

Retraction

Retracted: Research on University Network Public Opinion Monitoring and Early Warning System Based on Big Data

Mobile Information Systems

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This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

- (1) Discrepancies in scope
- (2) Discrepancies in the description of the research reported
- (3) Discrepancies between the availability of data and the research described
- (4) Inappropriate citations
- (5) Incoherent, meaningless and/or irrelevant content included in the article
- (6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

In addition, our investigation has also shown that one or more of the following human-subject reporting requirements has not been met in this article: ethical approval by an Institutional Review Board (IRB) committee or equivalent, patient/participant consent to participate, and/or agreement to publish patient/participant details (where relevant).

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

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- [1] R. Yang, "Research on University Network Public Opinion Monitoring and Early Warning System Based on Big Data," *Mobile Information Systems*, vol. 2022, Article ID 1884526, 6 pages, 2022.

Research Article

Research on University Network Public Opinion Monitoring and Early Warning System Based on Big Data

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Undergraduate self-consciousness is still in the formative stage and is highly susceptible to external environment. Schools must adapt to the new forms and requirements, improve their ability to search, analyze, and prevent online public opinion through big data technologies; we should make early discovery, early action, and early resolution, so as not to give time and space for public opinion crisis fermentation and consolidate the dominant position of the mainstream ideology. This paper focuses on the university network public opinion monitoring and early warning system based on big data and analyzes the university public opinion from the perspective of the specificity, sensitivity, identification, early warning and prevention ability of the system to deal with public opinion, and effectively solves the network public opinion crisis. Combined with the current actual situation and specific needs, this paper explores the intervention measures and guidance strategies for the network public opinion of college emergencies, so as to lay a solid foundation for the healthy, stable, and sustainable development of colleges and universities.

1. Introduction

At present, the network has become the first channel for college students to show their ideological trends and respond to contradictory problems. The traditional public opinion pattern has changed, and social media represented by Weibo, Tiktok, Kwai, and Xiaohongshu have reconstructed the public opinion pattern. Lang said that the rapid development of new media has brought opportunities as well as hidden dangers and challenges to the network culture work in schools [1]. Most of the network public opinion crisis in colleges and universities is caused by campus emergencies, and it is easy to cause rumors and abuse on the Internet, causing students to float in the hearts of the people, extreme emotions, and disrupting the normal campus order. Once the handling is not effective or timely, it is very easy to evolve into a public crisis event. Zhu believes that the information resources of new media are uneven. Although there are many positive energy information, it also contains many negative energy information, even illegal and criminal information [2].

Wu believes that the reason for this trend is that the network has the characteristics of virtuality, rapid propagation, etc. At the same time, young people have keen insights, coupled with the driving of clustering psychology and empathy [3]. The thinking and discussion of social contradictions among school teachers and students is extremely easy to evolve into a hot spot of network public opinion. Zhao said that the Internet public opinion of schools is relatively free, so some college students with weak self-regulation will make mistakes and deviate from the reality, which will affect the ideology of other college students [4].

Wang, Shi, and others believe that online public opinion is not enemy sentiment. Schools should take the initiative to occupy the highland of public opinion and establish a scientific and operable governance mechanism with rationality, temperature, evaluation, and feedback [5]. When dealing with the Internet public opinion events, colleges and universities must correct their work attitude, comprehensively understand the truth of the event through multiple channels and methods, not shirk their responsibilities, dare to assume their responsibilities, inform the public of the truth at the

first time, and conduct sincere, open, and timely communication, so as not to further intensify the contradictions and win the public's understanding and trust. Chen et al. believe that schools should carry out risk assessment and value screening on the massive network public opinion information of schools to reduce the adverse impact of sudden network public opinion on students [6]. Zhou said that the Internet public opinion of schools should be managed and prevented. By establishing an early warning evaluation index set, we prevent emergencies from having a negative impact on schools and society [7].

Zhang, Bo, and others said that schools still use traditional search engine manual monitoring technology in the face of online public opinion events. However, this method seriously lacks professional big data analysis of public opinion and is unable to give early warning, periodic changes and stage countermeasures of public opinion, which is not commensurate with the avantgarde nature of the current rapid development of media integration, so it will inevitably lead to incomplete, unknown, untrue, and hidden dangers of online public opinion monitoring information in schools [8].

Using big data technology, schools can detect the reactions of different groups on various social media in real time, establish accurate publicity strategies, timely and effectively announce the context of events, and prevent the fission propagation of public opinion events. Zhong said that schools should conform to the times, improve their ability to search, analyze, and prevent online public opinion use big data, and consolidate the dominant position of the mainstream ideology in schools [9]. For example, it monitors and collects news reports, media comments, and netizens' comments distributed on media, Weibo, forums, blogs, post bars, WeChat, and other platforms. At the same time, it conducts analysis, research, and judgment of relevant data to find out the nodes that cause public opinion crisis, and then formulate targeted disposal strategies to maximize the effect of public opinion crisis disposal in colleges and universities. Jing and others said that depth study the occurrence, development, evolution, and decline mechanism of public opinion in schools, design monitoring indicators, carry out monitor and warn public opinion events, unblock information exchange channels with relevant departments outside the schools, and monitor and effectively guide the relevant Internet public opinion [10]. At ordinary times, the school needs to pay attention to the construction of teacher-student interaction channels, set up online and offline "student hotline" columns, and provide patient, full and detailed answers to all kinds of hot issues, focus issues and difficult issues raised by students about learning and life. Zhang, Liu, and others expressed the same view. They believe that to establish public opinion in schools, we should detect and pay attention to negative public opinion, timely warn and monitor, and strive to find and dispose of all kinds of bad information in the bud [11].

This paper focuses on the monitoring and early warning system of college network public opinion based on big data technology. Knowing how to effectively manage and guide college students' network public opinion events is of great

significance for building a harmonious campus. It is hoped to provide reference value for the research of college network public opinion monitoring and early warning system.

2. Characteristics of the Internet Public Opinion Communication in Schools

2.1. Particularity and Collectivity. The main body of network public opinion in schools is mainly college students. As the mainstay of the future national development, their identity makes the network public opinion of schools have certain particularity, which is easier to attract the attention of the society. Therefore, when college network events occur, college students are the main participants in public opinion and their attitude is collective.

2.2. Interactivity and Uncontrollability. Wang said that college students are in an immature stage, and their cognition of things in their growth stage is often irrational [12]. Although college students have some insights, their values are not yet fully mature. Therefore, college students are very vulnerable to the inducement of the outside world or make extreme and unrealistic statements for their own psychological reasons. At the same time, driven by the psychology of clustering and empathy, college students' thoughts are easy to be influenced by network opinions, which leads to the difficulty of the schools to control public opinion.

2.3. Cyclical and Long-Term. The communication cycle of public opinion in schools can be roughly divided into five stages: germination, fission, spread, dilution, and activation. College students will pay long-term attention to events related to personal interests, such as study, accommodation, employment, and love. Therefore, when there are new developments in online public opinion related to such topics or similar events, college students' attention will increase and the popularity of online public opinion will rise again.

3. Problems Faced by Network Public Opinion Monitoring in Schools

3.1. Insufficient Attention and Capital Investment. The establishment of university network public opinion monitoring and early warning system based on big data requires a certain amount of capital investment. Deng said that due to the rapid development of the Internet in China, many schools did not have time to establish a sound network public opinion guidance mechanism, and some schools even did not have relevant response mechanisms [13].

The inefficient manual detection method is still adopted in the monitoring of network public opinion in schools. In reality, a large amount of network information will be generated every day; this method has been difficult to meet the needs of schools to monitor network public opinion.

3.2. The Management Mechanism of Public Opinion in Schools Is Not Perfect and the Reaction Speed Is Slow. After the

occurrence of network public opinion in schools, we should deal with and control the development of the situation at the first time, so as to minimize the negative impact of public opinion. The public opinion management mechanism of some schools is not perfect and the speed of information transmission is single. Therefore, schools have only just realized the occurrence of public opinion and reacted after the public opinion fermentation in schools has produced a certain negative impact. However, the golden time for dealing with public opinion has passed, and the negative effects have been produced and gradually expanded. The response action taken by schools cannot achieve a good treatment effect and may even cause a new round of public opinion crisis because of the slow response.

3.3. Improper Handling Cannot Effectively Guide the Development of Public Opinion. Many schools take a cold approach when dealing with the network public opinion of schools, trying to dilute public opinion by avoiding and blocking. However, this way of handling cannot really solve the problem. At the same time, it may arouse the rebellious psychology of college students and then lead to secondary public opinion, leading to the development of public opinion completely out of control. Those who pay attention to public opinion attach importance to the attitude of schools to deal with problems. If the schools can face up to the problem and provide feasible and effective solutions, the public opinion will naturally subside slowly. If the schools chooses to avoid the problem or shirk its responsibility, it will only intensify the contradiction and cause secondary public opinion.

4. Application Value of Big Data in the System

Sudden public opinion events will aggravate the contradiction in college campus cyberspace, and even cause social public opinion if serious. With the development of new media as the communication carrier, it is more convenient to make comments, and the personalized communication mode is highlighted in cyberspace. Some comments and opinions are easier to find among college students with the same ideas. The public opinion information obtained through the traditional network public opinion monitoring and early warning system is incomplete, unknown, untrue, and there are hidden dangers. At the same time, the monitoring is becoming more and more difficult. The dynamic trend of network public opinion and the trend of public opinion need key technologies. Big data mining technology can collect and mine public opinion information and analyze it at the same time, so as to predict sudden public opinion on the network.

Big data breaks through the unilateral and single form of traditional college network public opinion. The key to big data application is related public opinion, which pays more attention to the correlation between data information. The main body of college network public opinion

communication has its particularity. Therefore, in the process of communication, college network public opinion will show an irrational development trend, and if not properly guided, it will evolve into a network public opinion crisis. The school can master the dominant power of public opinion. The limitations of traditional system monitoring make it difficult for the university authorities to comprehensively and objectively grasp the panorama of public opinion, while big data technology can quickly analyze massive information data and make corresponding judgments. Relying on big data technology, the timeliness and accuracy of the school's handling of public opinion have been greatly improved, and its ability to cope with public opinion crisis has been enhanced.

College network public opinion usually consists of a small problem and a small event, which becomes a network public opinion event through the continuous fermentation of the network. If public opinion is not controlled in time and allowed to develop, it will inevitably have a negative impact on the safety and stability of colleges and universities. With the blessing of big data, the university can better handle online public opinion and effectively improve the management level of public opinion. In the process of monitoring, once sensitive words are found, they will touch the early warning system. The school can timely invest in the prediction link, control the public opinion risk from the source, monitor the campus network platform, and nip the public opinion in the cradle.

5. Simulation Verification

5.1. Comparison of Specificity and Sensitivity of the System. The network public opinion collection mechanism of big data improves the efficiency of obtaining data information, whether it is from the school website and school forum, or from outside the school, including WeChat, Weibo, post bar, and various multimedia channels, to filter and integrate public opinion data. The final outcome of big data analysis is directly impact by the quality of data collection. The gathering of network public opinion ensures the efficiency of early warning processing. With the use of gathered public opinion data, big data analysis and deep mining can be used to extract the pertinent information about public opinion and give decision support for later crisis early warning and emergency processing. The reactions of different systems are analyzed and Table 1 is obtained.

In Table 1, the research system can grasp the guidance, dynamics, and development trend of network public opinion at any time and do a good job in daily monitoring and analysis. The specificity and sensitivity are higher than those of the traditional public opinion monitoring system.

According to the statistical information in Table 1, Figure 1 is obtained.

As shown in Figure 1, the visualization effect of the specificity and sensitivity of the two different systems in dealing with public opinion, which can clearly see the contrast gap between the two groups of data. This research

TABLE 1: Specificity and sensitivity analysis of different systems (%).

| Group | Specificity | Sensitivity |
|-------------------------------|-------------|-------------|
| Traditional university system | 88.29 | 89.34 |
| This research system | 64.36 | 65.78 |

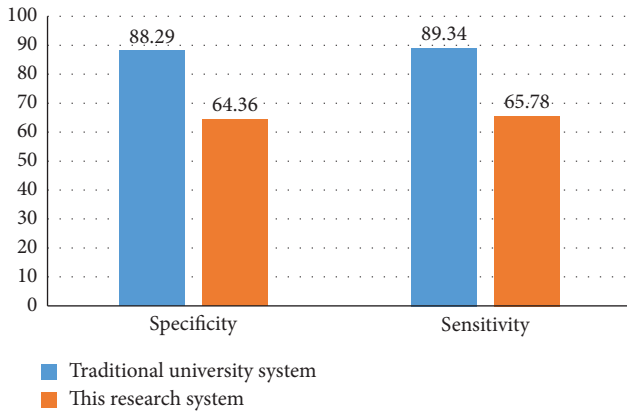


FIGURE 1: Visualization of specificity and sensitivity of different systems (%).

system can prevent the crisis of college network public opinion from expanding.

5.2. Comparison of Identification, Early Warning, Prevention, and Control Capabilities under Different Systems. As a basic tool in daily life, the Internet has a certain relevance in the fermentation degree of public opinion. College students, as the main body of public opinion, have obvious cluster benefits on hot issues, and it is easy to quickly form network clusters. Big data monitoring and early warning systems are used to quickly respond to information about public opinion. They are used to monitor negative public opinion. The application of big data in public opinion events in cyberspace will judge, analyze public opinion fragments, deeply mine hidden information, and predict public opinion content. Now, the identification, early warning, and prevention capabilities of different systems are compared. Table 2 is obtained.

Table 2 shows the comparison results of the identification, early warning, prevention, and control capabilities of the two different systems. The research system can conduct comprehensive monitoring and analysis in all aspects to ensure the rapid and effective handling of public opinion events.

According to the statistical information in Table 2, Figure 2 is obtained.

Figure 2 shows the visualization effect of two different systems in public opinion recognition, early warning, prevention, and control ability. In terms of identification, early warning, and prevention, big data analysis technology is stronger than traditional monitoring and early warning systems.

5.3. Comparison of Public Opinion Evaluation in Different Systems. This research adopts the big data public opinion monitoring and early warning system, which has complete functions for public opinion monitoring inside and outside the school. It has a certain effect on public opinion monitoring in colleges and universities. College students have a high dependence and compliance on cyberspace. The big data analysis system can stabilize students' mentality to a certain extent and effectively avoid the large-scale outbreak of public opinion. There are serious hidden dangers in the monitoring of public opinion in colleges and universities in the environment of freedom of speech and numerous communication carriers. Table 3 shows the results of our comparison of the nature of public opinion in different systems:

Table 3 shows the comparison results of public opinion evaluation of different systems. Big data analysis technology can filter the data content, extract information, remove the miscellaneous content of the collected diversified public opinion data, and ensure the objectivity to the greatest extent.

According to the statistical information in Table 3, Figure 3 is obtained:

As shown in Figure 3, the visualization effect of evaluation comparison of different systems is shown. In terms of the diversity, timeliness and observability of public opinion in cyberspace, the traditional system evaluation is lower than the evaluation results of the research system, which can indirectly explain that the big data analysis technology has certain observability on public opinion control.

5.4. Influence Analysis under Different Network Public Opinion Monitoring and Early Warning Systems. With the development of the Internet era, its network interaction has become a matter in the daily life of colleges and universities, and it is also the main source for teachers and students to obtain information. College students, as a special audience group, have their active thinking and reaction. The high-frequency interaction in cyberspace and the information dissemination of the public opinion field will have an impact on the reputation of colleges and universities, which will seriously spread to the whole society. The system used in this study can guide students in public opinion events, indirectly improve students' comprehensive quality, timely understand students' ideological trends, and maintain campus stability. Now, we analyze the public opinion influence of different systems and obtain Table 4:

Table 4 shows the comparison results of the public opinion impact of the two different systems. In the analysis and processing of public opinion, the system can grasp the trend of public opinion in colleges and universities. Effectively control negative comments and create a harmonious campus environment.

According to the analysis results in Table 4, the following Figure 4 is obtained:

Figure 4 shows the visualization effect of public opinion influence of different systems. There is a statistical significance of $t < 10.000$, $p < 0.05$ when comparing the data. From

TABLE 2: Comparison of identification, early warning, prevention, and control capabilities of different systems (%).

| Group | Public opinion judgment | Prediction of public opinion content | Risk prevention and control |
|-------------------------------|-------------------------|--------------------------------------|-----------------------------|
| This research system | 87.45 | 90.71 | 84.78 |
| Traditional university system | 60.35 | 63.68 | 56.45 |

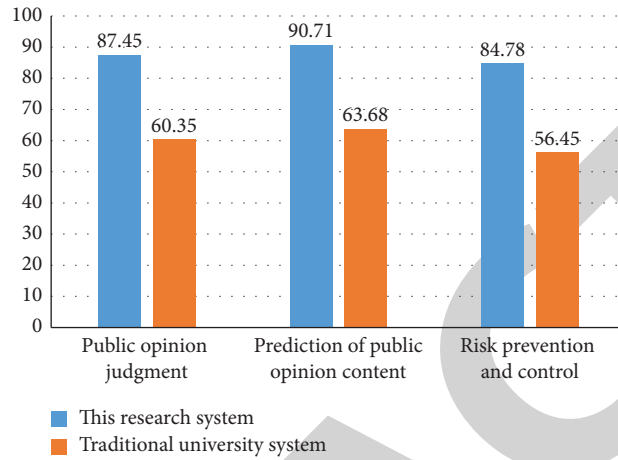


FIGURE 2: Visualization of identification, early warning, prevention, and control capabilities of different systems (%).

TABLE 3: Comparison of public opinion evaluation of different systems (%).

| Group | Diversity | Timeliness | Objectivity |
|-------------------------------|-----------|------------|-------------|
| This research system | 89.93 | 90.52 | 87.65 |
| Traditional university system | 68.54 | 65.32 | 63.22 |

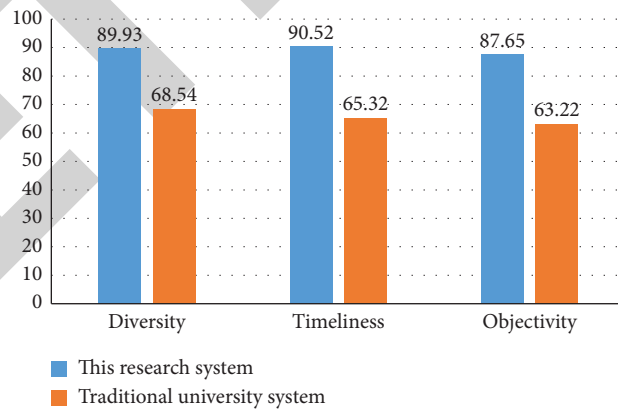


FIGURE 3: Visualization of public opinion evaluation in different systems (%).

TABLE 4: Analysis of public opinion influence of different systems (%).

| Group | Campus network environment | Comprehensive quality of college teachers and students | College reputation |
|-------------------------------|----------------------------|--|--------------------|
| This research system | 86.55 | 85.42 | 91.65 |
| Traditional university system | 60.51 | 62.35 | 65.22 |

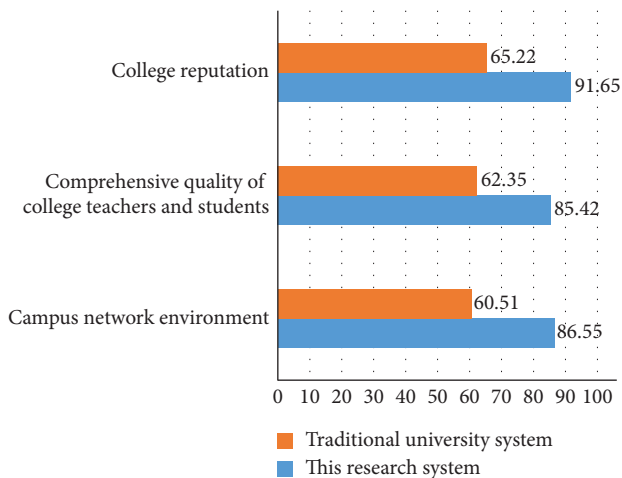


FIGURE 4: Analysis of public opinion impact of institutions in different systems (%).

the data results, the system can achieve early warning, early prevention, and initiative, which is helpful to avoid campus crisis.

6. Summary

When analyzing online public opinion, we should analyze the content of public opinion itself and analyze the social relations of the participants of public opinion, so as to explore the law of the development of public opinion. This study compares the big data system with the traditional system. From the perspective of the specificity, sensitivity, identification, early warning, prevention, and control ability of the system in dealing with public opinion. We will vigorously strengthen the reform and innovation of mainstream media in colleges and universities, compete with online media for student audiences, and take the initiative to control the right to speak. Newspapers, radio, television, and other media should pay close attention to teaching, logistics, employment, and other matters of concern to students and actively carry out positive reports. It is concluded that big data can improve the guidance ability of university network public opinion, which is conducive to purifying university cyberspace; college network public opinion reflects the hot spots and focus topics that students are or may be concerned about. Analyzing these public opinions is helpful to study and judge the ideological trends of college students, carry out ideological and political education in advance to avoid college students being misled by negative public opinion, promote the harmonious development of university civilization, and maintain the stability and development of university reputation and even society.

Data Availability

The data underlying the results presented in the study are available within the manuscript.

Conflicts of Interest

There are no potential conflicts of interest in our paper.

Authors' Contributions

All author have seen the manuscript and approved to submit the journal.

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