Research on Opportunities and Challenges of Ideological and Political Work in Colleges and Universities in the Era of Cloud Computing

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Abstract: “Cloud Computing” is deeply influencing our production and life style. At the beginning of its introduction, the application of this technology in university hardware and teaching was focused on by the academic community. However, with the gradual advancement of practice, “cloud computing” has brought opportunities for ideological and political work in universities, but it has also brought more severe challenges. Whether it is technology literacy, vocational training, or the ability of college students to monitor the network, there are various problems. This shows that “cloud computing” technology is facing new challenges in ideological and political work. For the new environment and new things emerging in the “cloud computing” era, we are still hard to adapt. Therefore, we will face difficulties and face difficulties in the quantitative analysis methods, the cultivation of scientific and technological talents, the interaction between teachers and students, and the construction of the party and group platform. This will give us the opportunity brought by the era of cloud computing, and will raise the ideological and political work of universities to a new level.

Keywords: “cloud computing”, Colleges and universities, Ideological and political work

1. Introduction

“Cloud computing” is a super-computing model based on the increase, use, and delivery of Internet-related services. It is called the “fourth revolution” since the advent of computer technology. “Cloud” is a metaphor for the Internet. Therefore, cloud computing can even achieve 10 trillion operations per second. In remote data centers, countless computers and servers are connected to each other, providing countless users with omnipotent and superior services anytime, anywhere. “Cloud computing” is a big leap in the development of network technology, and its application prospects are also very broad. At the same time, it also brings opportunities and challenges for ideological and political work in universities.

2. The Concept of “Cloud Computing” and Its Importance

2.1 Definition of “Cloud Computing”

“Cloud Computing” is another major change since the transition of network technology from large-scale computers to client-servers in the 1980s, and it has developed rapidly in recent years from March 2006 to the recent years (see Figure 1 for details). It is the addition, use and delivery of services related to the Internet. It usually involves dynamically scalable virtualized resources provided through the Internet. Virtual technologies are the core, economies of scale are driven, and the Internet as a carrier is a kind of ultra-large-scale resource sharing. The model can provide scalable virtualized data calculations whenever and wherever the user needs. To be precise, “cloud computing” is a virtual large-scale service model, not just a technology. This model provides users with available, convenient, on-demand network access, and can be dynamically built, operated, and maintained. The core of “cloud computing” is “cloud”, which is a “resources sharing pool” (resources include application software, storage, services, servers, networks, etc.). These resources can be provided quickly and do not require too much management work. No more interaction with service providers is required. Nowadays, the service scope of “cloud computing” is expanding and its influence is inestimable. There is no doubt that “cloud computing” service technology will inevitably penetrate into various fields, both in the present and in the future, and the prospects are extremely broad.
2.2 The Characteristics of “Cloud Computing” and Its Importance

First of all, “cloud computing” has three main features: In the first aspect, the “cloud computing” service has a large scale. “Cloud” is its core, and the rich hardware and software resources of “Cloud” are obvious. It has a considerable scale and gives users almost omnipotent and on-demand computing power. For example, Google’s “cloud” has more than one million servers, and companies such as Microsoft, Amazon, and Yahoo also have a considerable number of servers. The second feature of “cloud computing” is extremely cheap. “Cloud computing” possesses special technologies that can use inexpensive nodes to form “clouds,” which allows users to enjoy the centralized centralized management of “clouds” without burdening with expensive data management costs. The third aspect of “cloud computing” is that it is highly efficient and convenient. As a very large-scale resource sharing pool, it can be purchased on demand like buying gas, water, and electricity, and it can also be dynamically scaled to meet the requirements for increasing the scale of users at all levels at any time and place. What's more, “cloud computing” will not target specific applications, and various applications can be constructed under the “cloud” network support. The “cloud computing” service has great advantages compared with the traditional Internet (see Table 1 for specific details). According to related data, “cloud computing” has made great contributions in various fields (see the specific contents in the figure 2). It can be said that “cloud computing” technology is the gospel of China and even the world's networks.

Table 1 Comparison between the “cloud computing” and traditional internet

<table>
<thead>
<tr>
<th>The advantages of “Cloud computing”</th>
<th>Shortcomings of Traditional Internet</th>
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<tr>
<td>Large scale, rich resources</td>
<td>Small scale</td>
</tr>
<tr>
<td>Cheap</td>
<td>User experience difference</td>
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<tr>
<td>Efficient and convenient</td>
<td>Incomplete information</td>
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Fig.2 The role of “cloud computing” in various fields
Second, “cloud computing” is profoundly affecting people's lives and production methods. Its importance is also self-evident. We know that the two main functions of “cloud computing” are data storage and data processing. If “cloud computing” technology is introduced into the process of ultra-large-scale data processing, it will be better able to centralize or distribute a large number of computer clusters managed. Build a dynamic, scalable, easy-to-use, and cost-effective high-performance computing platform. In addition, “cloud computing” technology can better ensure data security and real-time synchronization in ultra-large-scale data storage. For example, Baidu.com, which was launched by Baidu in 2012, uses this kind of cloud storage service. Users can easily upload their own photos, music, videos, software, documents, and other content to the “Baidu network disk”, and can view, share and download across the terminal anytime, anywhere, without using the traditional U plate. In addition, “Baidu network disk” can also realize real-time synchronous backup of files. Users simply put files into the cloud directory and these files are automatically uploaded to the “cloud” (that is, the resource pool). We said that “cloud computing” is a new technological revolution. According to relevant data, the growth rate of the domestic cloud computing market is higher than the global level, showing a rapid development trend. The national public cloud computing market is expected to maintain its industry scale growth rate of over 15% from 2018 to 2020, and is expected to reach US$383.4 billion by 2020. (The specific content is shown in Figure 3 and Figure 4).

![Fig.3 Global “cloud computing” market size (company: billions of dollars)](image)

![Fig.4 2010-2018 years of global public cloud permeability](image)

3. The Main Challenge of “Cloud Computing” to Ideological and Political Work in Colleges and Universities

3.1 Challenges to the Scientific and Technical Literacy of Ideological and Political Teams

The ideological and political work has its inherent work laws and characteristics, as well as its basic principles and methods of scientific work through repeated practice. It is an ideological work that emphasizes science and is a science. However, with the continuous development and progress of science and technology, people have more and more requirements for new things, and the capacity for accepting new things is also increasing. As a result, our demands for ideological and political work are increasingly demanding. And I want to work hard to achieve the ideological work and science and technology
behavior. However, judging from the current situation, the ideological contingent’s own technological literacy is not optimistic. There are relatively few people in the politicians who can accept and have a good grasp of the latest scientific and technological means in time. The main reasons are as follows:

First, the recruitment of ideological and political teachers is not up to standard. Among universities, the scope of recruitment of ideological and political teaching groups is generally single, and most of them are undergraduate graduates who are professionally inclined to ideological and political education. There is no detailed study of scientific literacy and practical ability. As a result, the ideological and political teaching teams in universities have not been able to keep pace with the rapid development of science and technology.

Second, the training of ideological and political teachers is not detailed enough. As far as the current situation is concerned, colleges and universities should place more emphasis on cultivating the ideological and political teachers' skills in practice and scientific and technological knowledge and literacy, instead of focusing on the training of teachers in current affairs politics and communication skills. This will enable ideological teams to keep pace with the development of the new era and better accept new things and new knowledge.

Third, colleges and universities lack education in science and technology. At this stage, the ideological and political education and work philosophy of universities did not put too much emphasis on science and technology factors. This directly led to the ideological contingent team failing to keep pace with the development of science and technology, and also increased the “cloud computing” for the scientific and technological literacy of the ideological contingent. Bring challenges.

3.2 The Challenges of Analytical Levels in Ideological Work

For anything, there are quantitative analysis and qualitative analysis. They are all organic and unity of quality and organic. In the same way, ideological and political education is also the same. However, we often ignore the calculation of quantitative analysis in practice. This is the impact of traditional views on us. The traditional view is that ideological work should focus on dealing with people, so quantification is less important than qualitative. Of course, the former science and technology are neither simple nor efficient, or even cheap, when used. This is also the reason for the emphasis on qualitative analysis in the work. But now, with the rapid development of science and technology, ideological education can use the Internet and use “cloud computing” to more easily, quickly, and efficiently achieve a unified calculation of quantitative analysis and qualitative analysis.

We know that ideological and political education can play its role and achieve its desired results only under the organic combination of qualitative analysis and quantitative analysis. The “cloud computing” provides technical support and guarantees for the qualitative analysis and quantitative analysis of ideological education and ideological work in terms of convenience and cheapness in processing data and transferring data. Therefore, the emergence of “cloud computing” has led to a qualitative leap in the quantitative analysis of ideological work. However, it is obvious that the ability to use “cloud computing” is a major challenge to ideological and political work.

3.3 Challenges to College Students' Monitoring Ability of Internet Public Opinion

![Fig.5 Age and ability to accept new things](image-url)
The rapid development of the network has both advantages and disadvantages. It brings convenience to people and also brings disadvantages. In recent years, the influence of Internet public opinion on political life order and social stability has been increasing, and as the ability of contemporary college students to accept new things has gradually increased (see Figure 5 for details), and because “cloud computing” is simple and convenient to use. And cheap, the rapid development of the network does not necessarily bring us all the benefits. Therefore, colleges and universities must strengthen the supervision of the application of “cloud computing” to college students, support college students to correctly grasp and apply scientific and technological skills, but also severely prevent college students from using technology skills in harmful or even illegal use.

4. Grasp the Opportunities Brought about by “Cloud Computing” in the Challenge

As mentioned earlier, we know that as “cloud computing” infiltrates into life, it will bring more and more challenges to us if we fail to introduce the scientific knowledge of “cloud computing” into concrete work and life, then it will bring us a greater scientific crisis. Therefore, although there are many challenges, we must also overcome difficulties. While solving various problems, we must learn to seize the opportunities brought about by the “cloud computing” and make greater progress in the level of ideological and political work in colleges and universities. First of all, we should start from the fundamental task of maximizing the scope of recruitment of ideological and political teachers. We should also assess ideological and political teachers as far as possible in terms of science and technology literacy. We can also pay attention to undergraduates in computer science. Regularly training sǐ’s and political teachers in relevant scientific and technological knowledge to improve the deficiencies of the ideological and political team in the field of technological literacy. Second, we must improve the degree of application of quantitative analysis in the ideological and political work, and use “cloud computing” to the fullest extent in quantitative analysis. However, when we are quantifying, we do not blindly insist that each data analysis be very accurate. In the process of quantitative analysis of ideological and political education decision-making, when we can't express it numerically, the vague expression can reflect the data more clearly. Furthermore, we should make full use of the “cloud computing” as a new technological means to strengthen the monitoring of college students' Internet public opinion, and to a certain extent improve the efficiency and accuracy of public opinion analysis and forecasting work. Especially in the face of a number of sudden public opinion cases that need to be dealt with in a timely manner, analyzing the distribution of time and space, and then slowly making the right guidance, then the usefulness of “cloud computing” is very great. In addition, we can use the new technology to establish a new platform for student party organizations to provide college students with a more convenient and quick learning platform. Of course, learners and educators can supplement, modify, and interact with existing learning databases within established rules. This not only allows us to learn knowledge quickly and easily, but also narrows the relationship between learners and educators, and enables common learning to grow together. Finally, we should strive to keep up with the times and proactively grasp the “cloud computing” technology, face challenges, seize opportunities, and raise the level of ideological and political work in universities in the era of cloud computing to a new level.

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