

Application of WeChat Public Platform in the Construction of College Students' Campus Culture under the Background of Big Data

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Keywords: Big Data Background, WeChat Public Platform, College Campus, Cultural Construction

Abstract: For a long time, propaganda and ideological work has always been the key content in the field of ideology. As an important position for propaganda and ideological work, colleges and universities are more responsible for placing propaganda and ideological work in an important position. The purpose of this paper is to study the application of WeChat public platform in the construction of college students' campus culture based on the background of big data. The platform architecture is analyzed for the WeChat public platform of M University, and the main functional modules in the platform are analyzed in detail. The mobile terminal adopts J2EE technology, and the background is developed in Java. In the interaction, the representation of data information is realized through JSON. Starting from the basic situation of students in M University using the school's official WeChat public platform, to understand how and how the communication of the university's micro-platform has affected the campus cultural identity, explore the reasons, and explore how to improve on the existing basis to achieve more good communication effect. The content of M University's official Weibo and WeChat public platform texts are analyzed, and the characteristics and laws of transmission are summarized, so as to try to analyze how the official micro-platform of M University affects the campus cultural identity.

1. Introduction

Campus culture is the spiritual driving force for the progress of students. In the process of building higher vocational campus culture, we must first pay attention to the construction of campus media [1-2]. Based on the extensive use of the WeChat platform by the students and teachers, the needs of the students and teachers have been deepened through the WeChat platform, and the

problems that have arisen can be solved from this perspective, and then these groups can be properly guided to do good deeds and stand A good team, from the accumulation of bits and pieces to the final formation of the correct three views [3-4].

With the rapid development of the Internet and the rapid development of big data analysis technology, data mining has played a positive role in promoting the industry and academia. Classification is an important problem in data mining. Gaye B discussed the background and theory of support vector machine (SVM) in data mining classification algorithm, and analyzed and summarized the research status of various improvement methods of support vector machine. According to the scale and characteristics of the data, different solution spaces are selected to convert the solution of the dual problem into the classification surface of the original space to improve the speed of the algorithm [5]. Zhang believes that it is necessary to improve and balance the sports culture infrastructure of different campuses, and reflect the unity and commonality of the construction of sports culture in colleges and universities. The characteristics of different campuses must be taken into account, and the diversification and innovation of campus sports culture construction must be highlighted. He mainly analyzed the dilemma of multi-campus campus sports culture construction, and put forward suggestions and countermeasures combined with innovative ideas [6]. The combination of campus culture construction and new media is the primary task of contemporary college workers.

This paper selects the official WeChat platform of M University to conduct a data survey, sorts out the data of the propaganda content, tweet timing, functional development and other data of the official WeChat platform of sample colleges and universities. The resistance of the WeChat platform to publicize the ideological work provides reliability data support for this study. Taking the new era background of "micro-culture" as the research perspective, taking the Marxist cultural view as the theoretical basis of this study, and starting from the current situation of college students' reading view, this paper analyzes the new problems and challenges faced by college cultural construction. Therefore, the research perspective of this paper has certain innovations.

2. Research on WeChat Public Platform in the Construction of College Students' Campus Culture under the Background of Big Data

2.1 The Era of Big Data and Its Characteristics

Each era is unique and has obvious features that are different from other eras. The era of big data also shows its unique characteristics. The complex, diverse and large amount of information shows the obvious advantages of the big data era, and the uniqueness of the big data era cannot be comprehensively summarized only by relying on the huge amount of data [7-8]. Therefore, a complete grasp of the characteristics of the big data era has a positive effect on a comprehensive understanding of the big data era and the writing of subsequent content.

This paper attributes the characteristics of the big data era to predictive, data-driven, and personalized. Predictability is the most important feature of the era of big data. Prediction is based on a huge amount of data, relying on data mining tools and analysis techniques to explore laws, observe trends, make more accurate predictions, and explore the potential value of data, making people unlimited. Get closer to your vision for the future. Dataization is one of the characteristics of the era of big data. In the era of big data, words have become data, orientation has become data, and dataization has an impact on all walks of life. It can even be said that everything in the world will be digitalized. Personalization is another obvious feature of the era of big data, which pays more attention to meeting people's individual needs and pays more attention to the uniqueness of each person [9-10].

2.2 The Role of WeChat Public Platform in the Construction of College Students' Campus Culture

The school can establish a WeChat public platform to transmit the latest news, spread campus culture, etc. The types of information are mainly divided into three types, namely text, voice and pictures, etc., to fully understand the actual situation of the student group. Based on the actual needs, the functions of the campus WeChat public platform can be divided: first, the campus information section, which mainly includes some activities organized by the school, such as lectures, as well as relevant information such as recruitment and competition; second, the teaching management section, which The content mainly includes teaching evaluation and teacher charm display, etc. Third, the student information section, which mainly involves information related to students, such as evaluation, employment, classroom usage, and entertainment and food. Taking active innovation and depth as the standard, push graphic messages for teachers and students on the WeChat public platform, and require that the content of graphic messages be adapted to the mainstream cultural awareness of society. Give full play to its positive public opinion guiding role. Pull in the relationship between the school and the students, and develop a good interaction to promote the ultimate goal of building an innovative campus culture [11-12].

2.3 Related Technologies

(1) Spring MVC framework

Spring Web MVC is a simple Java based web framework for designing MVC web based designs. Spring MVC is the best MVC process out there. Since the release of Spring 2.5, ease of use has improved significantly due to defined configuration support. Spring3.0 is relatively complete, surpassing Struts2. The MVC process is the perfect MVC implementation for creating web applications.

(2) J2EE architecture technology

The J2EE architecture has four layers. The client layer is a view presented to the user, that is, the content that the user sees and receives when using the program. The logic layer is mainly for the operation of specific problems, it can also be said to be the operation of the data layer and the execution of business data analysis. (The key is to extract smart data from raw data) It can provide all the features at the data viewing level. The real purpose of the "middle business layer" is to integrate the same repository of the "data access layer" to formulate business rules. Layer access to data is essential to perform business operations directly on the database and to add and delete data.

3. Investigation and Research on WeChat Public Platform in the Construction of College Students' Campus Culture under the Background of Big Data

3.1 Platform Development Environment Configuration

During the development process of the official WeChat platform of M University, eclipse4.3 was selected as the IDE, the project module was built through maven, and the platform was realized by J2EE technology. In the data layer, the platform adopts the JPA framework as the persistence layer. The platform database uses Mysql as a data storage and data management tool. The platform development environment uses jdk1.7+, the server middleware uses weblogic10.1 for platform deployment and release, and finally, the platform code layer uses SVN for version control and document resource management.

3.2 Platform Architecture

The official WeChat platform of M University adopts the Spring MVC framework, and selects J2EE technology to develop and implement it in the technology selection layer. In order to ensure the stability and security of background data, the database is deployed in a dual-system hot backup mode. When the host fails, the backup node will automatically switch to improve the rapid response and reliability of the platform. Such a solution is the most mature and stable idea at present. The platform adopts the MVC design mode. The Controller layer forwards the request through different routes, and pushes the request to each controller for processing. After the processing is completed, the WeChat public end receives and processes the data, encapsulates the data information into XML format, and forwards it. To the WeChat APP, and finally, the processing result information is returned as a JSON format string, and the platform receives and processes it.

3.3 Data Analysis

Sampling selection: From January 2022 to March 2022, the official WeChat account of M University made a total of 182 pushes, including a total of 210 pieces of information. Due to the small total number of samples, this paper adopts overall sampling and will select these 210 pieces of information. Use SPSS19 software to analyze and process the obtained data, mainly use correlation analysis to analyze the key factors that affect the reading volume of M University WeChat, use SPSS software to code and statistically process the independent variables that affect the reading volume, and use correlation analysis. coefficient to test the correlation between the two. The reason why the reading volume is chosen as the standard is that if a WeChat article wants to achieve a high reading volume, it needs to rely on the multiple dissemination of followers to increase the dissemination power of the micro-signal. The t-test formula used in this paper is as follows:

$$t = \frac{\bar{X} - \mu}{\frac{\sigma X}{\sqrt{n}}} \quad (1)$$

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2} \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} \quad (2)$$

where \bar{X} is the sample mean, s is the sample standard deviation, and n is the number of samples.

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4.1 Functional Structure of WeChat Public Platform

The functional structure of the official WeChat public platform of M University is shown in Figure 1. The platform adopts a top-down structure mode in the design of functional modules. In the process of platform development, users can intuitively and clearly understand the overall functional structure of the platform. The main functions of the platform include four modules: user login module, freshman input query module, one-card management, and campus information.

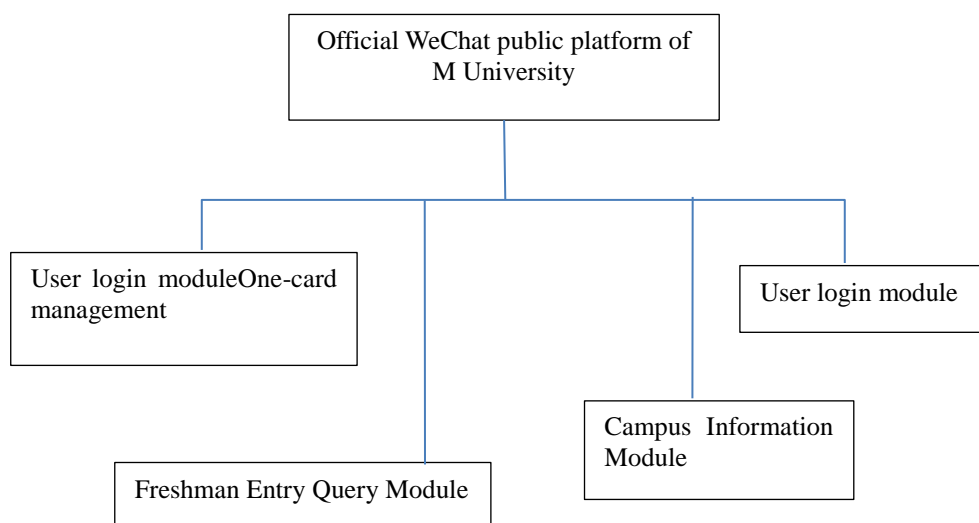


Figure 1. Platform Module Block Diagram

When using the WeChat public platform, you need to bind the WeChat account first, then perform user registration, and bind the WeChat public account with the student number and teacher number. When used by student groups, after students pass the registration, they submit their personal information to the server in JSON format, and then the administrator of the WeChat public platform conducts information review to check whether the user's registration content is true and valid. After the review is successful, it will return to WeChat to prompt that the registration is successful. After successful registration, students can query and set service functions on the WeChat public platform.

The freshman entry query module is mainly to realize the traceability of freshman information. Students register and then bind their student numbers. The WeChat public platform sends the transmitted content information to the business server, so as to complete the binding and query of student information. In the query module, students follow the school's WeChat public account by scanning the QR code information on the admission notice. At this time, the platform will send a subscription event information, and then through this event, the business server will notify the platform of the information and help manual. Send to student mobile terminal.

All-in-one card provides students with real-time account balance inquiry and automatic recharge channels, and supports personal information inquiry and loss reporting operations. The self-service module mainly includes card number binding management, card number unbinding, card loss reporting, card account information flow, transaction details, card unlinking and other operations.

The content of the campus information pushed by the official WeChat mainly includes a weekly news summary, campus figures, and the interpretation of the latest information of the university. In addition, the official WeChat account of M University has also launched a lottery benefit for sending movie tickets, exclusive postcards to Western University and other exquisite gifts.

4.2 Application Situation

According to the content characteristics of M University WeChat, this paper analyzes the content composition into 10 categories: activity organization, current news, campus style, campus scenery, enrollment promotion, campus news, campus notice, campus characters, knowledge information, and campus life, as shown in Table 1. The proportion is shown in Figure 2.

Table 1. M University official WeChat content topics

WeChat content categories	WeChat Articles	The proportion(%)
Event organization	38	18
Current news	9	4
Campus style	30	14
Campus scenery	22	10
Admissions promotion	18	8
School News	43	30
Campus Notice	25	11
Campus character	5	2
Knowledge information	8	3
School life	12	5

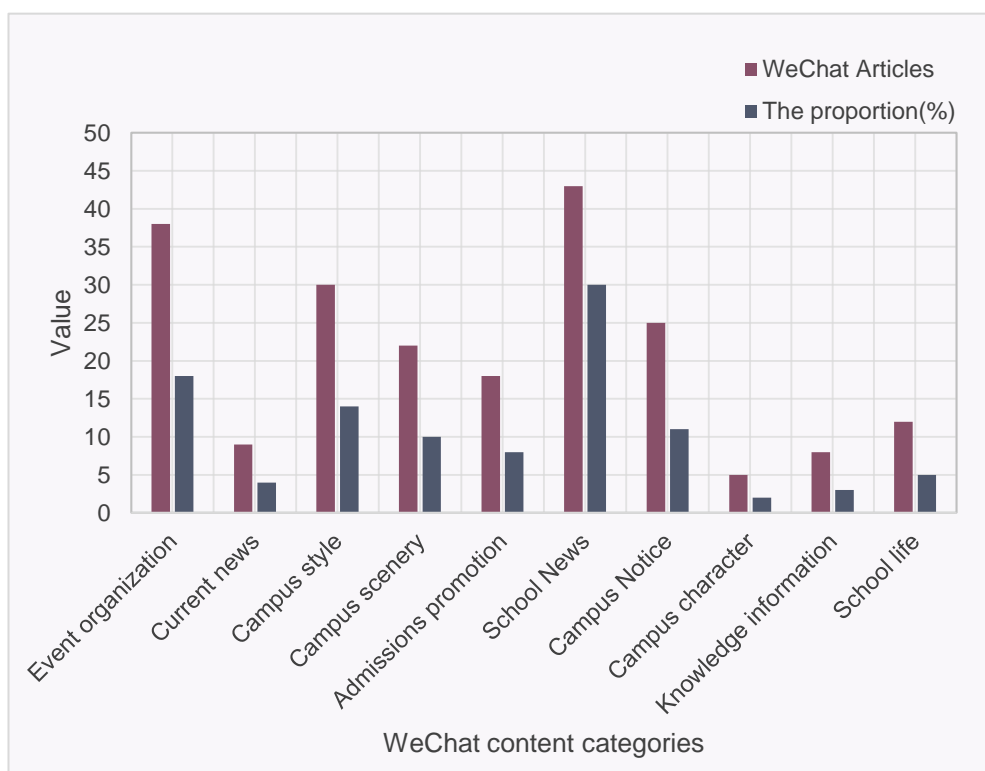


Figure 2. The theme of the official WeChat content of M University

SPSS statistical results P value was 0.009, less than 0.01, the two were significantly correlated. The top three categories with the highest proportion are campus news, event organization, and campus presence. In the activity organization category, it includes activities carried out by schools, colleges, societies and other organizations, as well as WeChat interaction activities organized by the WeChat operation team. For example, it introduced movie promotions for stars, and set up event ticket lottery activities. With the help of star effect, it grasped the star-chasing psychology of contemporary college students and achieved a high reading volume.

The introduction of campus characters includes famous professors and alumni, including the first principal Ma Junwu, etc. This content introduces the little-known aspects of many teachers and classmates, and provides a good role model for students. Let the students understand "how to cultivate a scholar", hoping to stimulate the students' fighting spirit, and also publicize the ability of

M University in cultivating talents.

Campus news mainly forwards information published on the official website of M University. According to relevant research, social media is the primary way for audiences to receive news information. Therefore, it is more satisfying to send important information from the school's official or file system in the form of WeChat push audience needs. At the same time, as a propagandist, he will also choose to disseminate information that will help promote the school's image through WeChat, with the intention of being recognized by the propaganda target.

5. Conclusions

How to solve the general problems of rigid and rigid mainstream advocacy, increased student boredom, insufficient political awareness of young teachers, and little effect of publicity activities in colleges and universities under the impact of new media is imminent. This paper adopts the content analysis method to analyze the dissemination content of M University's official micro-blog and official blog, in order to summarize the current situation of its dissemination. This is a way of processing frequently used transactions by sampling, constructing, coding, etc., from informal information to formalized information, and systematically obtained after researching the obtained data, scientific conclusions. By analyzing the audience's attention to the micro-platform, it is analyzed how the communication activities of M University's official micro-platform affect the campus cultural identity.

Acknowledgements

The work presented in this paper is financed by the 2022 National College Student Innovation and Entrepreneurship Training Program Project (Project Number: 202210549015).

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