Research on the Construction of High School Student Education and Management of Party Members Network Platform Based on Data Mining Technology

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Abstract

The arrival of the information age, especially the extensive popularization and use of intra-Party information management system in High School, has greatly promoted the Party building work of High School and provided a broad platform for the education and management of Party members.It is very necessary to manage the Party member information by using the modern way.Party member information management system can not only play the role of information sharing, but also increase the cooperation between Party workers, realize the party work flow through the system, and improve the efficiency of Party workers. The article analyzes some problems existing in the current party member development education management, and proposes to use data mining technology (KDD) to establish a management platform integrating party member development, education, management, service and other functions, in order to realize the scientificization of party members Management to improve the efficiency and level of party building work.

Keywords*: Kdd, High school student, Education and management of party members, Network platform construction*

Ⅰ. Introduction

In recent years, the rapid development of information technology has further expanded people's access to information, and online education has gradually become a compulsory course for college students. Making full use of and exploring the network information platform and integrating the network into education and management of party members will play a positive role in promoting the party building work in China [1]. Facing the rapid development of the Internet age, grass-roots party management workers should actively change the thinking of party building work, take the initiative to seize the opportunity to adapt to the development of the new situation, make full use of the network platform, innovate the working methods of party building, improve the efficiency of party building work, continuously strengthen the standardization and institutionalization of education and management of party members, and further enhance the level of party building work at the grass-roots level [2]. At present, as the cause of our party continues to develop and grow, the number of party members has grown rapidly, and their dispersion and nature have also increased significantly. How to use the Internet to innovate electronic party affairs management methods has become a major task of party building in the new era. Establishing a scientific, orderly and efficient Education and management of party members platform is an effective way to strengthen party members' party spirit education, achieve scientific management of party members, and improve the efficiency and level of party building work [3].

The main manifestations of the difficulty in managing a party member are: on the one hand, the individual member has a weak consciousness of the Party's organizational concept, only knows that he is a member, but does not actively contact the Party organization.On the other hand, members do not know that they are part of the Party organization, lack the awareness of serving the Party organization, do not propagate the Party's related ideas, do not act in accordance with the Party's line, policies, etc., and do not perform their duties and obligations [4]. With the advancement of education informatization, high school education and management of party members has gradually realized informatization, which is significantly improved in efficiency, benefit and effect compared with the traditional high school education and management of party members. And accumulated a lot of valuable data in

various high school education and management of party members systems and business processing subsystems. This has laid a good foundation for the application of KDD in high school education and management of party members [5].

Through KDD, we can find some useful knowledge hidden behind a large amount of data and use this knowledge to guide managers to improve management methods and strengthen management in a targeted manner [6]. KDD is a new interdisciplinary subject that gathers multiple disciplines. This is an extraordinary process, that is, the process of extracting unknown, implicit and potentially valuable information from huge data [7] . In August 1989, at the 11th Joint Conference on Artificial Intelligence held in Detroit, the United States, knowledge discovery was first proposed by scientists. At the same time, some people also called knowledge discovery KDD, but they are not exactly the same [8]. In 1995, the term KDD was accepted by people at the first international academic conference on knowledge discovery and KDD held in Montreal, Canada, which analyzed the whole process of KDD. Essentially, KDD is a sub-process of knowledge discovery [9]. On the basis of KDD, this paper puts forward the research on the construction of high school student education and management of party members network platform.

Ⅱ. Kdd and High School Student Party Member Education Network Management

A. Kdd

KDD is a process of extracting hidden but potentially useful information and knowledge from a large amount of incomplete, noisy, fuzzy, and random practical application data. It involves extracting, transforming, analyzing, and modeling a large amount of data in the database, extracting key data to assist decision-making, and deriving useful knowledge based on the characteristics of the field. KDD can help managers find rules, discover neglected elements, predict trends, and make decisions. It is a high level of abstraction and generalization of the inner and essence of data, a sublimation of data from rational and perceptual knowledge, and a high level of generalization of a large amount of complicated data with knowledge [10]. KDD can be categorized in many ways. According to the tasks of KDD, KDD can be divided into the following categories: classification or prediction model KDD, data cluster analysis, association rule analysis, sequence pattern discovery, dependency or dependency model discovery, anomaly and trend discovery, etc. [11]. According to KDD objects, there are the following data sources: relational database, object-oriented database, spatial database, temporal database, text data source, multimedia data, heterogeneous database, heritage database and web data source. Commonly used KDD methods include correlation analysis, time pattern, clustering, classification, deviation detection and prediction. The process of KDD is roughly divided into three stages: data preparation, KDD, interpretation and evaluation of results [12]. The main process is shown in Figure 1.

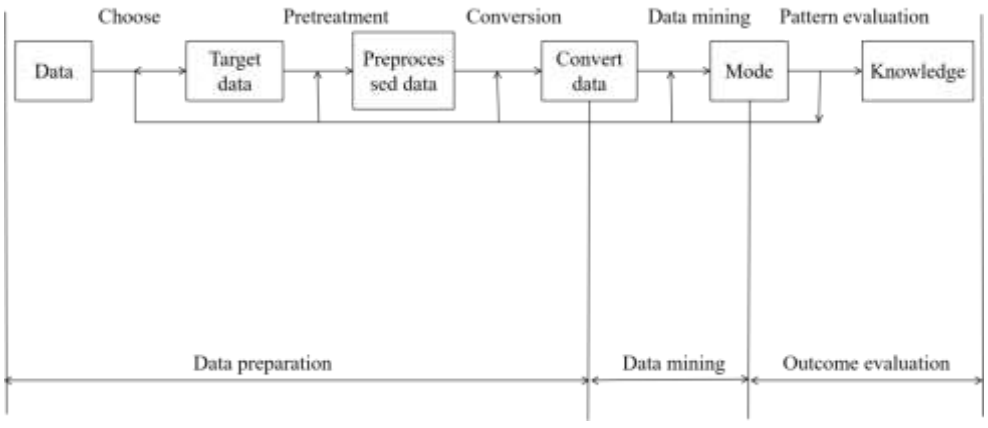

Fig.1 Data Mining Process Icon

B. The Current Problems in the Online Education of High School Party Members

In recent years, although platforms such as WeChat and Weibo for college student party members are gradually being established, the establishment of the platform is still in its infancy. It still has shortcomings such as imperfect content, inadequate management, untimely updates, and few attention groups. Network management People have a negative attitude and cannot effectively use the platform for party member management. The party member group does not pay attention to it and pays little attention to the relevant content of the website. As a result, most party member management platforms are useless and fail to play their due role [13]. Due to the negligence and slack of network administrators, the ideological propaganda content of many party and government education platforms is not updated in time, the content is old and single, and can not keep up with the time, which leads to the lack of interest of college students members, they will no longer pay attention to it and cause waste of resources.

C. Education Network Management of Party Members in High School Student

Information management system is a computer application system with data-intensive and man-machine interaction, whose main purpose is to provide information services. It involves a large amount of data, and the data is persistent. At the same time, the persistent data is shared by multiple applications, even in one unit or a larger scope. It has the basic functions of data collection, transmission, storage and management, and can also provide users with information services such as information retrieval, statistical reports, transaction processing, planning, design, command, control, decision-making, alarm, prompt and consultation [14]. The party information management system is also such a wide-ranging computer application system. Therefore, it is of great significance to develop and make good use of the party's information management system. The party member management module is the most important functional module in the party member information management system. This module realizes the basic management function of the party branch administrator for the party member information of the branch. Figure 2 is a use case diagram of the party member management module.

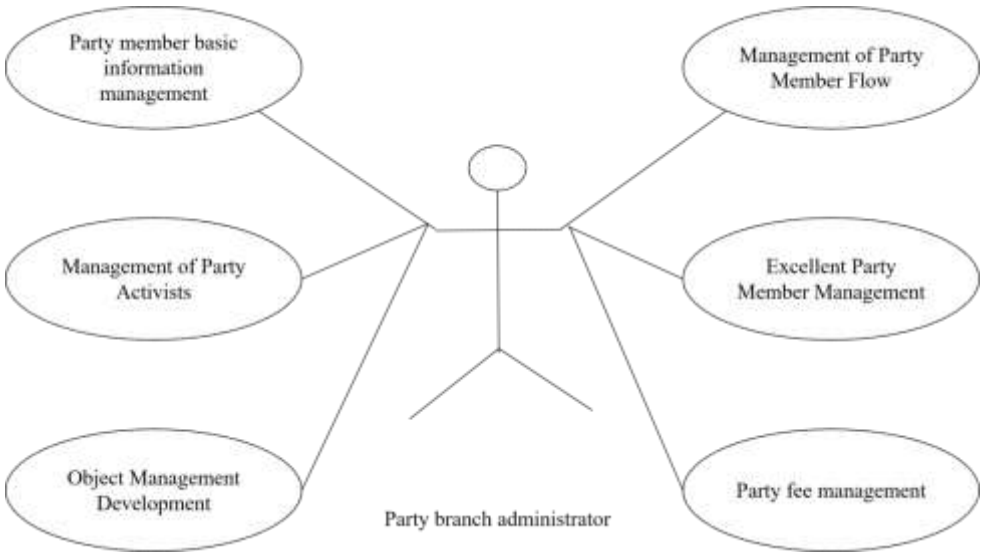

Fig.2 Use Case Diagram for Party Member Management

The operator of the system management module is the system administrator.The system administrator manages each party branch in the whole Party member information management system. The system administrator can manage each party branch, set up the administrator of the party branch, set up the authority of the administrator of

the party branch, manage the status of the members of the party branch, and at the same time, summarize and evaluate the basic information.Figure 3 is a use case diagram of the system management module.

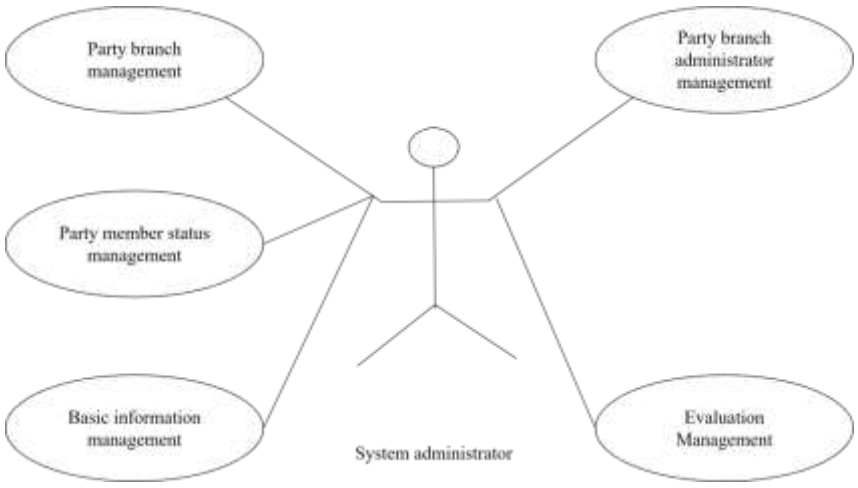

Fig.3 System Management Use Case Diagram

At the same time, it has audit function; Party branch management can modify the login system password, modify the name, modify the registered email address and use the password retrieval function. Figure 4 is a functional structure diagram of account management.

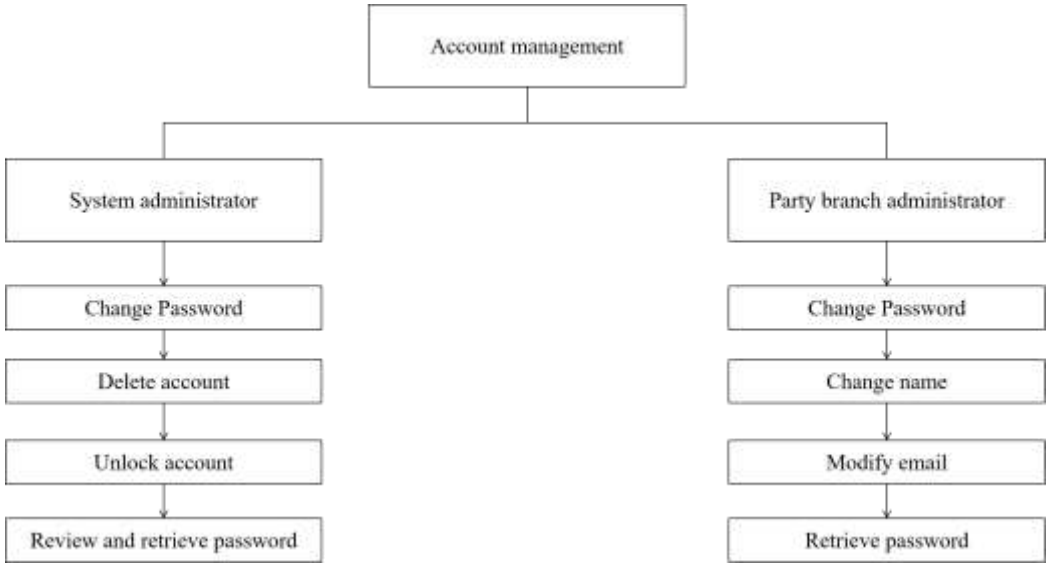

Fig.4 Account Management Function Structure Diagram

With the popularization and development of online information education, the Internet has increasingly become an important channel for college students to acquire various knowledge and information. According to some high school surveys, the proportion of college students surfing the Internet is generally more than 95%. The popularity of the Internet has broadened the way for us in the methods and means of party members' ideological and political education and management. The extensiveness and cross-temporal nature of network information content, the quickness and immediacy of speed, and the flexibility and interaction of forms have enhanced the radiation, persuasiveness and appeal of the ideological and political work of business schools, and also increased the work's effectiveness. Immediacy, sensitivity, interest, pertinence and effectiveness. We must pay attention to using the modern management platform and methods of the Internet for reference, to conduct public opinion guidance and

education for college students, let more students understand our party, increase the enthusiasm of the majority of students to join the party, and promote a good academic style and school spirit. The main forms of online platforms include party building websites, online party schools, BBS forums, etc. [15]. The education and evaluation of Party members plays an important role in the reform and development of Party member education, in the education and management of Party members and in decision-making.However, the current evaluation index of Party member education is mostly made by referring to the relevant evaluation index system at home and abroad, combining with the experience in actual operation and questionnaires. It is difficult to make a judgment on the dependency, importance and rationality of the existence of the indicators. Major quantity analysis and association rules are applied to each evaluation system.The evaluation index can be selected, sorted, etc. To some extent, the evaluation index can be optimized, and a more reasonable and simple evaluation index system can be found.

Ⅲ. Construction of High School Student Education and Management of Party Members Network Platform for Kdd

A. Associated Kdd

Mining association rules is a very important research direction in KDD field. Since the association rules algorithm was put forward in 1993, it has been paid great attention by researchers. In association rule mining, support and confidence are two particularly important concepts. Support is used to measure the statistical importance of the data used, and confidence is used to measure the credibility of association rules.

The concept of association rules originated from the acquisition of interrelationships between data in a certain data set. The main representation of association rules is $A \Rightarrow B$, where A is called the associated antecedent and B is called the associated subsequent. Next, the concepts and definitions involved in association rule mining are introduced in detail.

Definition 1: Assume that AAA is a collection of all items, X and Y are itemsets if $X \subset I, Y \subset I$ exists, and k-itemsets if the count of items in $I = \{I_1, I_2, I_3, \cdots, I_k\}$ is K.

Definition 2: Assume that the set of all items in the target transaction library is $I = \{I_1, I_2, I_3, \cdots, I_k\}$, $D = \{T_1, T_2, T_3, \cdots, T_n\}$ is the transaction library, in which $T_i = \{I_{i1}, I_{i2}, I_{i3}, \cdots, I_{ik}\}$ exists, and any element $I_{ij}\ (j \in [1,k]) \subseteq I$ in T_i, so we call T_i a transaction in the database.

Definition 3: We call $A \Rightarrow B$ an association rule, where A and B must satisfy $\{A, B | A \subset I, B \subset I, A \cap B = \Phi\}$ at the same time, A is the premise of the rule, and B is the result.

Definition 4: If s% of the transactions in the target transaction library contain both Project Set A and B, we call s% $A \Rightarrow B$ Support, and the formula as shown in Formula (1):

$$Support(A \Rightarrow B) = P(A \cup B) = s\% \quad (1)$$

Definition 5: We call c% $A \Rightarrow B$ Confidence. If c% of the transactions containing item set A in the target transaction library also contain B, the formula is shown in Formula (2):

$$Confidence(A \Rightarrow B) = P(B|A) = \frac{Support(A \cup B)}{Support(A)} = c\% \quad (2)$$

Definition 6: Assuming D is the target transaction database, x and Y are itemsets, if the support s and confidence c of $X \Rightarrow Y$ are not less than the preset minimum support min_s and minimum confidence min_c, then $X \Rightarrow Y$ is called strong Association rules.

The minimum support threshold, Minsupport, indicates the lowest statistical significance of a set of data items.The minimum confidence threshold Minconfidence represents the minimum reliability of the rule.If data item set X satisfies support < or > min support, X is the largest data item set.The minimum confidence and support thresholds are generally given by the user.

Rules whose confidence and support are greater than the corresponding thresholds are called strong association rules, and conversely, weak association rules. The task of discovering association rules is to find those strong rules whose confidence and support are equal to given values from the database.

B. High School Student Education and Management of Party Members Network Platform Construction

Making full use of the party building website as a carrier is conducive to the active development and expansion of new forms, new positions, and new content of party member education, and continuous exploration and innovation of effective forms of party member education. First of all, it is necessary to establish a platform for information transmission to facilitate timely transmission and understanding of the spirit, so that the latest spirit of the Central Committee, the Municipal Party Committee, and the Education Commission can be transmitted to each branch and to each party member in the first time, so that the cadres, teachers and staff can be ideological. , The action has always been consistent with the central and municipal party committees. In addition, the “grassroots Party Construction” column of the school Party School will timely transmit information about Party construction work, such as cadre learning, cadre appraisal, cadre appointment and removal publicity, various notifications, meeting information, award evaluation results, etc. to the browsers.Links to important and authoritative websites to facilitate learners' access to and search for learning materials.Secondly, the establishment of a platform for learning materials is conducive to the in-depth promotion of the education of Party members.Table 1 is the information table of outstanding party members. The score information is set by the system administrator's weight, and is calculated according to the masses' score. The score is generated automatically by the system, and the administrator of the Party branch is not allowed to modify it.

Table 1 Information Table Of Outstanding Party Members

Meaning	Type of data	Not null	Field description
An outstanding member number	Integer	Y	Primary key
Name	Varchar	Y	
Get time	Date	Y	
Score	Varchar	Y	

Party member management module is the most important function module in the education and management of party members network platform, which realizes the basic management function of party branch administrators for party member information.

The party member management module includes: party member basic information management, party member mobility management, party activist management, development target management, outstanding party member management, and party dues management. System construction is a key link to ensure the development and effective implementation of work. Therefore, it is necessary to strengthen system construction, formulate unified management methods for the party member development education management platform, and ensure that the system manages people and affairs. The life of the system lies in implementation. Party organizations and party members at all levels should strictly abide by the management measures, and ensure that there is guidance, inspection, and implementation in the use of the party member development education management platform, and the platform management work is specifically implemented to people and implementation.

Ⅳ. Conclusions

This paper builds a platform for collecting and publishing information, educating and training, interactive communication and the communication and management of Party members as a whole, which integrates information collection and publishing, education and training, and interactive communication, and improves the efficiency and level of students' education and management of Party members.At the beginning of the platform establishment, each party branch can manage its members through the combination of platform and traditional mode, and gradually expand the population used by the platform through systematic learning and training, promote the informationization construction of education and management of Party members' development, and finally achieve full coverage of the management platform. The network platform construction of high school education and management of party members needs the patient study of managers. On the one hand, the network management of party members is technical, on the other hand, it is emotional. Only in this way can the education and management of party members network platform really play its role as a bridge and link between party organizations and party members. The factors of outstanding party members are simply analyzed, and the association rule mining algorithm is adopted, which is a function that the current party member information management system does not have. Fully realize the significance of KDD in Education and management of party members is very important. As an auxiliary means of Education and management of party members under network conditions, it can help us explore and build a new model of party member education. Build an education and management of party members environment centered on new technologies. Combining the theory of party member education to develop various types of education management software at all levels, make full use of the large amount of accumulated data in the Education and management of party members system, extract useful knowledge, provide decision-making support for education managers, and continuously deepen the construction of party member education.

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