Study on Data Platform Application and Work Effectiveness for College Counsellors under the Background of Internet Media

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Abstract

In the big data age, students can get and share a lot of information through mobile phones. As a first-line educator and manager of college students, counselors are the backbone of developing college students’ political education, and also the organizers of daily work in colleges and universities. Facing the background of the big data age, the work of college counselors should follow the pace of the times. Through the construction of the student management platform, the counselor can make use of large data to analyze the students' dynamics in real time, thus strengthening the timeliness of the student management. At the same time, with the help of digital media, the instructor can modularized the work, so as to guide the students to manage themselves and improve their consciousness and good habits.

Key words: Digital system, Big data platform, Student management, Timeliness, Mobile terminal

1. INTRODUCTION

With the acceleration of China’s economic and social transformation and the popularization of higher education, the educational groups in Colleges and universities have undergone profound changes in their personality characteristics, behavior patterns and values. The individual diversity of college students is becoming larger and larger, the demand is more and more, and the frequency of ideological change is becoming faster and faster, which objectively puts forward higher requirements for the work of College Counselors; The external environment of College Students’ Ideological and political education is complex and pluralistic, which makes it difficult for the traditional, single, closed and linear communication education; The Counselor Group itself changed from “Post-60s”, “Post-70s” to “Post-80s”, “Post-90s”, due to the lack of discipline training of relatively systematic ideological and political education, they tend to follow the traditional way of education methods, at the same time, they are so complicated that they cannot communicate effectively with college students, which cause problems in Ideological and political education timeliness, and teacher-student relationship.

In the process of higher education, the counselor plays an important role and is the organizer and guide of the ideological and political education as well as the management. The traditional way of education management is to talk to students with outstanding problems one by one, however, in the background of big data era, people’s behavior will exist in the form of data, and the data of daily activities of college students will be a reference to the management and teaching of counselors. Ideological activities, learning situation, psychological characteristics, interest bias and behavior of each college student can be reflected from the network media, and these data are helpful for instructors to teach students in accordance with their aptitude, and adopt different teaching methods for different students. Therefore, in the background of big data era, college counselors must change their original work concept, have high efficiency and sensitive information judgment ability, and carry out the management tasks according to the data updated by the network media platform. Obtain the most effective parts from a large amount of information, and make the most rational analysis with comprehensive thinking to help counselors better grasp the class students.

According to the research work of college counselors optimization based on the idea of big data, they are mainly domestic, and the domestic research mainly focuses on the ideological and political education of college students in the era of big data. However, there are few literatures about the research on the timeliness of Counselors Based on big data. Therefore, facing the change power of big data, as a full-time student engaged in Ideological and political education and the backbone of administrative management, college counselors should actively face the opportunities and challenges brought by big data, strengthen the awareness of big data, change their working ideas, and actively explore the law of timeliness of counselors in big data age.

2. THE MAIN OBSTACLES IN THE PROCESS OF COMMUNICATION BETWEEN COLLEGE COUNSELORS AND STUDENTS
(1) The choice of educational communication strategy is inappropriate

The ideological and political education in Colleges and universities of the communication channels can be divided into vertical straight type communication and short type horizontal communication. Direct communication is top-down, with features of unidirectional indoctrination, which has a clear purpose of communication, a clear range of communication and object requirements. But because the transmission effect of information has certain requirements, lack of vivid, emotional and personalized features, it is easy to cause the students’ indifference, resentment, conflict and even rebellious mood, making it difficult to achieve the desired effect of information transmission and communication, greatly reduces the effectiveness of the ideological and political education.

Short type horizontal communication is a communication model based on interpersonal equality, with two-way “communication” characteristics of communication mode, which has strong pertinence and good communication effect. However, the purpose of communication is not as clear as direct transmission, and sometimes it requires “Smooth and Quiet” strategy, and the scope of communication is also limited.

(2) The sluggish integration of emerging communication channels and traditional communication channels

As representative new media, QQ, blog, Fetion, micro-blog, WeChat and 3G have the advantages of timely, quick, personalized, obvious and students willing to accept, but they also put forward higher requirements and challenges to the ideological and political education in Colleges and universities. Because the integration mechanism between the emerging communication channels and the traditional communication channels has not yet formed, there are also some problems in the process of counselors’ communication with students.

(3) Poor communication results of mainstream school media

The mainstream media generally include: radio station, radio, cable television, newspaper magazine, school web, billboards and banners. These mainstream media in the campus focus on meeting the publicity needs of the school organization itself, ignoring the reasonable demands of College students. Because of lack of publicity, sufficient information and content, it does not have enough appeal for students. College students have independent thinking consciousness, more precocious thoughts, and they like to pursue novelty, the school’s mainstream media outlets were unable to meet the needs and expectations of students. And colleges and universities have not taken effective measures to actively guide students to pay attention to the mainstream media of the campus so that they can get information, ideological and emotional education and help.
(4) Weak communication and understanding ability between Counselors and students

On the one hand, although college counselors have adopted layers of selection and pre job training, however, there is still a certain gap between the level of policy theory and practical ability to do ideological and political work and higher ideological and political education in the new period. Because of their quality difference, their ability to master and use communication skills is also very different in the process of communication with students. On the other hand, college students are not mature enough in their knowledge, experience and personality because of their specific age of growth. They are irrational, changeable and utilitarian.

3. CHARACTERISTICS OF COLLEGE COUNSELORS’ WORK IN THE BIG DATA AGE

(1) Good media literacy

As the management and education of college students, counselors must have good media literacy, including media awareness, knowledge and application in the era of big data. They are able to use all kinds of new media platforms, they use mobile phones, and mail, micro-blog, and WeChat communicate with students, keen to capture the useful information from the media perspective, which lays the foundation for further education and teaching activities. Therefore, good media literacy of college counselors is the necessary ability to do a good job in college students’ education.

(2) Improve the ability to predict information

In daily work, college counselors should always pay attention to students’ micro-blog, WeChat and QQ, actively search and arrange the data information released by the students. Through the collation of data analysis, the counselor summarizes and judges the general situation of the students in the emotion, thought and study, depicts and predicts the students’ performance for a period of time, and guides them psychologically.

(3) Improve the use of new media

In the era of big data, college counselors should have good ability to operate new media, collate and analyze the information data transmitted over the network, and effectively collect information delivered by students on various network platforms. Counselors should constantly strengthen the ability to use new media, and improve the quality of education management with data technology. Counselors should be good at using the media platform to communicate with students actively, and make the content of education be recognized and absorbed by more students.

The author investigated the satisfaction of students in a university in Jiangsu about their communication with students through social media, as shown in table 1:

<table>
<thead>
<tr>
<th>Social media</th>
<th>Yes (%)</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the college or student organization open micro-blog?</td>
<td>48.8</td>
<td>51.2</td>
</tr>
<tr>
<td>Does the college or student organization open WeChat?</td>
<td>46.5</td>
<td>53.5</td>
</tr>
<tr>
<td>Does the counselor communicate with students through WeChat?</td>
<td>94.6</td>
<td>5.4</td>
</tr>
</tbody>
</table>

Figure 3. Daily management system of students
The survey results show that: first, college counselors have the highest rate of WeChat opening, and maintain close ties with the vast majority of college students, the proportion of which is more than 94%. This shows that these young instructors are most active in the application of large data platform for ideological and political education, which in line with this group’s age characteristics and work preferences. Second, departments or student organizations in the application of large data platform is slightly inadequate, the official micro-blog and WeChat platforms watched by college students are no more than 50 percent, which are respectively 48.8% and 46.5%. The reason is that although the Department opened the WeChat and micro-blog, but because of the slow update and little influence, it is not concerned by the college students.

Because tools used to store and analyze data are not powerful enough, we can only use limited energy to analyze and master the ideological status of Minority Students. In the era of big data, the principal part of the Counselor’s work is no longer a specific student, but all students; The object is no longer part of the data, but the data; the analysis process is no longer passive, but naturally analyzing the data. Such a way will make the analysis more scientific, more natural and more objective.

In the era of big data, it is possible to collect all the students’ information through various channels. This time, we no longer pursue the accuracy of information, but to collect more student information as much as possible. A lot of information including the format may be confusing, even may be wrong, however, in the new situation emerging, allowing inaccurate appearance has become a new highlight. This is because relax the standard of tolerance, people have more data. Counselors can also use these data to do more new things, so that it’s not that a lot of data is better than a small amount of data, but that a lot of data creates better results. This is the standard way to carry out the work of a good counselor.

In the work of University guidance, any problem appears without any sign, but gradually appears. Therefore, by collecting all relevant information about students, we can predict the problems that will arise. For example, students play games online every day, and there will be a correlation between the students’ final exam results. With an analysis of these relationships, we can predict a series of problems that students may have and stifle in the cradle in advance.

4. ENHANCING THE TIMELINESS OF COLLEGE COUNSELORS’ WORK BASED ON BIG DATA PLATFORM

We need to reflect on how to innovate the work of counselors, so as to adapt to and meet the new requirements of big data for the work of counselors, and constantly improve the timeliness of the work of College counselors.

(1) Change the instructors’ work concept
In the context of big data, it’s enough to know what it is, and there’s no need to worry about why. We don’t have to know the reason behind the phenomenon, but we need to make the data sound. In the work, college counselors should strengthen the awareness of big data, change idea, reject the traditional patterns of thinking and the implicit biases inherent in specific areas and collects as much data as possible, predict the students’ ideological status or possible problems, and improve the scientific level of work through scientific statistical analysis.

(2) Establish student affairs big data center
Collect and deal with the data information in a timely, effective way, and provide a solid foundation for the timely and effective grasp of students’ ideological trends. As a leader of the ideological and political work of students, in the ideological and political education, student affairs management and other effective work, counselors can reduce the deviation due to lack of data support, thereby improving the efficiency of students’ work through big data for analysis and decision making. In practice, Faculty of science and Engineering can take the lead, combined with the Youth League Committee, the dean’s office, the finance department and the logistics department, the college students’ mental health education center and other functional departments to share student data resources, and establish information database of College Students’ study, consumption and social practice, which can collect and reflect all kinds of information for students during the school in a timely, comprehensive and accurate way, and provide detailed and effective data support for strengthening the whole process of serving students, managing students and educating students.

(3) Establish the university student affairs processing platform
For this platform, counselors, academic teachers, Youth League Committee teachers, psychological counseling center teachers have management authority. Student affairs managers represented by counselors need to respond promptly to questions about students’ learning, life, psychology and employment, expedite student...
affairs handling and communication channels, and establish active coping model of student affairs. Through the analysis and feedback on the behavior of school students, big data analysis can promote the timely and effective interaction between counselors, schools and students, and can also obtain large data of students’ behavior at school and analyze them, so as to find the students’ study, life and psychology in a timely and effective way. The problem (Interview, class cadre reflection, student reflection and other passive coping problems) is transformed into students’ affairs management model of active, effective discovery and problem solving.

Figure 4. Student management platform

(4) Establish student affairs tracking platform

For phase tracking and analysis of large data of students in the school, it can strengthen the risk control of students’ mental, psychological problems and unexpected events, improve the ability of predicting and warning, and the emergency response ability of the school. Both the dynamic supervised learning status of students, or the students’ Ideological Status and psychological problems can be effectively prevented with real-time data analysis. Closely grasping students’ learning problems, ideological problems and emotional problems need counselors or schools to guide and educate, which plays an important role in further strengthening the management of college students and improving the emergency handling of College students.

In order to better describe the timeliness of large data, we first introduce an example to illustrate the process based on the timeliness of large data. As shown in Table 2, relational data set Inf o personal information and graduation whereabouts information of students in a university, which contains two entities Alice and Tom, includes tID, eID, Name, Degree, Address, Salary and Statu. tID and eID respectively represent the tuple number and real number. The timestamp of the data set is incomplete and cannot be used.

Table 2. Entity relations data set

<table>
<thead>
<tr>
<th>tID</th>
<th>eID</th>
<th>Name</th>
<th>Degree</th>
<th>Address</th>
<th>Salary</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>t1</td>
<td>1</td>
<td>Alice</td>
<td>bachelor</td>
<td>3-Dp</td>
<td>40</td>
<td>single</td>
</tr>
<tr>
<td>t2</td>
<td>1</td>
<td>Alice</td>
<td>master</td>
<td>15-Dp</td>
<td>500</td>
<td>single</td>
</tr>
<tr>
<td>t3</td>
<td>1</td>
<td>Alice</td>
<td>master</td>
<td>Beijing</td>
<td>12000</td>
<td>single</td>
</tr>
<tr>
<td>t1</td>
<td>2</td>
<td>Tom</td>
<td>bachelor</td>
<td>1-Dp</td>
<td>40</td>
<td>single</td>
</tr>
<tr>
<td>t2</td>
<td>2</td>
<td>Tom</td>
<td>master</td>
<td>16-Dp</td>
<td>500</td>
<td>single</td>
</tr>
<tr>
<td>t3</td>
<td>2</td>
<td>Tom</td>
<td>phd</td>
<td>10-Dp</td>
<td>1000</td>
<td>married</td>
</tr>
</tbody>
</table>

In order to be able to respond quickly to update the data sets, and can efficiently determine the timeliness of data update, we first preprocess the initial data set: Record each entity’s storage location on the disk, so as to quickly find and get the corresponding entity data, and determine its timeliness in the entity. Due to the default timestamp of the data set, we use the following time constraints to determine the timeliness of the entity:

1. The attribute values of degree in the same entity include Bachelor and Master, the master’s timeliness is higher. Similarly, if there is attribute value Dr. (PhD), the doctor’s timeliness is higher.
2. Marital status in the same entity include single and married, married timeliness is higher.
3. The higher the salary in the same entity is, the higher the timeliness is.
4. In the same entity, if the salary attribute of one group in the original value than other tuples in wages is seasonal, so the address attributes values in a tuple is fresher than other original in the group address.

We use t to represent an entity tuple, ti<Atj indicates that attribute A value in tuple ti is poorer than tj in
the same entity \((ti.ID\rightarrow tj.eID-)\), \(ti=Atj\) indicates that the attribute \(A\) value is the same with timeliness of \(tj\). The above 4 time constraints can be expressed in the following form:

\[
\phi_1: \forall t_1, t_2 \in Info((t_1[eID] = t_2[eID]) \land t_1[Degree] = bachelor \land t_2[Degree] = master) \rightarrow t_1 < Degree t_2
\]

\[
\phi_2: \forall t_1, t_2 \in Info((t_1[eID] = t_2[eID]) \land t_1[Degree] = master \land t_2[Degree] = phd \land t_1< Degree t_2)
\]

\[
\phi_3: \forall t_1, t_2 \in Info((t_1[eID] = t_2[eID]) \land t_1[Salary] \land t_2[Salary] < Sal t_2) \land t_1 < Salary t_2)
\]

\[
\phi_4: \forall t_1, t_2 \in Info((t_1[eID] = t_2[eID]) \land t_1 > Status t_2) \land t_1 < Address t_2)
\]

We use entity Alice as an example, in accordance with the above prescription rules, we can get the aging relation between the different attribute values of the following attributes: (1) Degree: bachelor < master; (2) Address: 3-Dp < 15-Dp < Beijing; (3) Salary: 40 < 500 < 12000. In order to be able to clearly define the value levels of each entity’s different attributes, we introduce the concept of aging score value. The higher the score is, fresher the property value is. The attribute values for Degree, Address, and Salary are scored as follows: (1) Degree: score(bachelor) = 1, score(master) = 2; (2) Address: score(3-Dp) = 1, score(15-Dp) = 2, score(Beijing) = 3; (3) Salary: score(40) = 1, score(500) = 2, score(12000) = 3. The property values of other attributes in entity Alice cannot determine the timeliness based on the above rules, if possible, supplement the aging rule with an incomplete timestamp to cover the aging value of the attribute value that is not covered. If not, the aging value of the attribute value is initialized to 1 (minimum aging score). Then, in order to determine the aging relationship between tuples of the same entity, the aging score of the tuple is added and represented by the elimination of the eID of the tuple number of the remaining attribute value in the tuple. The following is an aging score of 3 tuples of entity Alice: score (t1) = 1+1+1+1+1 = 5, score (t2) = 1+2+2+2+1 = 8, score (t3) = 1+2+3+3+1 = 10. Then the order of times between tuples of entity Alice is t1, Alice < t2, Alice < t3. Similarly, we can determine the time sequence between Tom entity tuples is t1, Tom < t2, Tom < t3, Tom. So far, the preprocessing of the relational data set has been completed.

5. CONCLUSION

In a word, the work of College Counselors in the era of big data should be innovated continuously, and should be adapted to the needs of the times. As a young group of new freedom and individuality, students use more new media platforms, college counselors should recognize this situation, make full use of the new media platform to carry out the work, strengthen the communication with students in the ideological and emotional way, grasp students’ learning and psychological development, so as to carry out the education teaching work, to better promote the development of higher education in China.

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