Study on the Influence of Personalized Algorithm of Social Media TikTok upon College Students

Yuyan Pan^{1, a, *}

¹ College of Arts, Humanities and Social Sciences, University of Edinburgh, Edinburgh, EH8 9JU, UK a. s2408299@ed.ac.uk

*corresponding author

Abstract: In modern society, with the rapid development of digital social media and short video platforms, TikTok has become one of the important media for people to kill time and gain knowledge in their daily life. TikTok builds a "user-centered" algorithm recommendation mode, which not only improves the convenience and pleasure of content receiving but also brings some influence on users. As the main social media audience, the new generation of college students is more sensitive to network information, willing to accept new things and keen on pursuing personalized content. Under such circumstances, the information cocoon effect is particularly obvious to them. Studying the information of personalized algorithms on the Internet led to the cocoon phenomenon of the influence factors of college students and the formation mechanism, preventing students from accessing information with limited breadth, solidifying the phenomenon's occurrence, such as personal thinking. This TikTok APP, for example, through the way of questionnaire investigation and data analysis, parsing information cocoon effect and generated by the impact of correlation, to explore the influence of the information cocoon effect on college students caused by the personalized algorithm.

Keywords: TikTok, algorithm, information cocoon

1. Introduction

TikTok, a creative short video platform incubated by ByteDance, was officially launched in September 2016. Its core features are short video recordings of life, social sharing of daily life, shooting with various props, and disseminating real-time information. Its main profit models include advertisement realization, commodity shopping, Dou+ advertisement delivery, live broadcast revenue, offline store investment attraction, and advertisement content customization [1].

According to the 49th Statistical Report on Internet Development in China, by December 2021, the average weekly online time of Chinese netizens reached 28.5 hours, an increase of 2.3 hours compared with December 2020, among which the scale of short video users reached 934 million, and the usage rate of short video users reached 90.5%. According to public data, the TikTok APP has more than 600 million daily active users, making it the most popular short video platform in China [2].

In terms of user age distribution, the number of users under 25 years old is (31.71%), the number of users between 26 and 35 years old is (23.41%), the number of users between 36 and 45 years old

^{© 2023} The Authors. This is an open access article distributed under the terms of the Creative Commons Attribution License 4.0 (https://creativecommons.org/licenses/by/4.0/).

is (26.34%), and the number of users above 46 is (18.54%). From the perspective of user education level, the number of users with lower middle school education is (21.95%), high school and technical secondary school education are (27.32%), college and bachelor's degree are (40.49%), master's degree or above is (10.24%) [3]. According to the seventh Chinese Census, about 220 million people (16 per cent) have a college education. The 2020 TikTok College Student Data Report, released in 2021, is the latest publicly available report on the college student user data of the TikTok APP. The report shows that the number of college student users of the TikTok APP exceeds 26 million, which is about 80% of the college student population in China [4]. On the whole, TikTok's target population is younger and more active.

Regarding age distribution, its main users are between 18 and 40, especially young students under 25 years old with higher education. These young groups, especially college students, have relatively more time for fragmentation, are willing to pursue rich entertainment and leisure activities, and are more receptive to new things, which is also in line with TikTok's product positioning that focuses on the new generation. At the same time, users in this age group are the main Internet users in China and have certain consumption power.

In 2006, an American researcher and Professor Cass R. Sunstein put forward in his work Information Utopia -- How People Make Knowledge that people cannot access or are willing to access all information in social networks. Therefore, when people choose information, they tend to choose the content that is useful or interesting to them to ignore the content of other aspects, and the information acquisition is not comprehensive. Therefore, access to information is like confining oneself to a cocoon. Sunstein further pointed out that Internet users tend to select the information they are interested in when browsing The Internet, eliminate and filter the information they are not interested in, and form "The Daily Me" according to their taste, and form the layout of browsing content according to their personal preferences. Users can choose the themes they like, inevitably exacerbating preconceived positions and mindsets. This kind of information cocoon, formed by wrapping a single information element due to subjective choice, can easily lead to people's only access to a single information system and then lead to negative social phenomena. For example, it restricts personal vision, aggravates group polarization, and weakens social adhesion. It is like a silkworm chrysalis, which is always bound by the "cocoon room" and unwilling to face the outside world and life, resulting in certain harms and adverse effects [5]. Therefore, a careful analysis of its formation and specific impact, cracking the "information cocoon" effect of college students caused by the adverse impact, can promote the diversification of college students, comprehensive, comprehensive development. It also enables users to avoid the negative effects of TikTok and healthily browse the Internet.

2. Literature Review

Wang found that personalized information recommendation algorithm, the user's choice psychology and behaviors preference is the main reason causing the TikTok information cocoon phenomenon. As the new social media audience, college students are influenced by infotainment. Compared with other groups, college students are more personalized in the choice of information, which is more likely to cause the information cocoon effect, resulting in negative phenomena such as limited access to health information, fixed personal thinking and group polarization [6].

Chen analyzed that most mobile terminal applications in modern society rely based on big data algorithms to analyze the basic data information of users, such as users' interests and hobbies, usage habits, length of stay on the page, and personal information, and then intelligently recommend the content to users. Therefore, when people are exposed to the content that has been calculated and selectively recommended by the algorithm, people are more likely to get stuck in it, which leads to the rejection of other information and the long-term situation, which makes the information cocoon

more serious. The technology of personalized algorithms does bring convenience to the public on the one hand, but at the same time, people are also faced with the risk of being exposed to data and live under data monitoring every day and are unconsciously affected [7].

Fang found that in modern society, life pressure is magnified with the accelerated pace of life, and a good video can relax the brain and cheer people up. The public can escape the heavy pressure of real life for a while. Great user experience brought by the Internet users in addition to sleep, can brush TikTok anytime and anywhere before knowing it has consumed much time, video platform can be fond of according to the user, to provide users with the endless video content, meet the demand of user's curious psychology and entertainment to increase user stickiness, allows users to continue to play. Immersed in pleasurable mechanical movements [8].

Li proposed that with the arrival of the new media era, people's media use habits gradually showed a characteristic of fragmentation. Media fragmentation is becoming increasingly intense, and fragmented communication has become a new topic to be studied urgently, making it difficult for people to distinguish the authenticity of information and screen out valuable information. Incomplete fragments of information about events can amplify emotional bias and guidance, and information cocooning means that people only listen to what they choose to make them happy.

Attention will be habitually directed for maximum benefit, thus confining oneself to a "cocoon" of life, leading to declining attendance and thinking ability [9].

Users addicted to the TikTok phenomenon with the recommendation of the personalized algorithm are inseparable from the personalized recommendation technology based on the content in front of the user with user preferences. The personalized push according to the user label pattern will be based on the personal customized content horizon and combined with the user's selective psychological mechanism. The content seen by users has been transformed into customized content under the algorithm's calculation and their own subjective choice. In such an information environment, users' thinking, behavior, opinions and attitudes have all had a non-negligible impact [10].

Many scholars have studied how big data algorithms are carried out in the Internet era and how information cocoon is formed. However, few articles have studied the impact of the information cocoon effect caused by TikTok's personalized algorithm on college students. Young as the mainstay of Internet use, have a higher ability to accept new things, are more likely to indulge in colorful personalized content, and at the same time, also have a more fragmented time, too much trapped in the information-receiving comfort zone, will reduce their intellectual breadth and thinking ability, causes the mindset. As a new force in the construction of society and civilization, the influence of college students is undoubtedly detrimental to individual and social development. Therefore, this paper will analyze the specific impact of the information cocoon effect on college students through a questionnaire survey and result in analysis, explore what kind of results it will cause to amplify the positive impact better and avoid the negative impact.

3. Methodology

This article adopts the research methods of questionnaire investigation and data analysis, analysis of data collected by the questionnaire, designed the TikTok APP usage and impact college student's questionnaire. The questionnaire is divided into three parts, including the basic information used to judge whether the questionnaire is a valid user, TikTok's use of hobby habits of college students and its influence to push personalized algorithm, The influence of personalized algorithm on college students and some other aspects.

Questionnaire in January 2022 through the social networking platform to issue of university students, after two weeks of recovery samples of 187, according to the preset conditions to never use the TikTok APP, the college students' group, the answer is less than 90 seconds long. Logic has

obvious loopholes in questionnaire samples before and after the screening, The final number of remaining valid questionnaires was 170, and the effective sample rate was 90%.

To analyze the data collected by questionnaire, the main use chi-square test, analysis of the data classification of the independent variable and dependent variable validate user habits and classification, user's subjective initiative and push personalized algorithm, the connection between the information of cocoon such as addiction caused by a variety of effects on the users the correlation between the content.

4. Result

There are 28 questions in the questionnaire for data collection, including 24 questions in total, excluding four questions for background research on interviewees. On the short video platform usage habits: More than 40% of the respondents use TikTok for less than 2 hours a day, and 10.16% for more than 6 hours. Most choose to use TikTok before eating and going to bed, and 74.87% of the respondents do not do it when they are reminded to take a break. 83.42% of the respondents usually watch videos they are interested in, 90.91% of them said that if they watch content, they are not interested in, they will quickly swipe, 65.78% of them will usually like, collect and forward the content they are interested in, but not most of them only pay attention to the videos they are interested. Only half of the respondents focus on videos that interest them. For college students, the main uses of TikTok were entertainment and killing time (59.89% and 31.02%, respectively). 75.94% of the respondents said that they had acquired knowledge of TikTok.

Regarding the advantages of TikTok, the respondents had diverse opinions, among which 51.34% believed that they could acquire more knowledge, 64.71% believed that the recommended content was in line with their preferences, 26.74% believed that there was more high-quality video content, and 63.03% used it to kill time. 71.66% felt they could get happiness from it, and 16.04% chose other things. When it comes to the preference of TikTok, more than half of them choose food, comedy, film and art, accounting for 62.57%, 72.91%, 51.87% and 55.61%, respectively. On issues related to big data, most respondents think TikTok's big data recommendation is very accurate (79.68%).

Similarly, most respondents think videos recommended by big data can make them feel comfortable because they can watch their favorite content more efficiently. This questionnaire also investigated users' behaviors leading to big data recommendations. From the perspective of users, the main reasons for the increase in recommendation-related content are as follows: Searching for relevant content (78.61%), like the author of the content, favorites and following the content (75.4%), spending too much time in a type of video (68.45%), and other reasons such as buying relevant items (31.02%), and information theft and eavesdropping (39.5%). The question about the impact of personalized recommendations on respondents included 11 options: More time and energy spent on TikTok (55.08%), decreased concentration and work and learning efficiency (54.01%), increased consumption (convenient consumption and high-cost performance) (29.41%), increased consumption (buying a lot of idle goods) (17.65%), faster access to knowledge and guidance (22.99%), Learn more information (26.2%), the content they like can help improve mood (33.69%), the breadth of knowledge becomes lower, they can only see the field they like (28.34%), they become addicted to the recommended content, they have less patience to accept new things (30.48%), which leads to addiction (26.67%) and single content (20.86%). As for a reason for TikTok addiction, most respondents (73.26%) chose to capture their preferences with accurate data. 49.9% of the respondents think that the cocoon effect has troubled them, and 50.5% think personalized recommendation has caused more negative effects. Regarding the impact of personalized recommendation and the cocoon phenomenon caused by it, there is little difference between the number of positive and negative attitudes, which is equal.

Analysis of the correlation results between the core issues: Cross-tabulation (independence test) refers to the frequency distribution table of two or more categorical variables at each level, also known as frequency cross-tabulation and contingency table.

1. Cross-tabulation analysis between the behavioral reasons leading to the increase of similar recommendation contents and the influence of personalized recommendation on individuals, the specific results are as follows:

				25ª					
			Search for relevant content	Like, bookmark , and follow content and authors	Purchase related items	Informati on is bugged and stolen	Stay long in one type of video	Total	
	Spend more time	Quantity	87	64	33	36	57	100	
	and energy on TikTok	Percentage of \$26	87.0%	64.0%	33.0%	36.0%	57.0%		
	Decreased	Quantity	84	81	40	48	70	101	
	concentration and productivity in work and learning	Percentage of \$26	83.2%	80.2%	39.6%	47.5%	69.3%		
	More	Quantity	46	32	28	20	29	48	
26 ^a	consumption (convenient consumption, cost-effective goods)	Percentage of \$26	95.8%	66.7%	58.3%	41.7%	60.4%		
20	More	Quantity	30	21	19	17	19	30	
	consumption (buy many idle goods)	Percentage of \$26	100.0%	70.0%	63.3%	56.7%	63.3%		
	Faster access to	Quantity	39	21	15	12	20	42	
	knowledge and guidance	Percentage of \$26	92.9%	50.0%	35.7%	28.6%	47.6%		
	Learn more	Quantity	44	22	19	14	19	48	
	information	Percentage of \$26	91.7%	45.8%	39.6%	29.2%	39.6%		
	Content that is	Quantity	55	24	17	17	24	57	
	liked helps improve mood	Percentage of \$26	96.5%	42.1%	29.8%	29.8%	42.1%		

Table 1: \$Question 26 *\$Question 25 cross tabulation (continue).

The breadth of	Quantity	46	29	15	22	27	48
knowledge is reduced, which means that can only focus on the areas be liked	Percentage of \$26	95.8%	60.4%	31.3%	45.8%	56.3%	
			Table 1				
Become obsessed	Quantity	52	35	15	18	34	54
with the recommended content and become less receptive to new things	Percentage of \$26	96.3%	64.8%	27.8%	33.3%	63.0%	
	Quantity	41	33	15	20	34	4
Lead to addiction	Percentage of \$26	89.1%	71.7%	32.6%	43.5%	73.9%	
Agree that he	Quantity	27	17	7	11	17	2
video content is very simple	Percentage of \$26	93.1%	58.6%	24.1%	37.9%	58.6%	
Total	Quantity	146	81	40	48	70	16

Table 1: (continued).

Percentages and totals are based on responders.

a. The value 1 is used to tabulate the two groups.

		25
	chi-square	566.276
26	freedom degree	55
	significance	$.000^{*}$

The result is based on the non-empty rows and columns of each innermost sub table.

*. Chi-square statistics are significant at 5% level.

For the cross-tabulation analysis between the behavioral reasons leading to the increase of similar recommendation content and the influence of personalized recommendation on individuals, the chisquare value of Pearson's chi-square test was 566.276, and the significant value Sig value was 0.000<0.05. The null hypothesis should be rejected. That is to say, the behavioral reasons leading to the increase of similar recommendation content are not independent of the influence of personalized recommendation on individuals, and there is a correlation between the two variables. The study found that spending more time searching for relevant content on TikTok, watching more time on TikTok, and collecting more content also affected concentration to a certain extent, leading to decreased work efficiency. However, searching for favorite TikTok content can also relieve anxiety and regulate bad emotions, which plays a positive role. 2. Cross-tabulation analysis between the influence of personalized recommendation on individuals and whether they are more inclined to actively explore the fields they are interested in or immerse themselves in the content of personalized recommendation, the specific results are as follows:

			27. Are you more li explore areas of inter yourself in the p recommen	erest or immerse personalized	Total
			explore	immerse	
	Spend more time and	Quantity	64	39	103
	energy on TikTok	Percentage of \$26	62.1%	37.9%	
	Decreased concentration	Quantity	63	38	101
	and productivity in work and learning	Percentage of \$26	62.4%	37.6%	
	More consumption	Quantity	39	16	55
	(convenient consumption, cost-effective goods)	Percentage of \$26	70.9%	29.1%	
	Mana approximation (house	Quantity	19	14	33
	More consumption (buy many idle goods)	Percentage of \$26	57.6%	42.4%	
	Foster access to language day	Quantity	31	12	43
	Faster access to knowledge and guidance	Percentage of \$26	72.1%	27.9%	
		Quantity	40	9	49
26ª	Learn more information	Percentage of \$26	81.6%	18.4%	
	Contout that is liked holes	Quantity	45	18	63
	Content that is liked helps improve mood	Percentage of \$26	71.4%	28.6%	
	The breadth of knowledge	Quantity	39	14	53
is reduced, which means that can only focus on the areas be liked		Percentage of \$26	73.6%	26.4%	
	Become obsessed with the	Quantity	34	23	57
	recommended content and become less receptive to new things	Percentage of \$26	59.6%	40.4%	
		Quantity	27	22	49
	Lead to addiction	Percentage of \$26	55.1%	44.9%	
	A greathat the wides	Quantity	28	9	37
	Agree that the video content is very simple	Percentage of \$26	75.7%	24.3%	
	Total	Quantity	119	67	186

Table 3: \$Question 26 *\$Question 25 cross tabulation.

Percentages and totals are based on responders.

a. The value 1 is used to tabulate the two groups.

		27
	chi-square	24.470
26	freedom degree	11
	significance	.011*

Table 4: Pearson's chi-square test

The result is based on the non-empty rows and columns of each innermost sub table.

*. Chi-square statistics are significant at 5% level.

Cross-tabulation analysis was conducted between the influence of personalized recommendations on individuals and whether they were more inclined to actively explore the field of interest or immersed in the content of the personalized recommendation. The results showed that the chi-square value of Pearson's chi-square test was 24.470, and the significant Sig value was 0.011<0.05. The null hypothesis should be rejected. In other words, it is believed that there is no independent relationship between the influence of personalized recommendations on individuals and the tendency to explore the fields they are not interested in actively or to immerse themselves in the content of the personalized recommendations between the two variables. In terms of the influence of personalized recommendations on individuals, investigators are more inclined to take the initiative to explore the fields they are interested in to satisfy their curiosity.

3. Cross-tabular analysis of the reasons for watching TikTok videos for a long time and the influencing factors of the addiction caused by TikTok, the specific results are as follows:

	21ª								
			Big data accurately capture preferences	The video content is engaging	Short video of this without the burden of convenient video form fragmentatio n get easier to digest information		TikTok has a variety of products		Total
	Big data	Quantity	92	73	67	26	17	59	109
200	recommend ation makes me see too many interesting videos		84.4%	67.0%	61.5%	23.9%	15.6%	54.1%	
20 ^a	Too much	Quantity	52	36	43	18	9	43	66
	fragmented time to use	Percentag e of \$20	78.8%	54.5%	65.2%	27.3%	13.6%	65.2%	
	Life is too	Quantity	52	36	42	20	9	42	67
	stressful	Percentag e of \$20	77.6%	53.7%	62.7%	29.9%	13.4%	62.7%	

Table 4: \$Question 20 *\$Question 21 cross tabulation.

I like short	Quantity	61	56	41	21	17	37	75
videos	Percentag e of \$20	81.3%	74.7%	54.7%	28.0%	22.7%	49.3%	
Rely on	Quantity	35	35	28	15	13	26	43
TikTok for knowledge		81.4%	81.4%	65.1%	34.9%	30.2%	60.5%	
Rely on	Quantity	39	36	32	17	13	30	50
TikTok for information	Percentag e of \$20	78.0%	72.0%	64.0%	34.0%	26.0%	60.0%	
Shopping	Quantity	15	16	10	10	9	8	20
convenienc e	Percentag e of \$20	75.0%	80.0%	50.0%	50.0%	45.0%	40.0%	
Total	Quantity	137	106	104	47	33	102	187

Table 4: (continued).

Percentages and totals are based on responders.

a. The value 1 is used to tabulate the two groups.

Table 5: Pearson's chi-square test.

	21
chi-square	147.367
freedom degree	42
significance	$.000^{*}$

The result is based on the non-empty rows and columns of each innermost sub table.

*. Chi-square statistics are significant at 5% level.

The cross-tabulation analysis between the reasons for watching TikTok videos for a long time and the influencing factors of the addiction brought by TikTok showed that the chi-square value of Pearson's chi-square test was 147.367, and the significant Sig value was 0.000<0.05. The null hypothesis should be rejected. That is to say, the reasons for watching TikTok videos for a long time are not independent of the influencing factors of addiction brought by TikTok. There is a correlation between the two variables. Big data allows users to see many videos they are interested in, accurately capturing consumers' preferences and better using the fragmented time to watch information. The content recommended by short videos is in line with the interests. Watching TikTok videos is conducive to developing social interaction and provides convenience for shopping. However, at the same time, it also causes low personal efficiency, except watching short videos, life enthusiasm decreases.

5. Discussion

The big data push of TikTok's personalized algorithm is closely related to users' habits and preferences for watching short videos. Users have a demand for pleasure and knowledge when using TikTok APP. College students, in addition to watching short videos to kill time and relax before bed, usually actively search for the information they need and what they want to learn. Many people will actively choose to stay in their comfort zone, watch only the content they are interested in, and not stay too much for the content they are not interested in. So there is a tendency to swipe through things which are not interested quickly. They repeatedly watch the content they are interested in and habitually bookmark and like videos.

This phenomenon may cause positive and negative effects at the same time. The user can choose oneself want to see the contents of the subjective, to a certain extent, can make more pleasant when watching the video, and faster access to information and knowledge they want. However, users need to think about a problem, the user in control technology at the same time, whether in controlled by technology, Software developers or merchants, make use of users' preferences to create an elaborate data trap for users to indulge in. As one of the main Internet users and consumers, college students take the initiative to customize their content recommendations and indulge in the algorithm under fine calculation. The convenience and pleasant experience that big data brings to users are undeniable. However, users should be careful not to be manipulated by personalized recommendations, not to be seen through abusive algorithms, not to indulge in the information the Internet feeds you, and not to follow the low-IQ information that is stereotyped and repeated blindly to make a unpredictable computer people, in order to reduce the negative impact on their own.

The personalized algorithm is related to user addiction and other factors, and the information cocoon phenomenon caused by it will lead to a variety of positive and negative individual effects. The recommended content that is too comfortable and in line with preferences very easily leads to user addiction, and users will spend much time on TikTok for entertainment. It is related to TikTok's profit model. TikTok makes profits through videos and shopping modules. In order to promote consumption and retain customers, merchants use personalized algorithms to customize exclusive recommendation content that customers prefer. The characteristics of the group of college students, such as more fragmentation time, diverse needs for using TikTok, more preference for personalized content and easy-to-produce group changes, will make this group have a unique influence.

There are also many positive effects caused by the information cocoon, which improves the efficiency of users' information retrieval, enables users to find the content they are interested in faster, and can also relieve anxiety and regulate bad emotions when watching the TikTok content they like, which has a certain positive effect. At the same time, it can also promote shopping. There are individual differences in shopping. Some people buy products with higher cost performance more efficiently through TikTok, but young people are also prone to impulse consumption. Therefore, it is difficult for users to weigh the pros and cons of shopping promotion, which has both negative and positive effects. According to the data, the negative effects of the cocoon on college students are still far greater than the positive ones. Most people are troubled by the addiction caused by TikTok. The decreased concentration and work and study efficiency caused by spending more time and energy on TikTok is also the most popular choice among respondents. The lack of concentration and self-control often leads college students to spend too much time on recreational activities such as watching short videos, resulting in low learning efficiency. The association recommendation of the algorithm to the same group will also negatively influence the group of college students, thus endangering the stability of society. College students also need to acquire knowledge, and the limited knowledge breadth caused by the information cocoon is not conducive to college student's personal development and promotion. Make good use of the positive influence of TikTok, relax timely and moderately, obtain information and knowledge scientifically and efficiently, take the initiative to explore more content, stay awake in the algorithm, maintain their judgment ability, and distinguish information reliably to reduce the harm caused by the information cocoon to a large extent.

6. Conclusion

Full text by analyzing the TikTok app personalized algorithm of personalized push phenomena, the cause of the phenomenon, and information cocoon after work to cope with the impact of college students, and analyze the information cocoon effect and generated by the impact, the correlation of information effect to explore how the information cocoon affect college students and what are the effects. The data research results show that: Cross-tabulation analysis was conducted between the

influence of personalized recommendations on individuals and the tendency to actively explore the fields of interest or immerse in the personalized recommendation's content. From the influence of personalized recommendations on individuals, investigators are more inclined to explore the fields of interest to satisfy their curiosity actively. The reason for the formation of TikTok's personalized algorithm recommendation is also largely related to the subjective choice of users. Users will search and choose the fields they are interested in or want to know to watch. For example, they will stay on the relevant video content for a long time and quickly swipe through the content they are not interested in. A series of behaviors, such as liking, collecting and forwarding the content, can make the content increasingly personal. By cross tabling the behavioral reasons leading to the increase of similar recommendation content and the impact of the personalized recommendation on individuals, the study found that more time spent searching for relevant content on TikTok, longer time spent watching on TikTok, and more favorite content will also affect the concentration to a certain extent, leading to the decline of work efficiency. To sum up, big data recommendation has many positive effects to a certain extent. For example, searching for favorite TikTok content can also link anxiety and regulate bad emotions, which plays a positive role. Big data also allows users to see too many interesting videos, capturing consumers' preferences and better using the fragmented time to watch information. The content recommended by short videos is in line with their interests. Watching TikTok videos is conducive to developing social interaction and provides convenience for shopping. However, the negative effects are also serious and diverse. Watching one's favorite content for a long time will produce serious addiction, leading to spending too much time watching short videos, resulting in lower work and learning efficiency. On the other hand, single content recommendations and similar video content will lead to a limited vision of individuals and reduced knowledge breadth, making it difficult to receive richer knowledge and content and aggravating group polarization. Although the development of technology means the progress of human civilization, there is no good or bad technology itself. However, there are advantages and disadvantages to using technology, respect for user privacy, optimizing the efficiency of the Internet, and minimizing the negative impact in the direction of the personalized algorithm should be developed. The TikTok push model is under no change, as college students take the initiative to break their comfort zone, learn more, and explore more areas and scientific and efficient browsing videos. Using a short video is convenient, and the advantage of knowledge broad, obtain more useful information is to break the cocoon to reduce the effects of the cocoon information of its core method.

References

- [1] X. Q. Zhao, Analysis of TikTok APP profit model, Business Economics, no.10, 2020.
- [2] China Internet Network Information Center, The 49th Statistical Report on the Development of Internet in China, 2022.
- [3] Z. H. Gong, TikTok APP user portrait and behavior and motivation analysis, Construction of News Culture, no.15, 2021.
- [4] M. Yang, Research on Influencing factors and Countermeasures of TikTok APP overuse behavior among college students, Southwest University, 2022.
- [5] X. Cheng, L. Cheng, H. Yang, Research on the causes and prevention strategies of college students' "information cocoon" dilemma from the perspective of social media, 2022.
- [6] Y. W. Wang, To explore the formation mechanism of TikTok APP information cocoon from the perspective of college students, Sound screen world, 2022.
- [7] Y. Cheng, Information cocoon Phenomenon in the use of TikTok: Siege crisis and individual autonomy, The news spread, no.12, 2022, pp: 19-21.
- [8] J. Fang, Z. Wang, B. Hao, Analysis of" Anesthesia" Mechanism in Mobile Short Video Applications, In the First International Symposium on Management and Social Sciences (ISMSS 2019), Atlantis Press, 2019.
- [9] Y. Li, Research on Fragmented Communication and Response Path Under the Background of New Media. In 2022 8th International Conference on Humanities and Social Science Research (ICHSSR 2022), Atlantis Press, 2022.

[10] X. J. Han, Hazards and treatment of "information cocoon Room" in personalized recommendation of TikTok short video, Guangzhou Institute of Physical Education, 2020.