaching in China and even the whole world. Some hold the idea that they trust the government, education department, and schools not to lie to their own students. So it is up to the school whether to use it or not, they have no opinion. Others agree with the opinion that it is wrong for human beings to use this type of video clip in the classroom because this method will harm them. Because K12 education encompasses such a large scope, the influencing factors of education at different ages are different. In order to ensure that more accurate conclusions are drawn, this paper further narrows the scope by selecting the high school English stage as the research direction and focuses on the views of students, teachers, parents, and educational institutions on the application of video

clips in teaching at this stage.

3.3.1 Survey method

Since the 2010s, short video as a teaching tool has been overwhelmingly applied in K-12 education in China. Although the practicability and effectiveness of short videos as an instructional tool have been controversial, and the attitudes of users of short videos have been mixed, a creditable and referable survey on short video users' feedback is not available yet. Therefore, as mentioned above, the core objective of this study is to conduct a survey and compose a follow-up analysis to accomplish the following goals:

Learn about the current application of instructional short videos in K-12 education in China.

Understand the users' (parents, students, teachers) evaluations and opinions on instructional short videos.

Understand the current advantages and disadvantages of using short videos as an instructional tool in K-12 education.

Provide suggestions on the future development of the educational short videos industry.

The survey consists of two parts including questionnaires and interviews. The questionnaire which has 20 questions including multiple-choice and fill-in-the-blank, was distributed to 150 respondents including K-12 students, parents, and teachers. Of the 150 survey samples, 144 were valid and utilized to compose an analysis that is expected to be used to discuss the method of improving the practicability and effectiveness of short videos as a K-12 instructional tool.

In order to attain the creditable survey result, before filling up the questionnaire, each respondent has been informed and requested to independently answer questions, so that the respondent's thoughts would not be externally influenced by others. For under-aged preschool students who are considered too young to be able to complete the questionnaire, their parents were asked to answer the questions from their own perspectives. The research purpose and the confidentiality of the questionnaire have also been clarified to each respondent, to ensure that respondents will not be concerned to give genuine feedback because of worrying about their sociodemographic and answers being exposed.

The questionnaire had been designed and distributed using an online survey platform and was received and filled out by respondents using mobile phones. The location of the respondents and the time and duration of answering the questionnaire were automatically recorded to check the validity of each questionnaire. Survey results were processed using the same platform to evade errors in calculating by hand, ensuring the consistency of numerical data, and the schematic diagrams were generated using Excel.

The original Chinese and English translations of the questionnaire are attached as Appendix A and Appendix B respectively.

3.3.2 Questionnaire result

The questionnaire is divided into two portions: sociodemographic (4 questions) and opinions on instructional short videos (17 questions), in which the sociodemographic questions surveyed respondents' identity, age, grade, and academic performance.

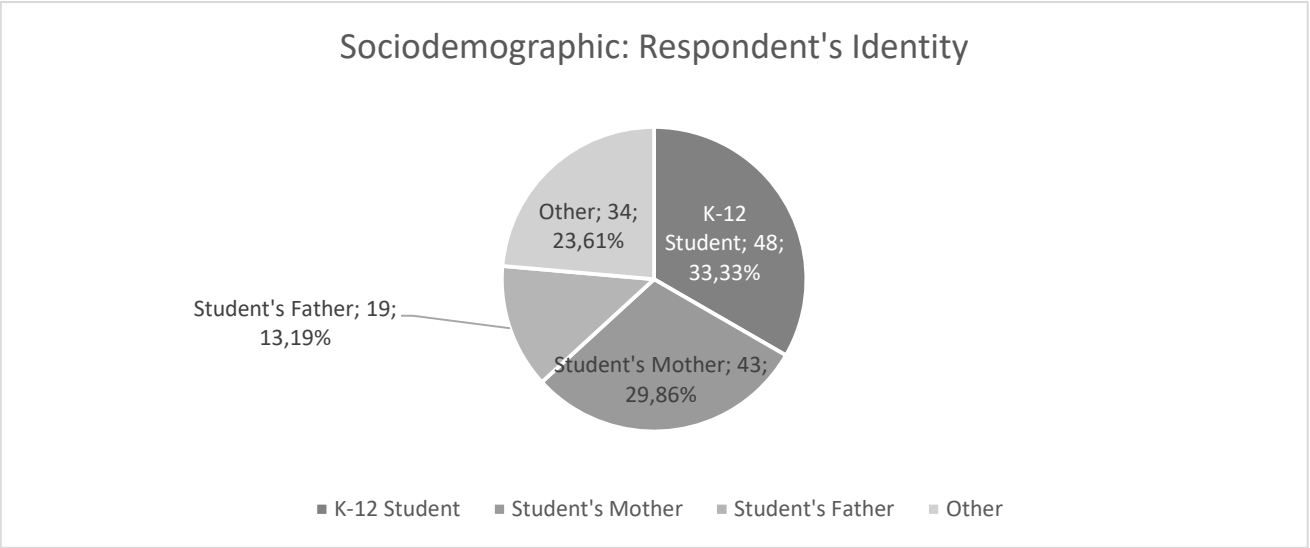


Figure 4 Respondent's Identity

Among the 144 valid questionnaires, 48% were filled out by the students themselves (33.33%), 43 by their mothers (29.86%), 19 by their fathers (13.19%), and the remaining 34 (23.61%) were filled out by others who were related to the student (Figure 4).

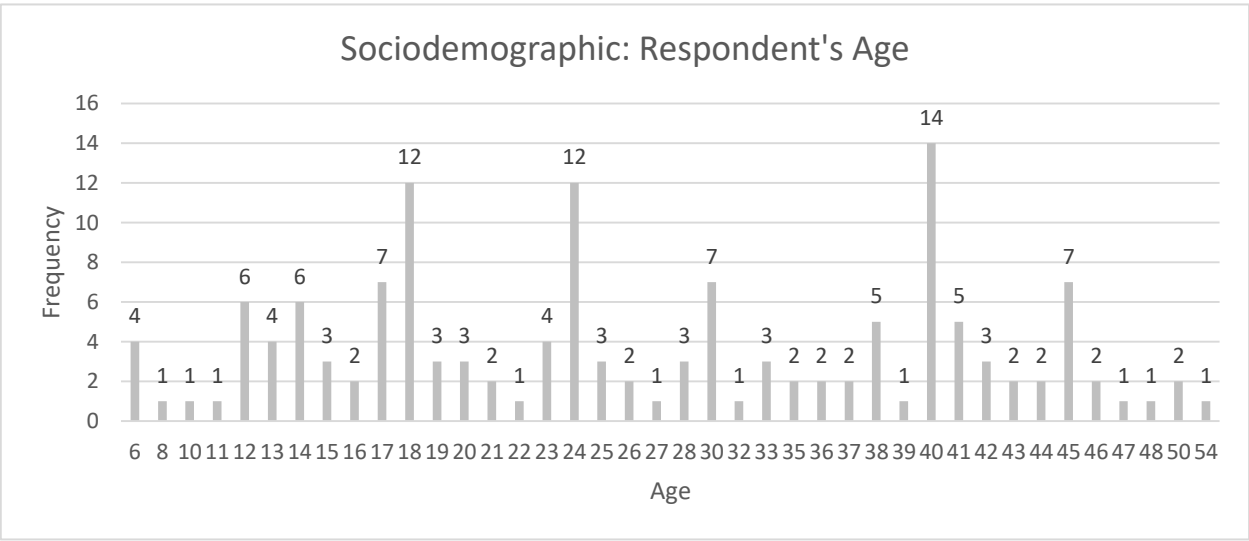


Figure 5 Respondent's Age

As parents of K-12 students were expected and encouraged to take part in the questionnaires, the maximum age of respondents was 51 and the minimum was 6 (Figure 5). The average age of the surveyed K-12 students and parents was 14.6 and 34.56 years old respectively. Respondents or their children's current grades included all grades from preschool to twelfth grade under K-12 education, of which the top three grade groups were 12th, 9th, and 6th grade (Figure 6). Students in these three grades are currently facing the pressure of entrance examinations for college, high school, and middle school respectively.

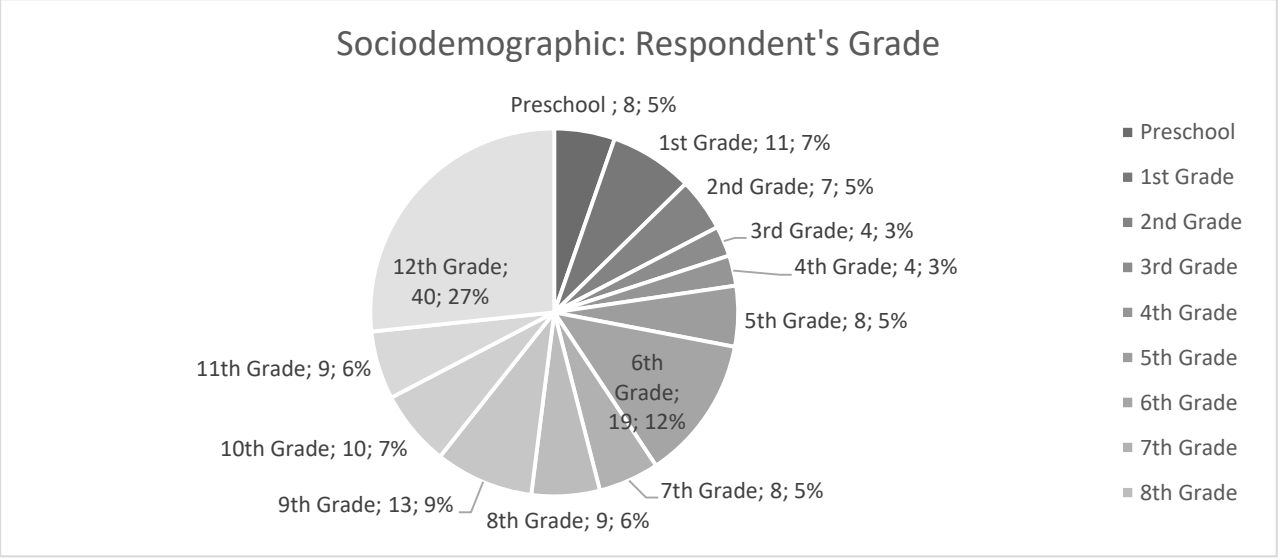


Figure 6 Respondent's Current Grade

When asked about their current academic performance, 45.14% of the respondents or their children were excellent students (top ten in the class), another 45.14% were middle-achieving students, and 2.08% were students with lower grades (last ten in the class), the other 7.64% are not quite sure about their current academic performance (Figure 7).

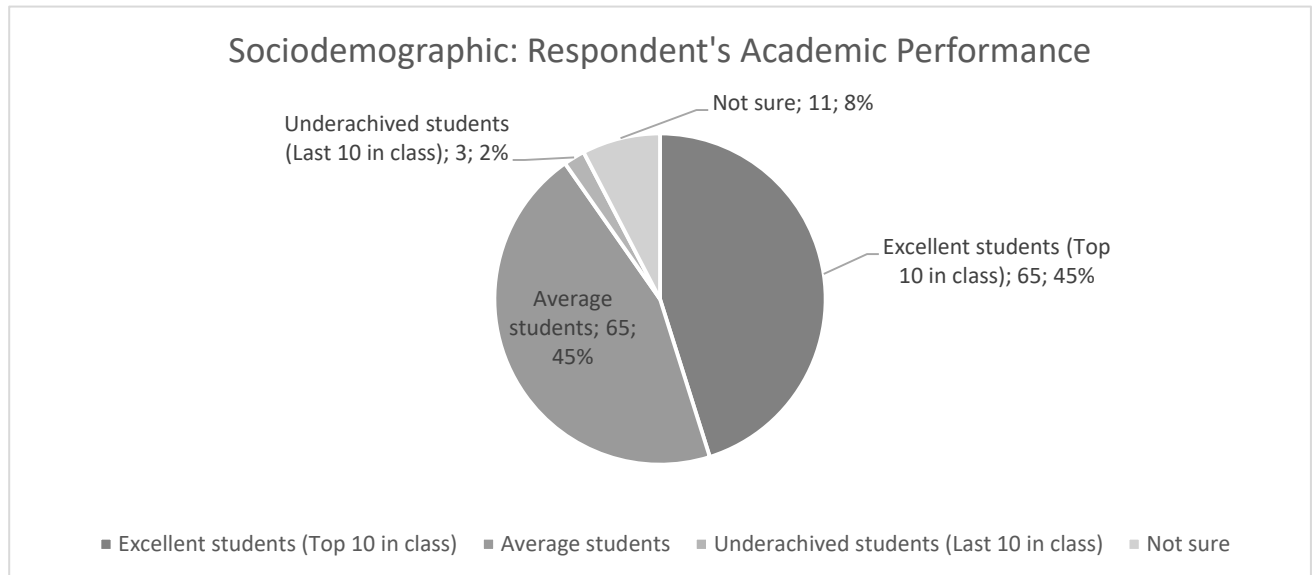


Figure 7 Respondent's Academic Performance

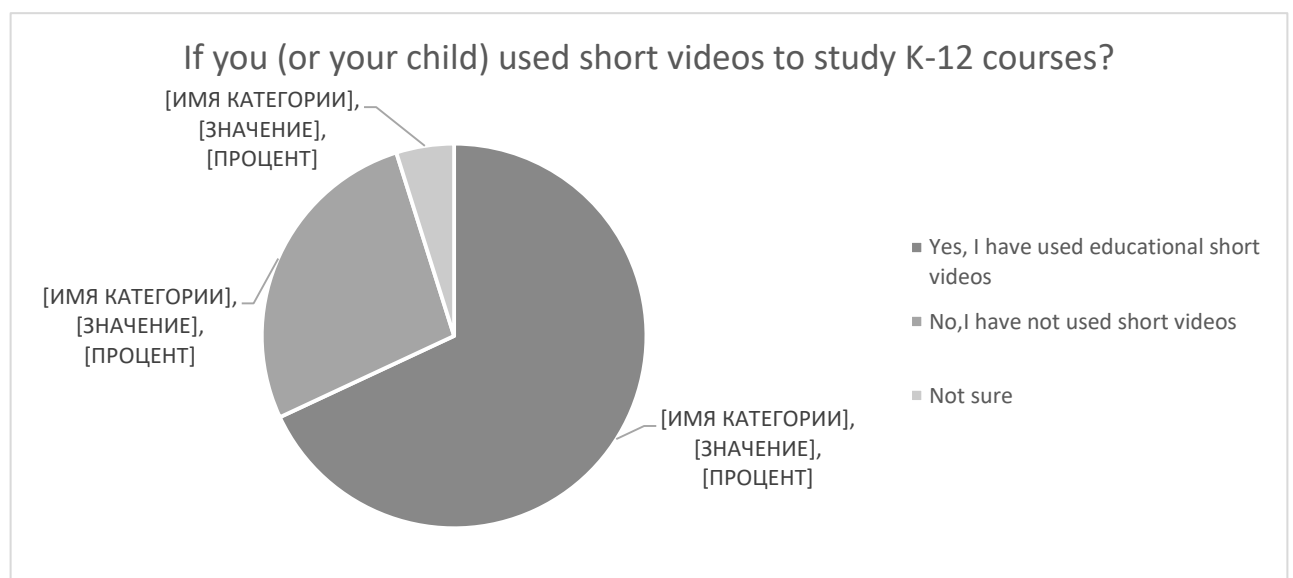


Figure 8 Statistics on whether respondents have used short videos to study K-12 courses

The first question of the opinions on instructional short videos part enquired if the respondents or their children had ever used short videos to learn K-12 courses (Figure 8). 98 of the 144 respondents who had experience using instructional short videos were asked to continue answering questions about their experience of using short videos for learning purposes. The other 39 who had never used educational short videos and 7 who were unsure if they had used short videos were instructed to

skip questions on previous experience and answer the question on the expectation of using instructional short videos as new users. According to the pie chart below, it can be observed that although short videos have become very popular in Chinese K-12 education in recent years, and the outbreak of the Covid-19 pandemic has intensified the promotion of educational short videos, there are still more than $\frac{1}{4}$ of the respondents have never used short videos to study K-12 courses (Figure 8).

When enquired about the year they first used short videos, 17 indicated they had started using educational short videos to study K-12 courses in 2017 or even before, but as expected, many respondents (34 of 98) started using short videos due to the lockdown policy of the Covid-19 pandemic. Excluding the current year of 2022, which has just passed half of the year, the overall trend of the number of educational short videos users is also increasing year by year (Figure 9). The statistical results of the questionnaire on the trend of the number of users are consistent with assessments from the industry forecast of the Chinese K-12 education market.

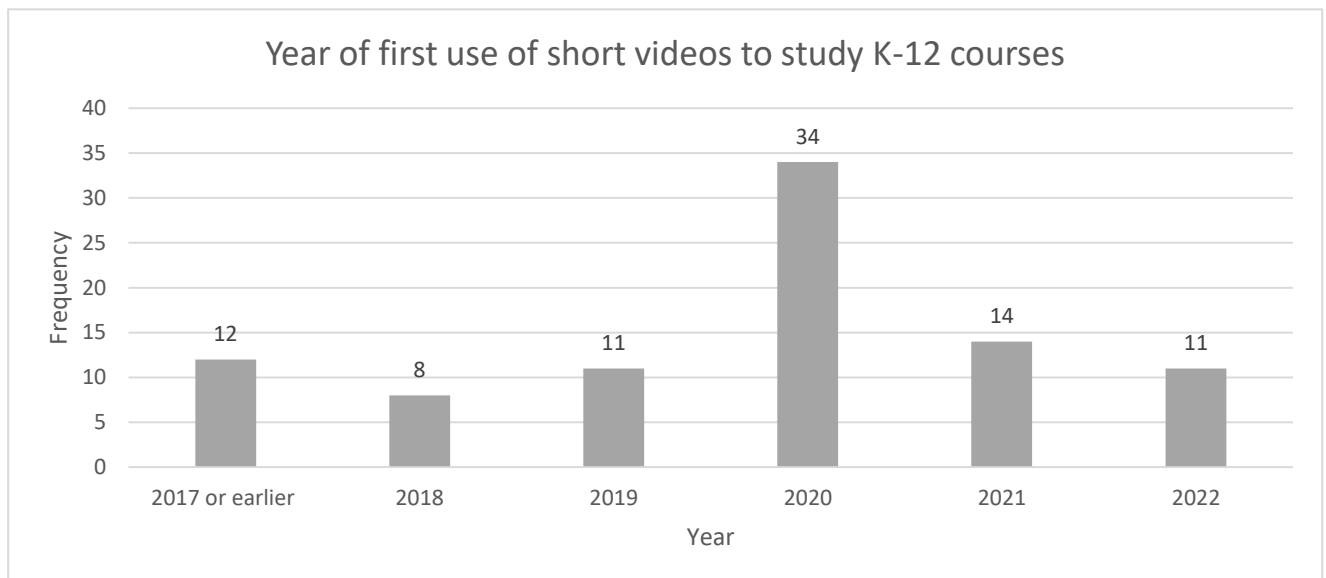


Figure 9 Year of first use of short videos to study K-12 courses

Of the 98 respondents who had used short videos before, less than a quarter spontaneously chose to use short videos to learn K-12 courses, while the others were

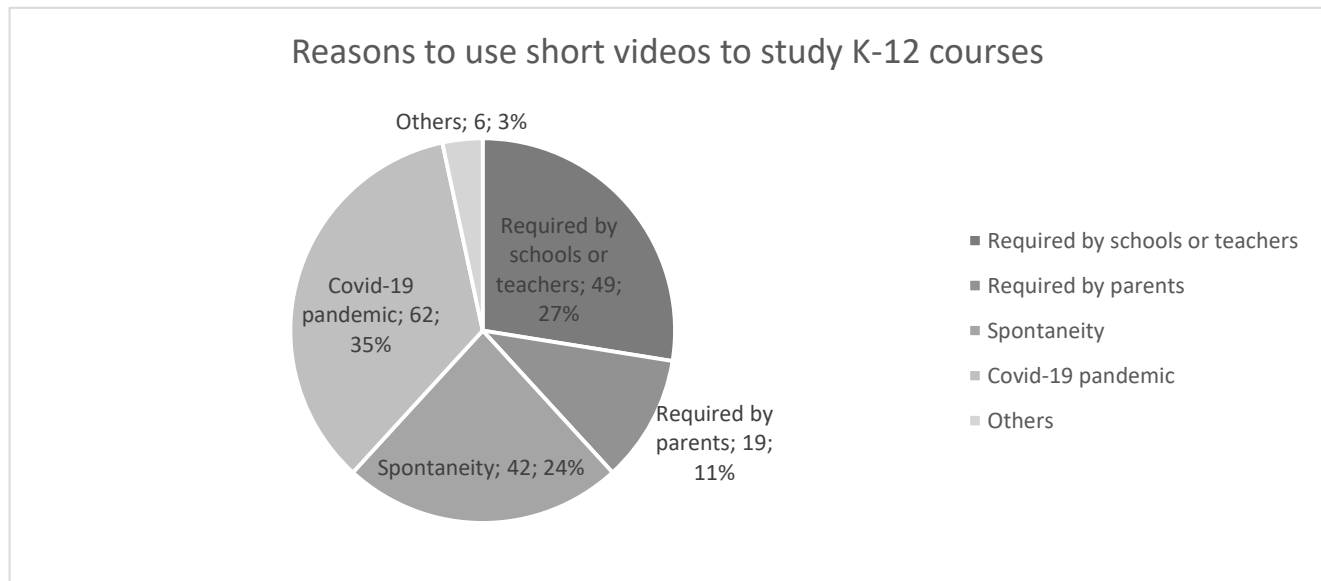


Figure 10 Reasons to use short videos to study K-12 courses

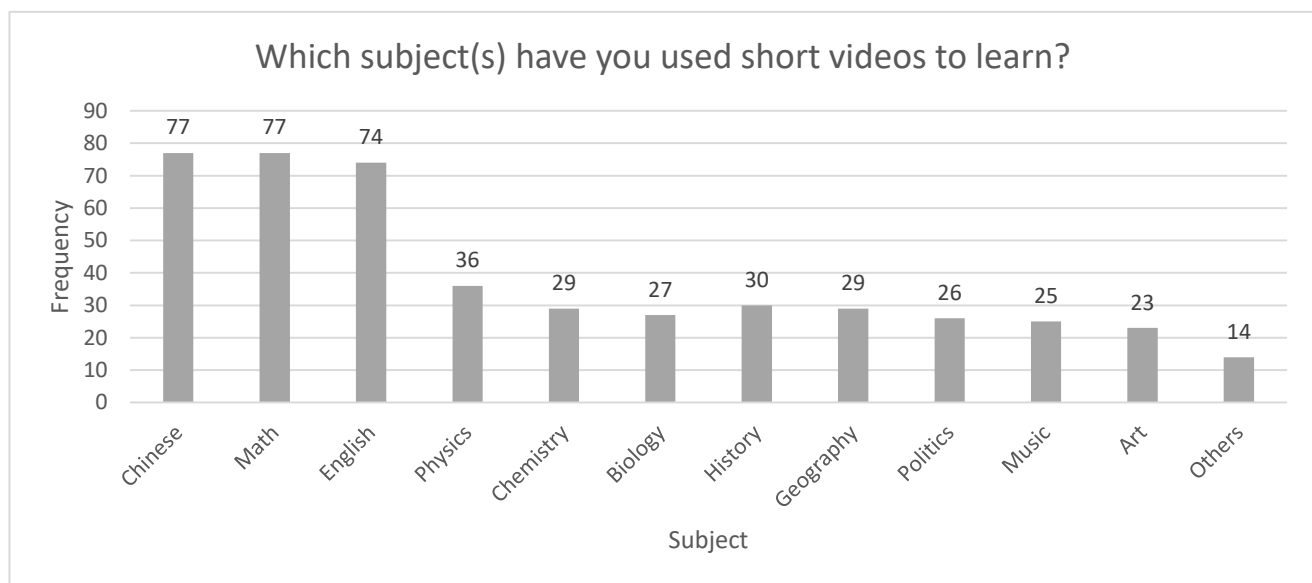


Figure 11 Which subject(s) have you used short videos to learn?

driven by external factors such as school requirements (27%), parental requirements (11%), Covid-19 lockdown (35%), etc. (Figure 10). When cross-analyzing respondents' academic performance (figure 7) with reasons to use educational short videos, it is found that students with better academic performance are more willing to use educational short videos spontaneously. On the contrary, students with poor academic performance are more likely to be forced to use short videos by their teachers or parents.

Since Chinese, mathematics, and English have been the three major subjects of Chinese K-12 education, in which these three courses are taught continuously

throughout the entire 12 years of primary and secondary education, Chinese, math, and English are undoubtedly the subjects that are most often required to be studied by using educational short videos (Figure 11). Beyond expectations, minor or less-important subjects such as music and art are also taught with short videos, although such subjects are taught with short videos less frequently than other main subjects.

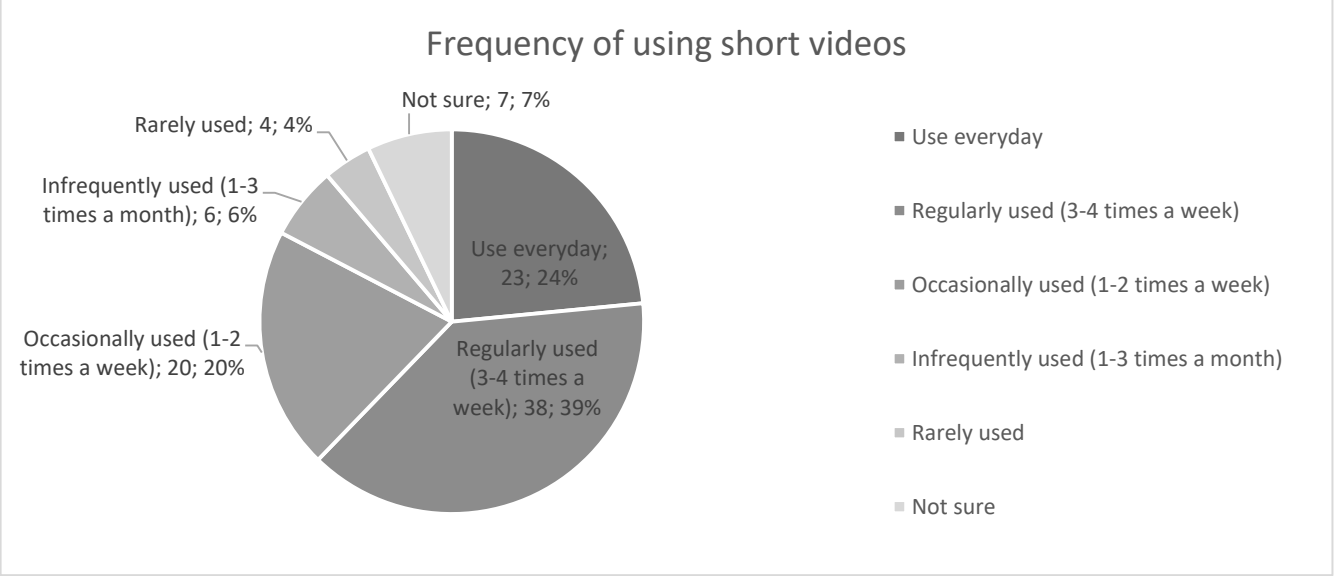


Figure 12 Frequency of using short videos

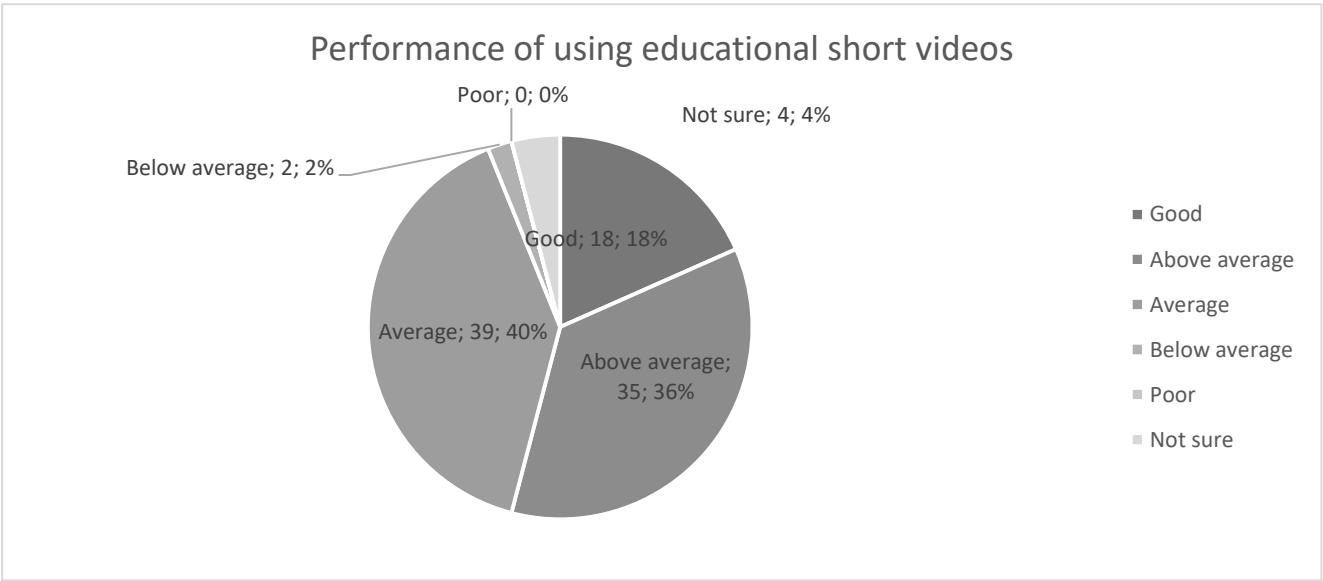


Figure 13 Performance of using educational short videos

When cross-analyzing respondents’ current grades with which subjects have respondents used short videos to learn, it is discovered that students in lower grades use short videos to learn minor subjects more frequently, that about half of kindergarten and primary school students are using short videos to learn art and music. But after entering middle school, art and music are rarely required to use short videos to learn.

When counting the frequency of using educational short videos, nearly 90% of

the 98 respondents watched short videos at least once a month, and $\frac{1}{4}$ of them utilize short videos to study K-12 courses almost every day (Figure 12). The cross-analyzing indicated that there was no proportional relationship between the respondent's current grade and the frequency of using short videos, but it was clear that students with better academic performance used short videos more frequently. More than 70% of excellent students (Top 10 in the class) watched short videos to learn K-12 courses at least 3 times a week, compared with only 56% of average students who did so.

The user's opinion and evaluation of the performance or effectiveness of educational short videos is one of the most focused results in the questionnaire, in which more than half of 98 respondents held a positive evaluation of the instructional performance of using short videos to study K-12 courses, they either believed that the effectiveness is very good or above average. The remaining 40% of 98 were neutral, and 2% thought the effectiveness of short videos is below average (Figure 13). Students with better academic performance tend to have higher evaluations of the instructional effectiveness of short videos. Although respondents' satisfaction with the performance of short videos is generally positive, when compared with the traditional offline in-classroom teaching and learning method, only 2% believed that short videos are more effective in teaching, and nearly 75% still preferred the offline in-classroom teaching method (Figure 14).

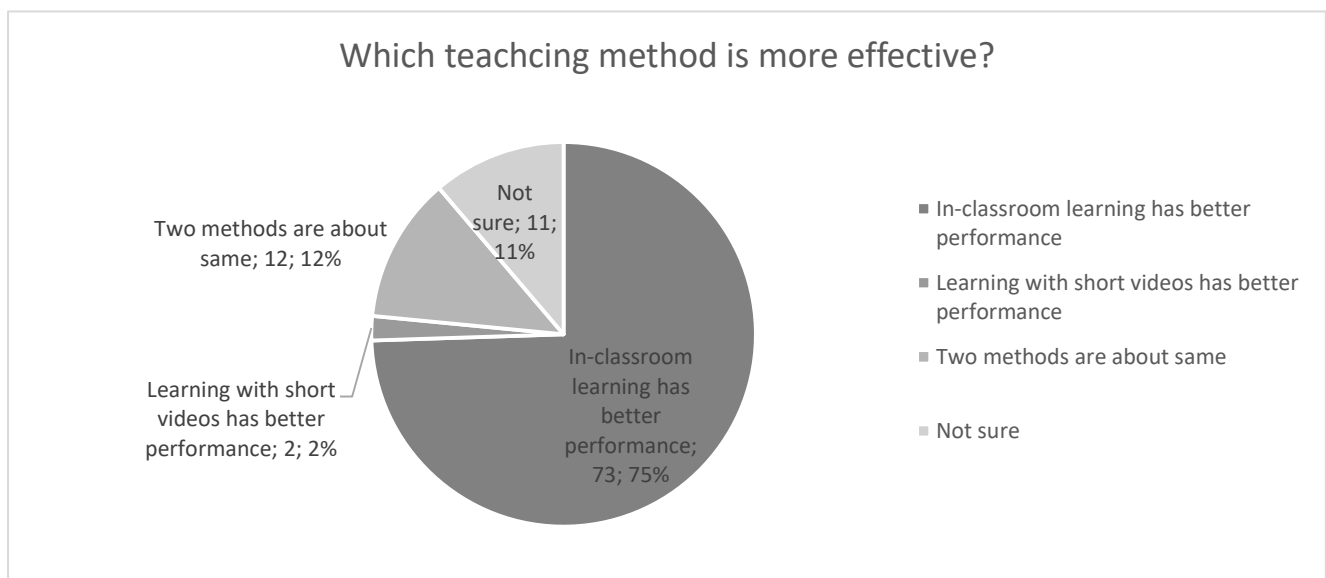


Figure 14 Which teaching method is more effective?

The main reason why the recognition of short video teaching is not higher than offline teaching is that students are often disturbed and distracted when using short videos, that only about a quarter of respondents said they were rarely distracted when

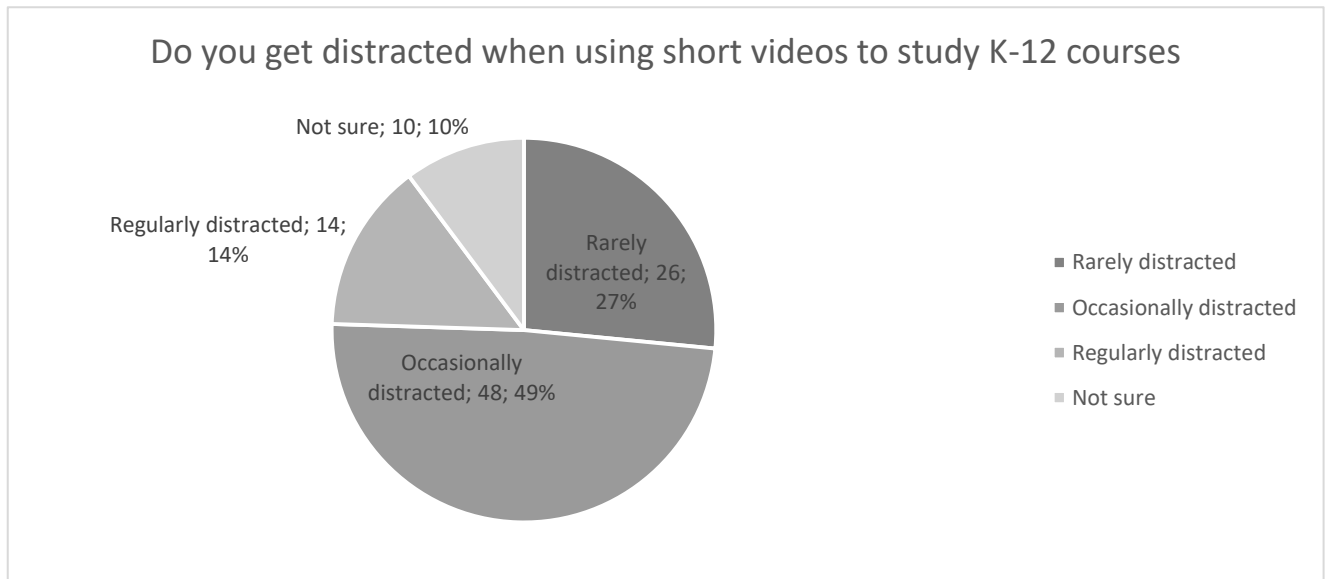


Figure 15 Do you get distracted when using short videos to study K-12 courses?

using short videos to study K-12 courses (Figure 2.15). According to the statistical results, older students with better grades were less likely to be distracted when using short videos.

When asked which online platforms respondents or their children frequently use to watch short videos, the following platforms were most frequently mentioned.

1. **Bilibili:** Bilibili is a video-sharing website based in Shanghai. It was originally an animation, comics, and games (ACG) themed niche video platform, and most of its users were young people who liked ACG. However, with the increase in the number of users and the influence of the trend of younger netizens, Bilibili has gradually become a major video-sharing website in China, hosting all categories of videos including instructional short videos. In recent years, Bilibili has opened an exclusive section for instructional videos, and users are encouraged to upload and share instructional videos either original or from other platforms such as YouTube. A unique feature of Bilibili is the scrolling danmu (bullet curtain) commenting system, it is a form of video commentary used on internet video consisting of scrolling user/viewer messages posted on top of the video in real-time. Bilibili is the most mentioned platform in the questionnaire.

2. **Douyin:** It is the original Chinese version of the popular short video hosting platform Tik Tok which hosts a variety of short-form user videos, from genres like pranks, stunts, tricks, jokes, dance, and entertainment with durations from 15 seconds to ten minutes. Douyin was launched in 2016 in China and was originally started with young people as its main target customer group. Since Douyin is

currently the most popular video-sharing website in China exclusively for short videos, increasing numbers of instructional short videos for K-12 education have also been uploaded and shared using Douyin, thus, it is the 2nd most nominated platform in the questionnaire.

3. Tencent Video: A traditional video streaming website owned by Tencent, has over 1.268 billion mobile monthly active users by 2022. Tencent Video is also the 4th largest streaming service in the world, after Netflix, Amazon, and Disney+.

4. Public Platform on WeChat: Public Platform is a built-in service hosted on WeChat, a Chinese instant messaging and social media app which has over 1 billion monthly active users. The Public Platform is used to forward articles and multimedia to subscribers. Many private educational institutions have been using the Public Platform to post and share instructional short videos.

5. Other exclusive learning platforms: A variety of different exclusive learning platforms have been also mentioned in the questionnaire. Some of the exclusive platforms are run by education authorities, for example, the Qinhuai Online Classroom is provided by Nanjing Bureau of Education, and the National K-12 Education Platform is run by China Central Educational Technology Center. While other platforms such as Zhangmen, Xueersi, Lanmo, etc. are provided by private education institutions.

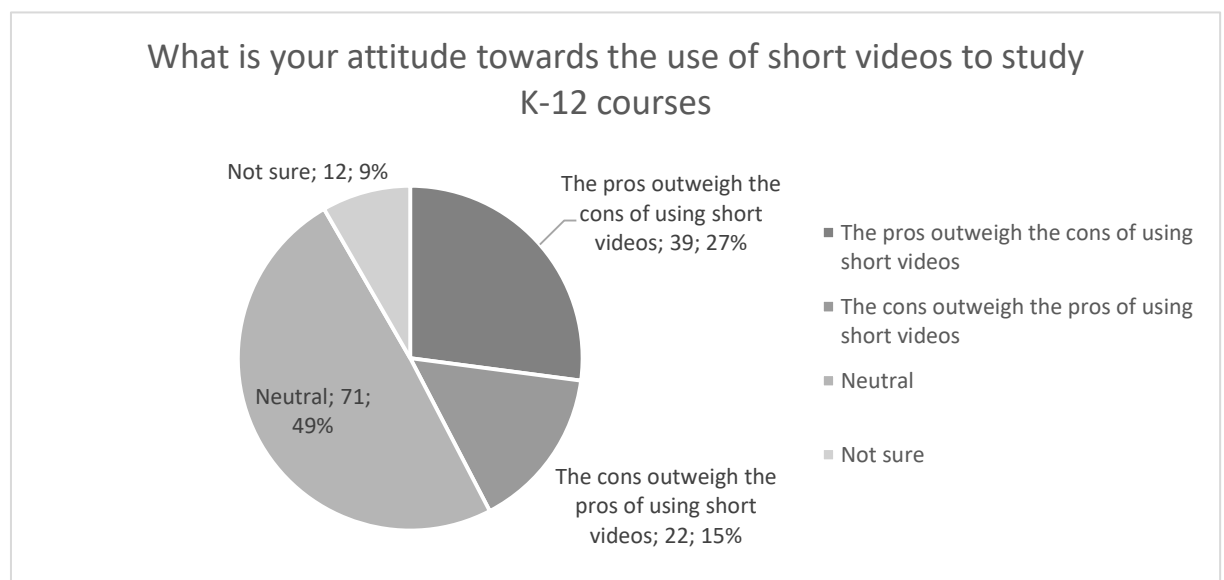


Figure 16 What is your attitude towards the use of short videos to study K-12 courses?

Of the 98 respondents who have used short video learning, only 27% believe that the advantages of using short video learning outweigh the disadvantages, 15%

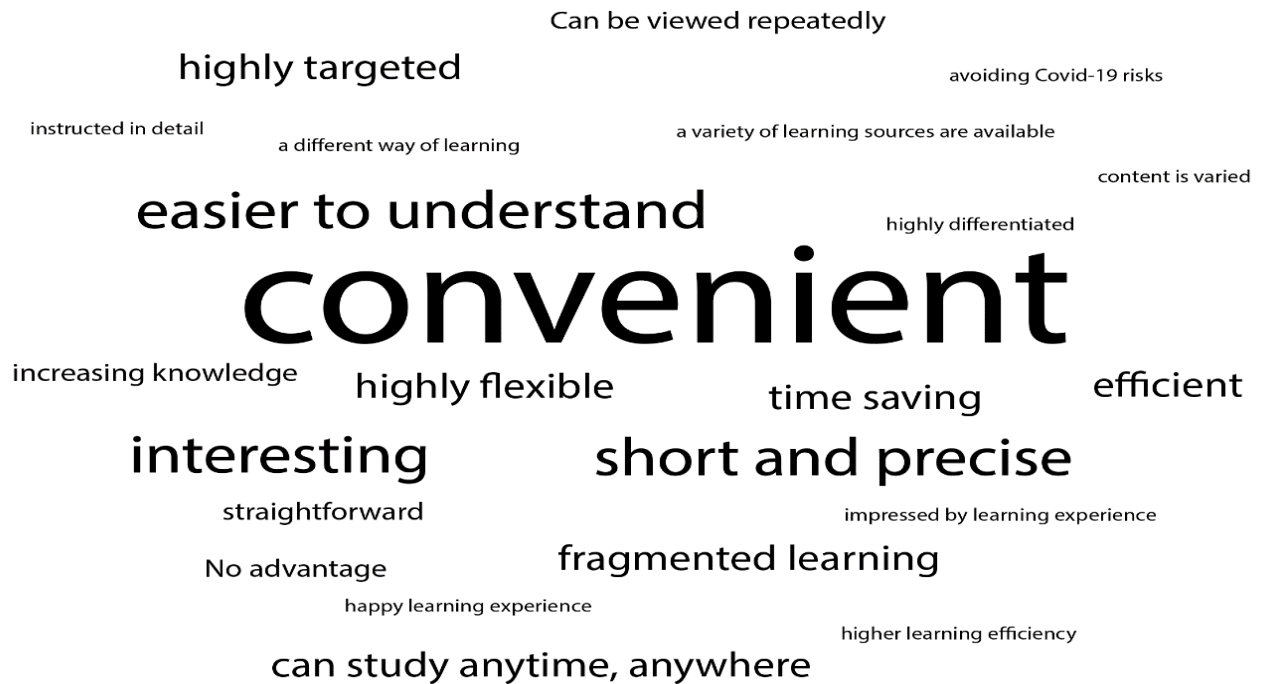


Figure 17 Word cloud of advantages of using instructional short videos

believe that using short video learning does more harm than good, and 49% are neutral (Figure 2.16). Word clouds of advantages (Figure 17) and disadvantages (18) of using short videos were generated.

The last five questions of the questionnaire inquired about the future expectations of using instructional short videos, and all 144 valid respondents were required to answer these last 5 questions. When respondents had a variety of choices of learning methods, the first and second most nominated methods for extra-curricular tutoring were

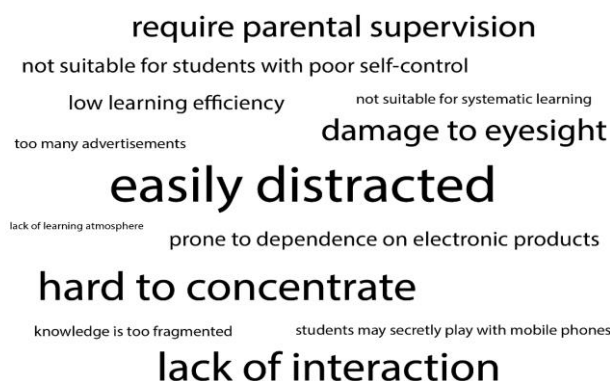


Figure 18 Word cloud of disadvantages of using instructional short videos

going to courses offered by private institutions and watching short videos (Figure 19). Students with better academic performance are more inclined to use short video learning, while students with poor academic performance are more inclined to participate in extracurricular courses offered by private educational institutions or public schools.

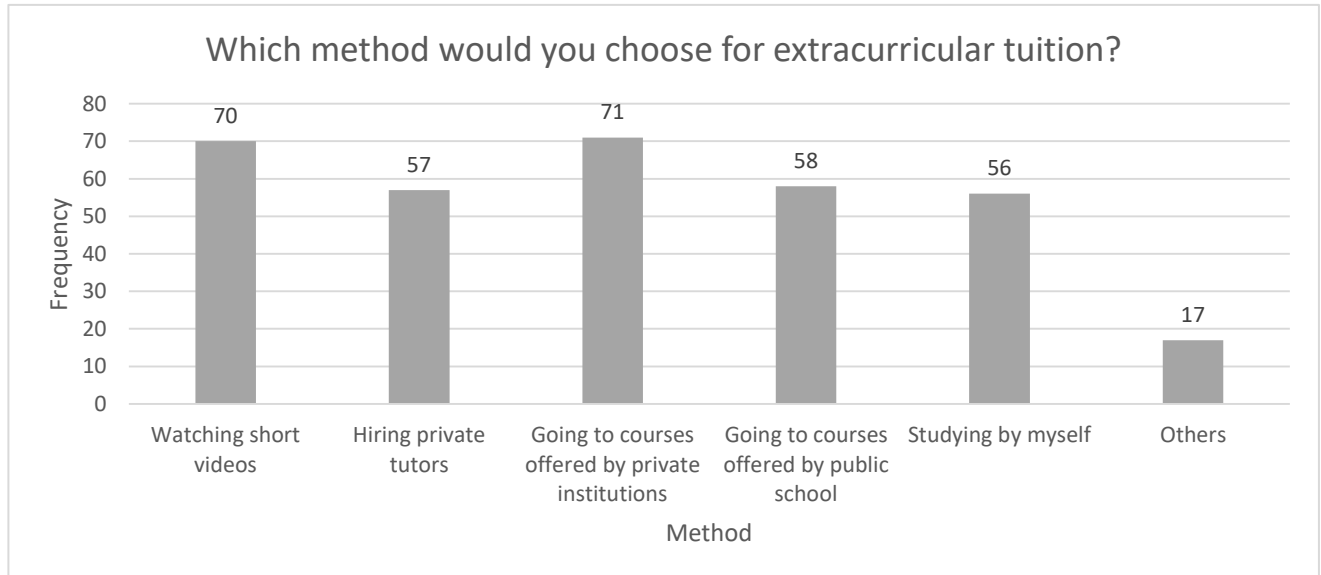


Figure 19 Which method would you choose for extracurricular tuition?

The statistical results of which subject(s) are more suitable for learning with short videos, opinions on the development trend of instructional short videos, and what actions should authorities implement for instructional short videos in the future are shown in Figure 19, 2.20, and 2.21 respectively. As in the current market situation, English was considered by respondents to be the most suitable subject to study using short videos (Figure 20). 58% of the respondents believe that the popularity of short videos will continue to increase in the next few years, and only 2% of the respondents are pessimistic about the future development of short videos (Figure 21). In addition to simply supporting the development and popularization of educational short videos, most respondents believe that authorities should introduce regulations to regulate the content of short videos and strengthen supervision to ensure the quality of short videos (Figure 22) .

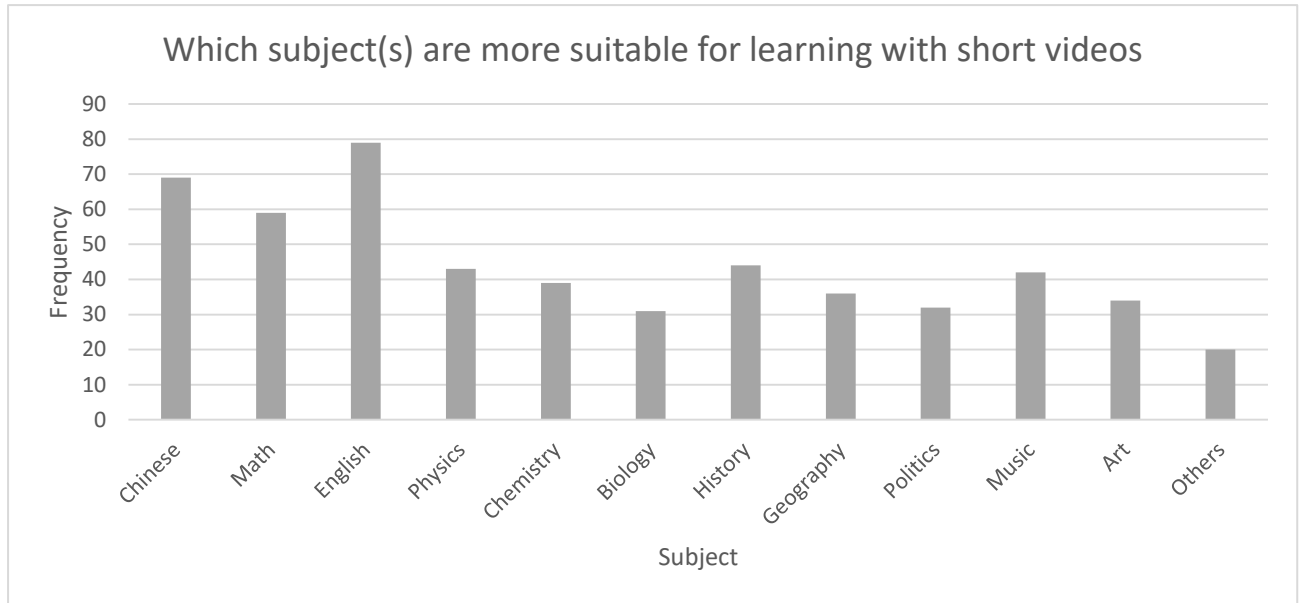


Figure 20 Which subject(s) are more suitable for learning with short videos?

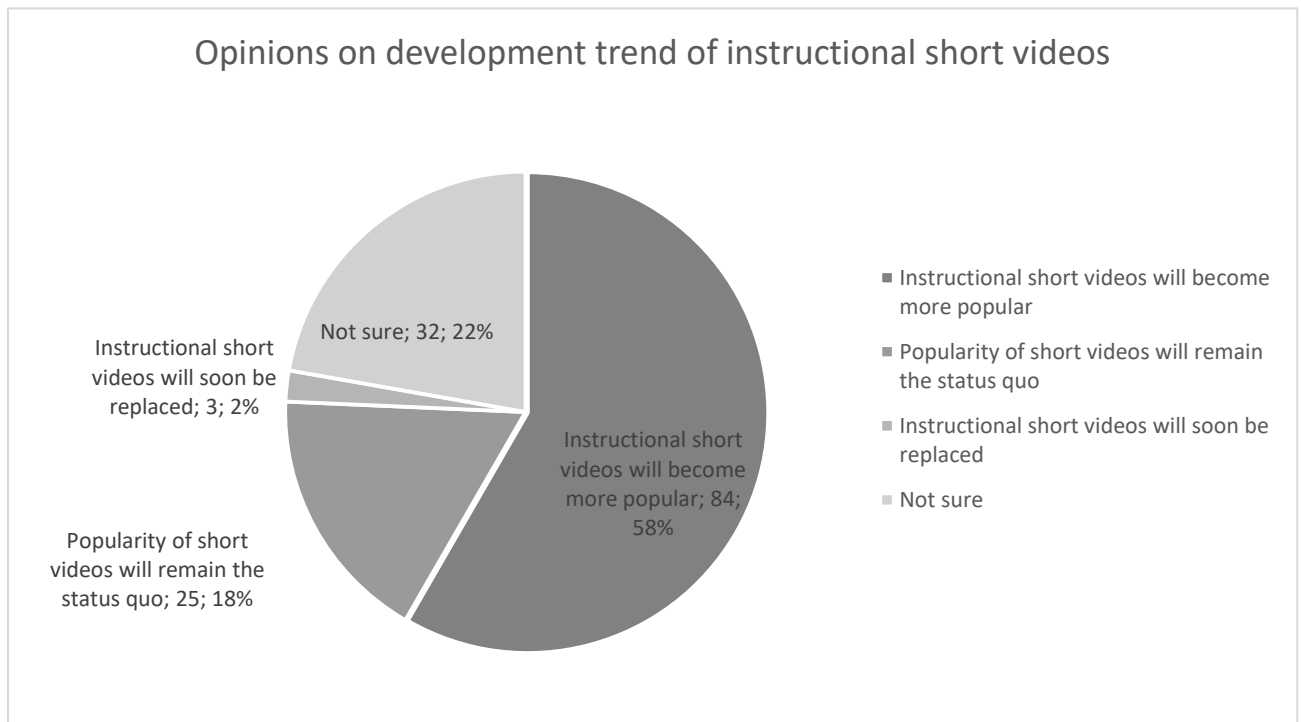


Figure 21 Opinions on the development trend of instructional short videos

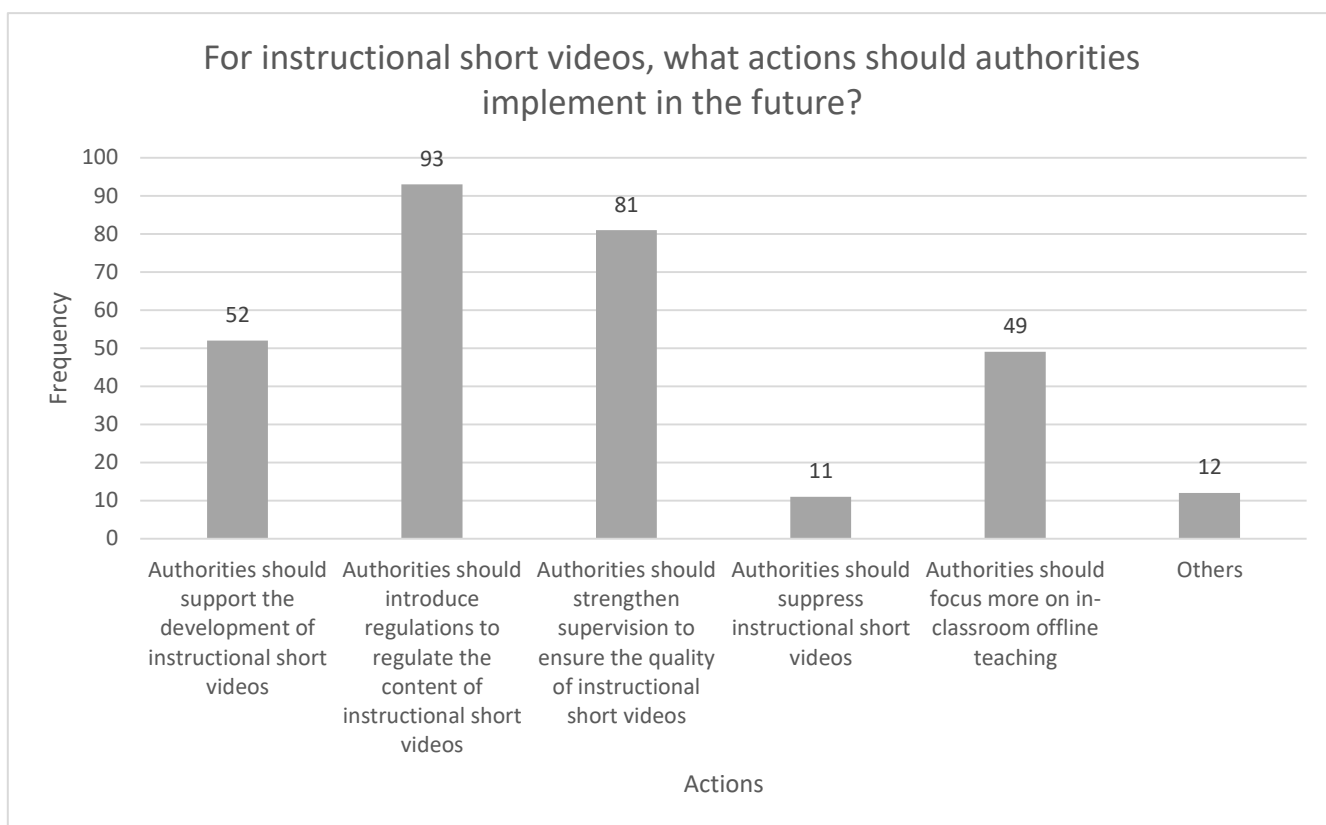


Figure 22 For instructional short videos, what actions should authorities implement in the future?

In summary, to a certain extent, the questionnaire reflects the current Chinese K-12 students and their parents' perceptions, evaluations, and expectations of using instructional short videos. The following points are concluded from the statistical and schematic results:

1. Educational short videos are more suitable for students with better grades.
2. Most K-12 students currently use short videos to study courses only because of the Covid-19 pandemic or school requirements. Short videos should be improved to make students more willing to use them spontaneously.
3. For high and middle school students, educational short videos in Chinese, mathematics, English, physics, and history are more marketable. For elementary school and kindergarten students, short videos of interest classes such as music and art also occupy a large market share.
4. Nearly a quarter of K-12 students now use educational short videos every day, and students with better academic performance use short videos more often.
5. Students with better grades learn better with short videos.
6. Nearly three-quarters of respondents believe that the teaching efficiency of short videos is far less efficient than offline in-classroom teaching.

7. Bilibili, Douyin, Tencent Video, and Public Platform on WeChat are the top 4 most frequently used platforms to watch educational short videos.
8. Convenient, short and precise, easier to understand, interesting, and highly flexible are the top nominated advantages of educational short videos.
9. Easily distracted, hard to concentrate, lack of interaction, requiring parental supervision, and harmful to eyesight are the top nominated disadvantages of educational short videos.
10. Most respondents are willing to continue to use short videos to study K-12 courses in the future and are optimistic about its future development.

3.3.3 Students' attitude to video clips

According to the results of the questionnaire, the majority of students supported the use of video clips in their daily learning. A total of 30 students participated in the questionnaire. Among them, 28 students thought that watching videos for learning was interesting and they were willing to try this method of learning. The other two students did not want to try this method of learning.

After receiving the questionnaires, the students who filled out the questionnaires were interviewed in detail in order to really understand the students' thoughts. First of all, the students who had a supportive attitude held the idea that the traditional remedial teaching method was too dull; It is a waste of time for most students. And it is like a fill-in-the-bag education. Teachers cannot stimulate their interest during the process of learning. No one likes to be forced to do anything, especially students at the high school level. Children at this stage have high self-esteem and prefer not to be forced to study. Therefore, students who don't want to study at school don't want to study under the forced tutoring of educational institutions. Not to mention achieving the goal of improving scores. The basic reason is that this single traditional teaching method has worn out the students' enthusiasm for learning. In the teaching activities, the teacher is still dominant. Students have always played a passive role in it. And some teachers do not care whether students understand or not, whether they understand clearly or half-understand. They just decide to "pour" knowledge into students' brains. The knowledge cannot be digested by students quickly, it has become counterproductive. If teachers want to get rid of this problem in the current era, they should follow the trend of information technology teaching, integrate video teaching into the learning of English, enrich the teaching format, and stimulate students' interest in learning English. Second, currently, watching videos on social platforms is the main way of entertainment for the public. Students are no exception. After school, students also often relieve their stress by playing mobile games, watching TV shows, and cartoons, reading novels, etc. Accordingly, watching video lectures on cell phones will make students' stress in pre-reading and reviewing sessions much less. Some students shared their experience,

saying that even if they didn't pay attention in class, they could still check the gaps by watching videos after class, so they wouldn't be unable to keep up with the overall learning pace because of one mistake. Thirdly, search apps are very popular among the public. When they encounter a problem that they have no idea about, they can take a picture of this question and search for the answer in the app to learn and comprehend the knowledge. This allows them to quickly grasp what they don't know and know exactly where they are lacking. One student claims that the Search app has helped him very much. He was able to improve his grades quickly thanks to making full use of the Search app. When he found that he didn't understand a topic, he uploaded the topic and listened to the online explanation. That's not the last step, after that, he also searches for exercises on relevant knowledge on the Search app to practice and make sure that he really knows how to do that type of question. Eventually, compared to one-on-one teaching in educational institutions, the price of recorded classes will be cheaper and more cost-effective. High school extracurricular classes are very expensive, many of them cost thousands or even tens of thousands of yuan a month, and they don't always have good learning results. Most students are wasting their parents' hard-earned money in the tutorial force. And most importantly, students can use the trial class to determine if the teacher's teaching style is understandable. High school students have already established a complete view of the three, they clearly know that their parents do not make money easily and cannot waste money. Therefore, the recorded classes and online videos that share knowledge for free are great alternatives for them.

3.3.4 Parents' attitude to video clips

According to the results of the questionnaire, parents' attitudes towards the use of video clips in learning remain neutral. A total of 30 parents participated in filling out the questionnaire. Among them, 16 parents did not support their children in learning knowledge by watching videos. The other 14 parents thought that it was a great idea to try.

After receiving the questionnaire, the author of this paper had a detailed conversation with the parents who filled out the questionnaire in order to understand how they felt about their children learning through watching video clips from their perspective. The parents who remained supportive and the students who remained supportive both had very similar reasons. They think this method of learning is not perfect, but the advantages outweigh the disadvantages. At first, the video clips are more interesting. It can develop students' interests and make them learn independently. After all, it is known that interest is the best teacher for young people in everything they do. It is certainly a blessing that students can learn happily and independently. Second, video clips do make up for many of the shortcomings of learning in the classroom. Children with lower grades can use online videos to close

the gap with other students. Students with good grades can use online videos to expand their horizons and learn about relevant knowledge that interests them. For example, when school is studying long reading passages, they can look for relevant phonics knowledge and video knowledge on their own to practice their listening and speaking skills after they already have had a deep understanding of the knowledge. They can also choose to chat with online tutors about relevant issues to enrich their vocabulary. However, other parents believe that the method of learning knowledge by watching video clips does more harm than good. Although it is convenient, it also brings many problems that cannot be solved at present. First, watching video clips for long periods of time can cause your child's eyesight to deteriorate. High school students normally spend more than 10 hours a day in school, and after school, they have to finish their homework for the day, so they are already using their eyes excessively. If they have to watch electronic screens for a long time after school, especially when the words on the cell phone screen are small, parents are worried that this will be harmful to their eye health. Parents obviously value their children's health more than good grades. Second, video education requires a high degree of self-awareness and self-control, and most students are unable to maintain long-term attention in front of online video courses. There are so many temptations on cell phones that parents find it difficult to keep their children from being tempted without supervision. Each child has different study habits. Some students are very disciplined and do what they are told to do at what time. This kind of teenager is not drawn to other things. But some students are the opposite. There are some high school students who have bad study habits. They can only learn when they have teachers and parents sitting around to watch them study, and once no one is watching them, they do not choose to study on their own. When using cell phones to watch video clips, without the supervision of teachers and parents, the attention of such undisciplined students is often attracted by other WeChat messages or game messages, and the learning effect will be greatly reduced, or they simply do not want to watch online classes carefully. For this type of student, tutoring is meaningless. Thirdly, some parents consider that learning through video clips is a learning method that has suddenly become popular in recent years, and the whole system is not complete and standardized. Moreover, their children do not have such a learning experience before, so they are not sure what kind of learning effect their children will have. Combining the above two reasons, these parents are not willing to take risks with their children at this important stage of high school, so they will not choose this new learning method.

3.3.5 Instructors' attitude to video clips

According to the results of the questionnaire, instructors' attitudes towards this new learning method of applying video to learning are generally supportive, but there are still some concerns. A total of 30 teachers participated in filling out the

questionnaire. Among them, 26 teachers supported their students to learn by watching videos. The other 4 teachers thought that having students watch videos to learn knowledge was inappropriate at this stage. They believe that while video clips have energized K12 education, they have also brought a series of problems to be solved.

After receiving the questionnaire, we interviewed the teachers who filled out the questionnaire in order to understand the reasons for their choices. First, in the traditional English classroom, the teaching atmosphere is rather dull, students do not pay attention in class, and their learning efficiency is not high. However, the effect of this method is not long-lasting, and it is likely to provoke students' rebellious mentality. However, there are many advantages to introducing video teaching into English teaching. For one thing, the focus in high school English classes is on the presentation of English texts. These texts are often long and difficult. The boring text and the excessive length of the text cut down students' interest in learning to a certain extent. Especially for those students who have a weak foundation in English. Therefore, in schools, teachers can stimulate students' interest in learning by showing vivid images in teaching, combining listening and watching, thus allowing students to focus their attention in class, increasing their enthusiasm for learning, and reducing their fatigue and burden of learning. Video clips can make abstract, difficult knowledge more vivid, and also can make not easily understood content visual, and concrete. On the other hand, video teaching can effectively help students complete their pre-reading and revision tasks. The use of video clips can be used to personalize the teaching of English, which can help students improve their English learning efficiency, complete the process of learning and consolidating the English knowledge and vocabulary of the section, and thus also exercise students' independent learning ability. This learning method breaks the previous boring after-class review mode, allowing students to review after class easily and happily, helping students to solve many difficult problems, and playing a role in checking the gaps in English learning, thus improving learning efficiency. The application of video clips allows students with weak learning abilities or those who did not understand the knowledge points in class to study and communicate with each other independently after class, and students can find answers quickly without the help of teachers and parents. Students with good grades, can learn the content independently according to their own needs and strive for more gains. Second, the videos also provide great help for teachers to improve themselves and their teaching ability, especially high school English teachers. Teachers can make full use of network resources to optimize classroom teaching and use high-quality video resources to promote teachers' self-learning and growth. At the same time, they can not only recommend excellent English course resources to their students, but also share excellent English masterpieces, videos, and other resources to realize the combination of teaching and education, continuously improve teaching efficiency and teaching quality, enhance students' humanistic and

moral qualities, and promote their all-round development. Thirdly, English is a language and a tool for understanding the world. Teachers can use videos as a carrier to enable students to observe and understand the world from a cross-cultural perspective and make correct judgments about things. By comparing excellent Chinese and foreign cultures, students can enhance their sense of national cultural identity, strengthen their sense of home and country, build cultural self-confidence, establish a sense of the community of human destiny, learn to behave and do things, and thus grow up to be civilized and socially responsible people. Last but not least, video clips can help teachers implement a teaching method that is tailored to the needs of the students. Because China has a large population, there are many students assigned to each learning class. As it known to all, an English teacher needs to teach 40-50 students with different foundations and different learning habits. Each student has different learning situations and life experiences, and different perceptions and understandings of life. Therefore, it has different needs for instruction in the teacher's curriculum. It is obvious that using the same teaching method for so many students will definitely not achieve good learning results and satisfactory grades. Consequently, with a large number of students in a class, it becomes a challenge for the teacher to tailor the instruction to the students' needs. The presence of video clips can help teachers overcome this challenge. For example, when improving students' English listening skills, teachers often use the original British or American listening texts; BBC English News and VOA English News are good choices for all students. At the same time, for students with different foundations, teachers can use the speed adjustment function of video clips to achieve what they want. For students with a weak foundation, you can start with a slow speed of English, and for students with an average and good foundation, regular English is good for them. In addition, the teacher can also communicate with the students beforehand and pick topics that really interest them. This way will give better results. However, during the process of the interview, although the teachers supported the use of the new method, they still expressed some concerns in their words. With the rapid development of the Internet, many people have been exposed to more ways of education, through the screen, voice, the camera can be "close" and the opposite person communication, learning. This was especially common during the "Covid-19" period when schools could not hold normal classes and there was academic pressure, so school teachers who had never taught on a screen began to broadcast live. One teacher shared her experience of taking an online English class during the outbreak to express her concern. She said, "During the semester, due to the outbreak and spread of the epidemic, many schools made the decision to keep their children home and isolated for online classes to ensure the health of their students." Taking online classes is also a type of learning knowledge through video clips. Through her experience over the past few months, she believes that so far, the at-home Internet classes have not been as effective as

people expect. First of all, online classes at home can be conducted without a webcam, so the teacher cannot directly determine whether the students are listening carefully or are distracted in the online class. Secondly, parents need to go to work during class time, so many students are often left alone to listen to the class, and the teacher does not know if the students are paying attention in class without supervision. Lastly, when they are not in the real classroom, students think that the teacher is far away and cannot teach them, so they tend to pay less attention to their homework and therefore do not complete their homework very well. In short, how can students learn when they are distracted while listening to lectures and perfunctory when doing homework? Besides, today's society advocates freedom of speech, so there is a lot of information on the Internet, not only correct information but also wrong information. High school students, on the other hand, are not yet adults and have a slightly weaker ability to distinguish information, making it difficult to identify whether the source of the information is correct or incorrect. Therefore, if they are blindly using the video to learn without confirming whether the video information is explained correctly, it can lead to worse learning results. These are the parts that teachers worry about. Therefore, instructors have to take more responsibility. That is to say, they should guide students properly, make full use of online resources to carefully select video clips, and use teaching positions to provide students with a good learning environment and learning conditions.

3.3.6 Education institutes' attitude to video clips

According to the results of the questionnaire, the founders and teachers of educational institutions think that the new learning method of applying video to learning is great and is the future trend. A total of 30 educators participated in the survey. All 30 of them chose to support their students to learn through watching videos.

After receiving the questionnaires, we interviewed and surveyed the people who filled out the questionnaires in order to understand the reasons for their support. First of all, in 2022, China issued the "Opinions on Further Reducing the Burden of Homework and Off-Campus Training for Students in Compulsory Education", or "ease the burden of excessive homework and off-campus tutoring for students undergoing compulsory education", to rectify the problem of capitalization in the education market. Although the double reduction was aimed at compulsory education students, it also had a huge impact on the high school education and training market, with many small and unregulated educational institutions closing down and a large number of teachers losing their jobs. Other institutions began to open up new paths of online live education in order to save costs. Second, online education platforms provided new job opportunities for employees who were isolated during the epidemic. Until the epidemic is effectively contained, people can be sequestered at

any time, which results in employees not being able to get to work on time, and without work, there is no pay and no money to live on. Our lives have been affected by the new crown epidemic since the beginning of 2020, and it is still affecting our daily lives now in 2022. Therefore, in order to make money and feel safe, many teachers from educational institutions have switched to the online education industry. Online education is not limited by time and space, so you can attend classes and earn a living as usual even during the epidemic. Finally, teachers in developed areas not only have strong teaching ability, but also novel teaching content and extensive knowledge; online education provides a platform for sharing quality education resources, so it is favored by many schools and students, and user acceptance has been improved like never before, which is expected to usher in a new round of growth. Driven by the combination of favorable policies, consumer upgrades, and technological waves, the market size and user scale of online education in China continue to expand.

However, at the same time, educational institutions also face many problems in the process of creating online platforms. At first, the teaching effect is not obvious in the short period and the national awareness of knowledge payment is lower. So most users have a low willingness to pay. Some parents retain stereotypes rather than looking at the teaching effects. These people hold the idea that watching online classes is playing on their phones, not learning. The only real tutoring is when the teacher sits next to the student in person and teaches them. So they are naturally not willing to pay for the online video class. Secondly, Internet content copyright protection is not enough in China. The content loss of each platform is serious. There are cases of leaking teaching content through recording and other ways, making it easy for other users to get free resources so that the user conversion rate is low. The phrase "share xxx online class for free" is often seen on developed platforms. Some people even specialize in selling video resources cheaply in the secondary market. If the relevant laws do not protect the original, then sooner or later the original will disappear completely. This is not a good thing for anybody. Moreover, paying for knowledge is a reasonable thing in itself. Thirdly, some teachers in educational institutions do not want to get out of their comfort zone and learn extra new knowledge. Imagine if there were no online classes, they could have taught a day in and day out with their old known knowledge, which would have made it very easy for them. The advent of online education platforms means that teachers have become more competitive. They need to learn new things, such as how to manipulate the equipment of online classes, how to make their trial classes more attractive to students, etc. Overall, lifelong learning is always beneficial both for students and teachers. Failure to learn will one day be lost to a rapidly changing world.

3.3.7 Survey result and summary

The statistics of the questionnaire results and the compilation of the in-depth interview conversation data lead to the conclusion. High school educational institutions, high school teachers, students, and their parents maintain a positive attitude toward the new technology and new method of learning knowledge through video clips. The majority of students, teachers, parents, and educational institutions support the development of this new technology, believe it has many benefits, and are willing to try this method themselves. Few people oppose the use of this new technology in high school English teaching. Very few people think that video is the wrong thing to use in teaching. Beyond that, only a few teachers and parents are neutral. That is also because the use of video clips in the teaching process is not yet perfect and there is still room for improvement and adjustment. There are always problems in the beginning of a new technology and method. As long as relevant organizations, schools, parents and children actively cooperate and do their best to propose feasible measures to solve their problems, these neutral parents and teachers are excepted will eventually agree to use video in teaching. The 45th Statistical Report on the Development Status of China's Internet Network released by China Internet Network Information Center (CNNIC) shows that as of March 2020, the size of online education users reached 423 million, accounting for 46.8% of Internet users as a whole. Stimulated by the epidemic, both the scale and proportion of users participating in online education have increased significantly compared to June 2019. With the gradual recovery of offline classes, as of June 2020, the scale of online education users and the proportion of overall Internet users both declined slightly, but the scale of users increased by 149 million and the proportion of overall Internet users increased by 13.3% compared with the same period last year. Overall, the epidemic has boosted the development of the online education industry, accelerating the change of students' learning habits to a certain extent and increasing user acceptance to an unprecedented degree, which is expected to usher in a new round of growth. Therefore, it is certain that as problems continue to emerge and be solved, the use of video in the teaching process is an inevitable development trend in the future. The use of video clips in teaching and learning has not only great benefits but also imperfections. Relevant departments and people need to sort out the strengths and weaknesses of instructional video clips in research, and this step has important theoretical and practical values for its improvement and optimization of teaching behavior research.

3.4 Effectiveness of instructional video clips

As we all know, every coin has two sides. There is both a good side and a bad side to everything, especially a newly invented technology or something. Because new means that it has been created for a very short time and has not really been

applied in real life yet. There are some problems that can be improved. So is the application of instructional video clips. Although the application of instructional video clips has many benefits as mentioned above, it is not perfect, there is still room for improvement, and it still needs to be corrected according to the actual situation and problems.

In order to test the effectiveness of the application of instructional video clips in daily teaching life, the author of this paper designed an experiment. In this experiment, 30 high school students were invited to watch various educational video clips of different lengths, presentation modes, etc., and the experimental volunteers' attention to these video clips was observed and recorded. And the 30 high school students were guaranteed to have essentially the same basic learning level, male-to-female ratio, and other factors. The English language knowledge taught in the video clips was quizzed to assess the effectiveness of teaching and learning. This thesis attempts to identify the current problems with this new technology through such an experiment.

The experiment divided 30 high school students into three groups, with one group of ten. Asking the teacher to show a 40-minute-long video about explaining English knowledge for the first experimental model. For the second experimental model, 20-minute-long English teaching video clips and then another 20-minute-long English teaching video clips at 10-minute intervals were shown to them. The third group of students was asked to listen to the lecture in the traditional classroom. The teacher was asked to give a 40-minute lesson to the students in the classroom. All three groups listened to the same lesson and same points. After the above steps were completed, the same test paper was used to test the students' listening performance. The results were as follows: The first group of students who watched the 40-minute video had a correct rate of about 85%. The second group of students who watched the 20-minute video in two sittings had a correct rate of about 92%. The third group of students who were in the classroom for 40 minutes had a correct rate of about 80%.

Therefore, the above data show that, first of all, according to the correct rate of the test paper, video clips do have better teaching performance and effect compared with traditional classroom teaching. Traditional classroom teaching is teacher-oriented, the lecture is slightly boring, and students are easily bored and distracted, so the effect of the test paper is not very good; while the video clip is different from the previous traditional teaching mode, its content is more specific and vivid, lively sound, with vivid images, and also more concise and intuitive, which is convenient for students to understand. Such a novel experience is more able to attract students' attention. And the enthusiasm for learning is also much higher, and the learning initiative gets improved. This requires that the teacher must complete a role change. The teacher is not only the lecturer of learning knowledge but also the organizer, facilitator, and guide of students' learning. Second, the length and presentation mode

of the selected video is the dominant factors affecting the teaching effect of video clips. According to scientific research, human concentration is limited, and different people have different concentration times. Therefore, the tomato work method was born. The tomato work method means that most students or workers reach the limit of concentration in about 25 minutes, at which time people should take a short break and then proceed to the next 25 minutes of study. This is the only way to complete the task efficiently. Therefore, we can conclude that the longer the video is, the less effective the students will be in understanding the knowledge, and the moderate length of the video will maximize the students' learning effect. At the same time, the duration of the video is limited to 20 minutes to protect the eyes from fatigue.

However, even though video education is good, there are still problems. Therefore, to ensure the effectiveness of video teaching, we must first solve the following problems. First, the educational effect produced by applying video to teaching is strongly dependent on the teaching scene, and the absence of a face-to-face teaching scene also directly affects the teaching effect. Learning efficiency improvement requires constant interaction. The most effective effect of learning efficiency is the interaction between students and teachers in the classroom. Direct questions to the teacher, or the teacher depending on the different expressions of the students to decide whether the problem needs to be weighted proportionally to parse. Part of online education is more like a one-man show, where the teacher unilaterally indoctrinates students, regardless of whether they can accept it well, somewhat similar to duck-and-fill teaching, where the online teacher does not have enough control over the students to form timely teaching feedback. Second, online video information comes from a wide range of sources. It is difficult for people to distinguish which is good and which is bad. Few correct teaching resources, poor quality of video information, and limited development level often lead to poor quality of their videos. Even though there are relatively good recorded high school English courses, many of them simply move the content of textbooks to web pages, failing to give full play to the role of network and multimedia, and students' personalized learning cannot be satisfied. Third, the online teacher teams of educational institutions are lacking and highly mobile. Online education is a challenge and an opportunity for teachers. In order to become a master's teacher of online education not only must complete the role of change, but also take the initiative to learn a variety of advanced educational technology, to complete the technical improvement at the same time also have a deep educational theory and professional knowledge to be able to spread the knowledge more wonderfully through video. All of the above are missing, and it is very difficult to gather all of these qualities. Also, it takes time for students to adapt to a teacher's teaching style. It can be a big problem for students if they keep changing teachers. Also, different teachers have different teaching habits and it is difficult for students to adapt quickly. In addition, for quality teacher

resources, it is also a test for educational institutions to encourage teachers to participate in recording video courses and sharing systematic teaching content on online course platforms.

Only by solving the above problems in a targeted manner and giving full play to the advantages of video teaching can we maximize the teaching results. It is believed that in the process of continuous development of technology, human beings can find solutions in practice through their own ingenuity. The future development of applying video clips to teaching will generally show a trend of mainstreaming, diversification, informatization, intelligence, standardization, and integration.

3.5 Methods of correctly using short videos for K-12 teaching

English is a kind of language learning, and English teachers are the organizers and managers of the classroom. Short video platforms can be introduced into College English teaching classes as a new way of English teaching. Combined with traditional teaching forms, it can bring a real personalized experience to students, so as to create a new and harmonious ecological education environment. In College English teaching, teachers need to change the old way of thinking, break through the shackles of traditional teaching concepts, innovate their own classroom teaching mode, and increase the utilization of short videos in the classroom. Teachers are no longer simply indoctrinated. Teachers can play short videos in class, quickly capture students' attention with attractive pictures and language, and stimulate students' learning enthusiasm. In addition, educators must have enough knowledge support to deliver new ideas to learners. In the process of making short videos, teachers will be exposed to some new English knowledge, so as to expand their knowledge and enhance their comprehensive ability. College English is a subject with strong practicality. College English teachers combine classroom content with short videos, which provides opportunities for the cultivation of college Students' autonomous learning ability and practical abilities.

The popularity of short videos is irreversible, but the quality of the short video is a problem that people should pay attention to. The short video platform should strengthen the audit and put an end to the release of wrong information videos. In the short video platform, some people choose to publish some negative content by any means in order to attract attention, which has affected the formation of college students' values. Therefore, relevant platforms should not allow these videos to circulate and should strengthen the audit of short video quality and content. In addition, the government should also introduce relevant laws to rectify the content of this area, so that educational short videos can develop healthily and create a good learning atmosphere for college students.

Colleges and universities should actively build their own official short video brands and build the main front Colleges and universities can set up a professional

and reliable operation team, regularly release some short videos related to English learning, and create a strong short video resource library for English teaching. This official account has a large flow, strong authority, and a wider range of dissemination. The construction of a college English teaching resource-sharing system is a dynamic project. On the one hand, colleges and universities should strengthen linkage and complement each other. On the other hand, universities and platforms should strengthen cooperation and management. While colleges and universities disseminate knowledge, the platform can also obtain more visitors, so as to achieve mutual benefit and win-win results.

CONCLUSION

In recent years, video clips have exploded and are more and more used for education. This is due to the rapid development of the Internet nowadays. The popularization of the Internet and the opening of the platform give everyone the opportunity to show himself. Today's short video platform is not only for entertainment but also for education, which opens the development road of the short video + education industry. The video clips are interest-oriented and the continuous output of high-quality content is always the key to success. The essence of content actually lies in people's hearts. The key to good content is whether it can resonate with viewers, grasp the essence of the content and meet the needs of students, which makes short videos widely used in the education industry. The new education and teaching model provides new ideas and inspirations for expanding the education market, implementing lifelong education, and exchanging experience and skills.

Teachers make full use of modern educational technology, develop English teaching resources, broaden students' learning channels, improve students' learning methods, and improve students' learning efficiency; In order to realize the integration of modern information technology and English teaching, we should use computer and multimedia teaching software to explore a new teaching model, develop and make reasonable use of English teaching resources based on modern information technology. Short videos are designed on the basis of information technology. Different from single media such as text and pictures, short video integrates image, sound, text, and animation, thus giving a strong visual impact and attracting students' attention. Compared with video, the playback time of short video ranges from a minimum of 30 seconds to a maximum of 20 minutes, which has the advantages of being short, convenient, exquisite, and playing anytime and anywhere.

The analysis results show that video clips can promote high school students' English learning, and students, parents, teachers, and educational institutions support the use of video clips as learning media. In this paper, the attitudes of students, parents, teachers, and educational institutions towards video clips are obtained through a questionnaire survey as follows. Firstly, a questionnaire survey was conducted among 30 students, among which 28 students were very interested in watching video learning, and most of them were willing to try this learning method. A questionnaire was then conducted among 30 parents, of whom 14 thought that learning by watching videos was a good idea to try, and parents remained neutral about the use of video clips in learning. After that, 30 teachers conducted a questionnaire survey, among which 26 teachers supported students' learning through video. According to the questionnaire results, teachers generally supported the new learning method of applying video to learning, but there were also some concerns. Finally, 30 educators participated in the survey. All 30 educators chose to support

their students' learning by watching videos. According to the results of the questionnaire survey, the founders and teachers of educational institutions believe that the new learning method of applying video to learning is great and the trend of the future.

For high school students, almost every high school student has his or her own mobile phone, and most of them choose to play on mobile phones in their spare time. Doing so can make them relax and relieve their study pressure. Therefore, compared with the normal boring teaching in the classroom, video clips can create a vivid and lifelike teaching environment for children. Receiving information on the screen also makes students more interested. After all, watching videos is like playing with your phone. Being relaxed and happy is the most important thing a student or teacher can achieve. For students, short videos are a more contemporary way for teachers to express themselves on the original basis, and they are more receptive to this new means of knowledge transmission. The practical application of short video in high school English classroom is firstly applied to listening and speaking training. The content of listening and speaking is presented to students in a dynamic and sound form, which makes the listening and speaking training more real and interesting. It helps students understand the content of listening and speaking, stimulates their enthusiasm for learning, and thus improves their comprehensive language application level. Second, it is applied to pre-class introduction to help students predict text content, which can quickly focus students' attention and stimulate their interest in learning while activating the classroom atmosphere. It provides an excellent occasion for students' intercultural communication skills and lays a solid foundation for subsequent classroom teaching. Thirdly, the short video teaching resources can be used to strengthen students' English knowledge and skills and improve their English learning effectiveness.

For teachers, effective teaching behavior is an important tool to optimize teaching effect and promote their professional development. And video clips are one of the most effective instructional behaviors currently available. High school teaching task is heavy, promote the pressure of higher education is great. And every student the teacher meets has his or her own unique characteristics. In the process of explaining knowledge, it is difficult to take care of every student comprehensively, and it is also difficult to keep the class interesting and innovative all the time. In addition, there are too many students at different levels, adding too much extra knowledge. Students' learning level is different, and blindly supplementing extracurricular knowledge, will increase the burden of students with low grades, easy to blur the teaching focus. The appearance of video clips can assist teachers in their daily teaching. It not only ensures the quality of teachers' teaching but also helps to broaden their knowledge while improving their English listening and speaking skills. Short videos are a better way to spread knowledge. Short videos are applied to after-

school extensions in high school English classes taught by teachers. Since the Contents of English textbooks cannot meet the needs of students' English learning, teachers should guide students to expand their learning. Teachers use micro-video to effectively expand and promote extended learning, which has achieved good teaching results. The knowledge that the teacher failed to finish in class can be widely spread in the form of short video shooting. At the same time, videos can be easier to save. You can open it anytime, anywhere. The very low-cost input given can be better accepted by students.

For parents, the parents of children with short video accept degree is different, from the parents of teenagers who understand the digital culture life, by more than ninety percent of parents think that impossible to let the child and the network isolated, and most parents say the future is the Internet age, children need to touch and to know much fun in learning it is also very normal. But some parents worry that the content of short video platforms is uneven, and governance is difficult to place, which is not conducive to children forming good habits. For example, stars with goods may develop children's unreasonable consumption habits. Internet celebrity overnight fame legend, celebrities on the Internet showing mansions, and luxury car behavior may also let children form the wrong value of unearned gain. Because of these concerns, parents should watch short videos with their children and discuss the content of short videos with their children. Only in the process of watching and appreciating together can parents' educational philosophy gradually penetrate into their children. And what we found from our research is that if parents have more knowledge and understanding about their children's use of short videos, their children spend less time with short videos. On the contrary, children are more likely to rely on short videos if their parents do not understand their children's behavior. Therefore, parents are advised to accompany their children as much as possible. Watch short videos with your child after dinner, so that you can enjoy doing what your child likes to do, but also learn about his browsing interests and take the opportunity to guide him. Short videos are beneficial to children, such as the reading activities held on the Douyin platform. Children are very interested after watching them. The combination of short videos and offline reading not only makes children actively read books but also forms a positive learning consciousness.

For educational institutions, in addition to the traditional teaching mode, it is undeniable that the application of video clips in teaching provides more possibilities for educational institutions to make profits. With the help of vivid and rich micro-video teaching, students can not only improve their enthusiasm for English learning but also improve their cross-cultural communication skills. At the same time, owners and practitioners of educational institutions also have more opportunities to explore the possibilities of teaching and learning, taking into account the teaching objectives and the actual situation of students. However, the primary goal of educational

institutions is to make every effort to ensure that every student has equal access to a good education. An industry that appeals to conscience should not be driven by profit.

In order to effectively apply video clips to English learning and ensure the effectiveness of video teaching, the following problems should be solved first. First of all, the educational effect produced by the application of video in teaching is highly dependent on the teaching scene, and the absence of a face-to-face teaching scene also directly affects the teaching effect. The improvement of learning efficiency requires constant interaction. The most effective effect of learning efficiency is the interaction between teachers and students in the classroom. Ask the question directly to the teacher, or the teacher will decide whether the question should be weighted proportionally based on the students' different expressions. Part of online education is more like a one-man show. Teachers unilaterally indoctrinate students, no matter whether students can accept it well or not, which is similar to spoon-feeding teaching. Online teachers do not have enough control over students and cannot form timely teaching feedback. Secondly, the source of network video information is very extensive. It's hard to tell what's good from what's bad. The lack of correct teaching resources, poor quality of video information and limited level of development often lead to poor quality of their own videos. Even though there are well-recorded English courses in senior high schools, many of them simply transfer the contents of textbooks to web pages, failing to give full play to the role of the Internet and multimedia, and students' personalized learning cannot be satisfied. Finally, online teacher teams in educational institutions are lacking and highly mobile. Online education is both a challenge and an opportunity for teachers. If you want to become a master teacher of online education, you should not only complete the transformation of your role, but also take the initiative to learn all kinds of advanced educational technologies. When you complete the technical improvement, you also need to have profound educational theories and professional knowledge to spread knowledge more brilliantly through videos. All of those things are missing, and it's very difficult to bring them all together. What's more, students need time to get used to the teacher's teaching style. It will be a big problem if students keep changing teachers. What's more, different teachers have different teaching habits, which makes it difficult for students to adapt quickly. In addition, for high-quality teacher resources, it is also a test for educational institutions to encourage teachers to participate in recording video courses and share systematic teaching content on the online course platform. Only by solving the above problems and giving full play to the advantages of video teaching, can the teaching effect be maximized. We believe that in the process of continuous development of technology, human beings can find solutions through their own ingenuity in practice. In the future, the application of video clips in teaching will generally show the trend of mainstreaming,

diversification, informatization, intelligence, standardization and integration. Therefore, video clip is a feasible application in high school English teaching.

Compared with traditional classroom teaching, the main factors affecting the teaching effect of video clips include video clip length, topic, presentation mode and teaching language. Educational video clips have both positive and negative effects on English education in Chinese high schools. In order to test the application effect of teaching video clips in daily teaching life, this paper designed an experiment by inviting 30 high school students to watch a variety of educational video clips of different lengths and presentation methods, and observed and recorded the attention of experimental volunteers to these video clips. And ensure that the 30 high school students' basic learning level, gender ratio and other factors are basically the same. The knowledge of the English language taught in the video clips was tested to assess the effect of teaching and learning. This paper tries to find out the existing problems of this new technology through such an experiment. The experiment divided 30 high school students into three groups of 10. The teacher was asked to play a 40-minute video explaining English knowledge for the first experimental model. In the second model, they were shown a 20-minute English teaching video clip, and then another 20-minute English teaching video clip at 10-minute intervals. A third group was asked to listen in a traditional classroom. Teachers are required to give a 40-minute lesson in the classroom. All three groups listened to the same lesson and the same knowledge. After completing the above steps, use the same test paper to test students' listening performance. Here's what happened: The first group of students who watched the 40-minute video got it right about 85 percent of the time. The second group watched the 20-minute video in two separate sessions and got it right about 92 percent of the time. The third group, who sat in the classroom for 40 minutes, got it right about 80 percent of the time. Therefore, the above data show that, first of all, from the perspective of the accuracy of the test paper, video clips do have better teaching performance and effect than traditional classroom teaching. The traditional classroom teaching takes the teacher as the center, the lecture is slightly boring, the students are easy to get bored and distracted, so the effect of the examination paper is not very good; The video clip is different from the traditional teaching mode, its content is more specific and vivid, the voice is lively, the image is vivid, but also more concise and intuitive, easy for students to understand. Such a novel experience can attract students' attention. And the enthusiasm of learning is also much higher, the initiative of learning has been improved. This requires teachers to complete the transformation of their roles. Teachers are not only lecturers of learning knowledge, but also organizers, promoters and guiders of students' learning. Secondly, the length and presentation of the selected video are the dominant factors affecting the teaching effect of video clips. According to scientific research, people have a limited amount of concentration, and different people have different periods of concentration. The

Pomodoro technique was born. The Pomodoro technique refers to the point at which most students or workers reach their concentration limit at about 25 minutes, when they should take a break and move on to the next 25 minutes. It's the only way to get the job done efficiently. Therefore, we can come to the conclusion that the longer the video, the less efficient the students' understanding of knowledge, and the appropriate video length will maximize the students' learning effect. Meanwhile, videos are limited to less than 20 minutes to protect eyes from fatigue. By collecting research data through investigation, interview and analysis of big data, a comparative experiment is conducted between traditional classroom teaching and educational video clips of the same lesson, and it is observed that the English learning efficiency of high school students using video clips is relatively high. High school English learning in China based on as the research samples, investigated the video clip in k-12 education in the application and its influence, it is concluded that video clip yes students enthusiasm degree is high, maximize learning effect, has certain positive influence, in the field of dissemination and education, video clips, more efficient than the traditional media and popular, study education video clips more practical than the traditional teaching mode.

In general, video clips are accessible and applicable to High school English education in China. The Internet industry competes for people's attention, the education industry competes for people's mind. Although they have different degrees of influence on people, educational behavior is more complex. Short video is just beginning. For the education industry, short video is a new form of product introduction and also the focus of users' attention. Therefore, the biggest value of short video for the education industry at the present stage lies in the "consumer education" of consumers and creates more brand value and market value for education enterprises. In the future, primary and secondary schools and even adults will consume a large amount of paid content. Video clips will also become the mainstream teaching method of English education in High schools in China.

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APPENDIX A
Questionnaire (Original Chinese Version)

关于短视频用于中小学教育的调查问卷

- 感谢您能在百忙之中回答本问卷！
- 本问卷由白俄罗斯国立大学社会学院发起，旨在研究教学类短视频对于中小学校教育的影响与应用。
- 本问卷的调查对象为中小学在读学生或其家长。
- 本问卷为匿名调查，问卷结果仅用于学术研究。
- 本问卷共21题，将占用您大概5分钟左右的时间。

1. 您的身份：
 - a. 学生
 - b. 学生母亲
 - c. 学生父亲
 - d. 其他

2. 您的年龄（例：10）：

3. 年级：

4. 您（或您的孩子）目前的学习成绩是：
 - a. 优秀（班级前10名）
 - b. 中等生
 - c. 还在努力（班级后10名）
 - d. 不确定

5. 您（或您的孩子）是否使用过短视频学习中小学课程：
 - a. 使用过
 - b. 未使用过（若选择此选项，请跳过6~13题）
 - c. 不确定（若选择此选项，请跳过6~13题）

6. 您（或您的孩子）最早开始使用短视频学习中小学课程的时间是：
 - a. 2022年
 - b. 2021年
 - c. 2020年
 - d. 2019年
 - e. 2018年
 - f. 2017年或更早

g. 不确定

7. 您（或您的孩子）使用短视频学习中小学课程的原因是：

- a. 学校或老师要求
- b. 家长要求
- c. 自主意愿
- d. 新冠疫情
- e. 其他

8. 您（或您的孩子）使用短视频所学习的课程科目是：

- a. 语文
- b. 数学
- c. 英语
- d. 物理
- e. 化学
- f. 生物
- g. 历史
- h. 地理
- i. 政治
- j. 音乐
- k. 美术
- l. 其他

9. 您（或您的孩子）使用短视频学习中小学课程的频率为：

- a. 每天都用
- b. 经常使用（每周3~4次）
- c. 偶尔使用（每周1~2次）
- d. 不常使用（每月1~3次）
- e. 很少使用
- f. 不确定

10. 您认为您（或您的孩子）使用教学类短视频学习的效果如何：

- a. 效果很好
- b. 效果较好
- c. 效果一般
- d. 效果较差
- e. 效果很差

- f. 不确定
11. 您认为教室内授课比使用短视频学习更有效率吗：
- 教室内授课效率更高
 - 使用短视频学习效率更高
 - 两种方法效率差不多
 - 不确定
12. 您（或您的孩子）在使用短视频学习中小学课程时会分心吗：
- 使用短视频学习时，很少会分心
 - 使用短视频学习时，有时会分心
 - 使用短视频学习时，经常会分心
 - 不确定
13. 您（或您的孩子）曾使用哪些平台观看教学类短视频（如：抖音，哔哩哔哩等。最多可填三个）：
- _____
 - _____
 - _____
14. 您对于使用短视频学习中小学课程的态度是：
- 支持，认为使用短视频学习利大于弊
 - 反对，认为使用短视频学习弊大于利
 - 中立
 - 不确定
15. 请写出您认为使用短视频学习的优势：
16. 请写出您认为使用短视频学习的劣势：
17. 您或您的孩子会选择下列哪一种方式进行课外补习：
- 观看教学类短视频
 - 家教
 - 教培机构开设的补习班
 - 学校开设的补习班
 - 自己看书做题
 - 其他
18. 您认为教学类短视频更适合哪一科目的课程学习：

- a. 语文
- b. 数学
- c. 英语
- d. 物理
- e. 化学
- f. 生物
- g. 历史
- h. 地理
- i. 政治
- j. 音乐
- k. 美术
- l. 其他

19. 您对于教学类短视频未来发展的看法是：

- a. 教学类短视频在未来几年内会更加普及
- b. 教学类短视频在未来几年内会维持现状
- c. 教学类短视频在未来几年内会被逐渐取代
- d. 不确定

20. 您认为教育部门需要对于教学类短视频做出怎样的态度：

- a. 教育部门应支持教学类短视频的发展
- b. 教育部门应出台法规，以规范教学类短视频的内容
- c. 教育部门应加强监管，以保证教学类短视频的质量
- d. 教育部门应遏制教学类短视频
- e. 教育部门应更加重视教室内授课的质量
- f. 其他

21. 若您对于教学类短视频还有更多的看法与建议，请您在此简述