

## *Retraction*

# **Retracted: Analysis of Key Factors of College Students' Ideological and Political Education Based on Complex Network**

### **Journal of Sensors**

Received 3 October 2023; Accepted 3 October 2023; Published 4 October 2023

Copyright © 2023 Journal of Sensors. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

This article has been retracted by Hindawi following an investigation undertaken by the publisher [1].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.

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.

### **References**

- [1] W. Lu, D. Huo, and S. Jia, "Analysis of Key Factors of College Students' Ideological and Political Education Based on Complex Network," *Journal of Sensors*, vol. 2022, Article ID 6577878, 10 pages, 2022.

## Research Article

# Analysis of Key Factors of College Students' Ideological and Political Education Based on Complex Network

WeiPing Lu,<sup>1</sup> DeCai Huo,<sup>2</sup> and Sib0 Jia <sup>3</sup>

<sup>1</sup>Human Resources Department, Yanching Institute of Technology, Langfang, 065201 Hebei Province, China

<sup>2</sup>Center of Employment Guidance and School Enterprise Cooperation, Yanching Institute of Technology, Langfang, 065201 Hebei Province, China

<sup>3</sup>In the International Business School of Yanching Institute of Technology, Langfang, 065201 Hebei Province, China

Correspondence should be addressed to Sib0 Jia; jsb@yit.edu.cn

Received 28 April 2022; Revised 3 June 2022; Accepted 10 June 2022; Published 28 July 2022

Academic Editor: Yuan Li

Copyright © 2022 WeiPing Lu et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Rapid updating and complex network means bringing more development opportunities for the education industry. As for ideological classes and political science at colleges and universities, how to use sophisticated online technology to educate and educate ideological and political classes and improve the formation of ideological and political classes has been a complex theory in the education industry in recent years. Complex network is an abstract representation of complex systems in the real world, with broad research value and application prospects, and has many advantages in complex network research, with interpretability, expression ability, generalization ability, flexibility, etc., and has been used in various network analysis tasks, such as community discovery, link prediction, network representation, and political learning. The second part of this article focuses on (1) the concept of ideological education, (2) the advantages of ideological education, (3) the contradiction of the mode of ideological education, and (4) how to innovate ideological education. The third part proposes the basic characteristics and models of complex networks and proposes the emergence of fractal structures. The fourth part analyzes complex network models in detail and compares the number of points and sides of the real network with the respective irregular networks, indicating that the real world is not fully defined or completely irregular, and that the real network has the nature of a small world and a high-quality cluster. The key factors of complex networks applied propose theoretical and political education and ultimately influence theoretical and political teachers and students in the complex networks examined through empirical questionnaires. He proposes that large universities should be able to use a network environment to promote ideological and political education.

## 1. Introduction

In this paper, the synchronization characteristics of relative oscillators present an understanding of the effective methods of modules in complex networks. The performance of the algorithm has been tested on known computer-generated and real networks, especially when the module elements are very mixed and other methods are difficult to detect [1]. The purpose of this paper is to apply the theoretical knowledge and empirical development of complex network literature to the background of adaptive systems, to promote the development of supply chain theory; the author hopes to reflect the complex net-

work characteristics of the real supply chain, in order to develop a suitable supply chain network theory; the author hopes to reflect the characteristics of the complex network model with the real supply chain. Design/Methods/Methodologies - the author reviews the complex web literature of multiple disciplines extracted from top scientific journals [2]. As can be seen from the undirected network diagram, these seismic networks are small-function networks without scale, distribution of electrical rule links, high increase factors, and a small average length route. It shows that the network's current methods show the complexity of sewed activity in new ways [3]. According to the document, in complex networks, "rich club pregnancy" means

that high knots are more closely related to shallow knots. The presence of this behavior may reflect interesting and advanced networking features, such as hub failure resiliency. In complex networks, “rich club events” mean that high joints are more closely related than fewer joints [4]. In large, complex networks, the scale-free feature evolves through the process of self-organization, more precisely is the priority dependency. New network nodes will connect to other already well-connected nodes. Movement in the network is efficient because traffic is mainly directed at angles that are too tightly connected and concentrated, so the diameter of the network is small [5]. This article introduces a complex network that describes how organizations in the system interact. The structure of these networks is believed to influence processing. Clustering Factor C, a network structure measure, measures how close nodes are. It has also been suggested that the network structure affects a wide range of memory-related information processes, such as word memory, long-term memory, and short-term memory [6]. This article is essentially done through activities aimed at human development. It is a humanities discipline characterized by typical humanities and is essentially carried out through activities aimed at human development. It is a humanities discipline characterized by typical humanities [7]. The article suggests that environmental civilization openly presents the entire process and aspects of students’ theoretical and political education as an important place for the creation of knowledge and talents. To improve the environmental education of students and to promote environmental knowledge, some effective measures need to be taken, fighting for the current situation of environmental education in professional schools [8]. This information tells us that by continuing to improve technology, internet communications have entered the lives of college students. Cyber and political studies of college and university commentary create political and political knowledge on the Internet by illustrating the difficulties the Internet will face. This article discusses different political views and online learning. Therefore, the full use of the program is now a public, socialized, and political orientation, as well as improved academic and political education [9]. The paper concludes that “opposing classrooms” are new concepts and models that can be used to enhance the attractiveness and participation of political education in political and ideological learning. Classrooms centered on “teaching” have become classrooms centered on “learning,” the interaction between form and content, and the reform of assessment methods has changed, and the teaching activities of political ideology education have changed; students can turn passive recipients into active researchers, and teaching activities are more interactive [10]. This paper proposes that in a rapidly changing society, the purpose of ideological and political education shows a dynamic development, and the reversal conflict between the “educated” and the “educated” gradually intensifies. Putting aside the thinking of social one-way influence, social interconfiguration theory places individuals and groups, socialized subjects, and objects at the level of

equality and mutual structure, and transforms reversible conflicts into positive and harmonious changes, which has far-reaching significance for the innovation of ideological and political education subjects [11]. The author points out that while interpreting educational values, there is a trend of applying rationalist and functionalist theories at the same time, and the research model of moral education is developing in the direction of positivism. The author believes that in a multicultural environment, emphasizing the cultivation of moral cognitive ability belongs to the “third way” in Western moral education theory. So the study of significance and progress became very important [12]. This paper is not optimistic about the network environment in colleges and universities. To improve it, we will adhere to the principles of integrity, positivity, positivity, and participation, change the old concept of ideological and political education. In colleges and universities, students are encouraged to make independent choices and decisions, create ideological and political educational websites and networks, create teaching models with Internet federations, develop relevant programs, manage the network environment, ideological, and political educational groups, and improve the overall quality of college students [13]. This article emphasizes that under new circumstances, ideological and political teachers should fully understand and fully utilize the positive opportunities created by the new media, abandon their ideas and find new ways and ways to do ideological and political work in the sector of new media, and increase the efficiency of ideological and political education [14]. The article suggests that the introduction of populist thought into the theoretical and political education of leading colleges and universities is crucial for promoting and improving theoretical and political education in secondary schools and universities and for the growth and development of students. The document addresses the main ideas of ideological and political education to the public in colleges and universities and recognizes that people’s objective sense of ideological and political education in schools and universities should include caring for people, developing people, and serving the people [15].

## 2. Content on Intellectual and Political Education

*2.1. The Concept of Intellectual and Political Education.* The concept of self-esteem for students accepts the concept of ideology as an important part of education, explores the right perspective on global life and values, and explains your mission to make modernization a reality. Teachers should create good conditions in using all factors to create a healthy development environment for college students student height. Education of ideological and political standards in a rich and diverse spiritual and cultural life, promote awareness and social responsibility, adhere to the norms of fair expression in society, and properly demonstrate and apply the correct concept of China’s great national spirit in teaching about collective and socialist love.

*2.2. Advantages of Ideological and Political Education.* In the Internet era, information content presents diversified transmission characteristics, and along with various types of information resources, foreign culture and local culture will also form a certain collision; this would make it difficult to teach traditional and political ideas. After students are exposed to the network environment, they are surrounded by all kinds of complex and comprehensive information, and the negative impact of some content, if it penetrates into the depths of students' ideological consciousness, will inevitably affect their learning confidence and values. For example, foreign hedonism, and egoism, the impact of cultural origin will make students have a wrong perception of the ideological level. This requires in the development of intelligence, politics, environmental education, student reading, education development laws, etc., creating a comprehensive and effective curriculum that ensures all forms of pregnancy education based on the impact of expected education and politics.

*2.3. Correctly Understand Ideological and Political Education.* First, for the traditional concept of education, teachers should learn from a position of strength in them, build an ideological and political education system, and focus on developing unique talents, transforming and political education. Education in talent training plan. Second, colleges and universities need to allocate independent class hours and credits to ensure their effectiveness, help college students form excellent moral character, make them a talent who abides by professional ethics, and lay a solid foundation for the improvement of their comprehensive ability. Third, in the process of educating people, people should ensure the close connection, and after studying Marx's practical teaching, strengthen students' political consciousness and enable them to shoulder the glorious mission of building the country. Teachers should lead practical activities with socialist core values and devote themselves to cultivating college students with advanced ideas and firm political stances. In accordance with China's basic national conditions and international political situation, we should scientifically innovate the teaching mode of ideological and political practice. It accurately locates the value and goal of talent training and optimizes the practice link along the right direction and path. The education classroom should become an important place for students to absorb advanced concepts and to conduct in-depth discussions and practices on relevant cultures and theories. Teachers should handle the relationship between various teaching elements, and the subject and object should participate in practical teaching activities with correct role positioning, emphasis on progressive nature and focus on modernizing the ideological and political classes. Truly nurture talent with the spirit and ideas of today's pioneers.

*2.4. Contradictions in the Ideological and Political Education Model.* At the present time in developing teaching objectives, using teaching methods and methods, college students pass exams, and a current curriculum is more developed by colleges and universities in terms of student evaluation. In addition,

teachers give assessment standards to students, which have nothing to do with teaching and practice; students themselves have learning goals, ignoring the importance of conceptual curriculum, the effect of open thinking. Political education is also down sharply. In real education, it is not enough for everyone to know ideology and moral education, lack of learning objectives, and empty teaching makes students' ideological and political knowledge excellent and instructive. Conflict in the current curriculum.

*2.5. Innovative Ideological and Political Education Methods.* Traditional academic explains students' thoughts and behaviors through data analysis, and in the world of big data, grades are provided by data. Research and research are carried out to ensure the accuracy and effectiveness of student analysis. Universities are necessary to find out what kind of ideological need more according to big data and adopt educational methods that are more in line with students' favorites, such as pictures, videos, or other websites, and push them to students. In addition, universities can also use big data to predict education, track students' thoughts and behaviors in real time through data analysis results, and predict their future trends, for example, teachers can analyze students' thought changes through high-click rate hot news on the WeChat platform, and integrate them into the teaching content, more targeted adjustment of lesson preparation content, change the way of education, when chatting with students, it is found that students have great interest in the current Syrian war, but also have a lot of doubts. Therefore, teachers can develop a teaching courseware based on the Syrian war, through which students understand that the strength of the country can directly determine the future of the country and the damage of the war to the country and the family. Through big data to collect the latest trends in the war and the views of people from all walks of life on the Syrian war, and combined with the classroom content to tell the teachers' personal views, students can more deeply feel the happiness of living in China, a peaceful country, and the sense of responsibility of a strong teenager and a strong China. It is improved by using great information to reform ideological systems and by moving away from traditional educational models through self-awareness. The rapid development of the Chinese economy has raised the standard of living and increased the importance of society for education. And the era of the big data has entered the global economy. The gradual growth of science and technology has led to innovation. In recent years, the approach to talent development in colleges and universities has provided opportunities for theoretical and political education for universities and colleges, as well as facing many challenges.

### **3. Fractal Characteristics of Complex Networks**

*3.1. Fundamental Properties of Complex Networks.* To study complex network G, (1) Complex structure: The core feature of a complex network is that the structure is complex, and any network component is randomly intercepted, and the



number of nodes is huge. (2) Network evolution: It is a study of professional data that actually have evolutionary functions. (3) Node diversity: In the complex structure of a complex network, each node can represent any kind of thing. Complex topological network features, such as the humble medium cluster multiplier and network diameter, can act as feature surveyors. The mapping relationship between the exhaustion vector and the network is bidirectional complex and inverse, and if the complex network  $G$  is transformed  $T$ , a new function vector can be obtained  $\vec{\mu}_T$ . You can do this by studying the degree of change in the function vector  $\Delta\vec{\mu} = \vec{\mu} - \vec{\mu}_T$  to dive into complex networks. In a directed network, the number of distances directly associated with the group is defined in a balanced instrument, in the middle group provided for the sum of all things in the network, which is clearly expressed as (k).

$$k_i = \sum_{j=1}^n a_{ij}, \quad (1)$$

$$\langle K \rangle = \frac{1}{N} \sum_{i=1}^N k_i = \frac{1}{N} \sum_{i,j=1}^N a_{ij}.$$

If the difference between class  $I$  and level  $J$  is the shortest form of two sets of connections, and the same communication length is described as two hundred lengths, plus the road is the same as two hundred different areas, which can be sued the average length of thev.

$$L = \frac{1}{1/2N(N-1)} \sum_{i \geq j} d_{ij}. \quad (2)$$

The network diameter is the maximum distance between each network node between two network nodes, or ·

$$D = \max_{i,j} d_{ij}. \quad (3)$$

A degree  $k$  for the definition of clustering coefficient  $C$  of node  $i$

$$C_i = \frac{2E_i}{k_i(k_i-1)}. \quad (4)$$

There into  $E_i = 1/2 \sum_{j,k} a_{ij} a_{jk} a_{ki}$ . Connect to  $k_i$  nodes in existing lands or neighbor pairs.

Degree distribution of unconventional networks  $P_k$ , defined as a very randomly selected probability of a degree of network of  $P_k$ . The most common and important probability distribution is the normal distribution, and the common hypergeometric distribution, binomial distribution, and Poisson distribution can be regarded as discrete forms of the normal distribution under certain conditions. These distributions are usually symmetrical by methods, such as the length of a person. The distribution of personal wealth has a long tail, and this distribution is called a long-tail distribution. Unlike the normal distribution, the long-tailed distribution does not have a certain degree of characteristics,

so it is called a rowless distribution. In a mathematical sense, the curtain rate distribution is the only long-tail distribution without scale features, i.e.,

$$P(k) \sim k^{-\gamma}. \quad (5)$$

There into  $\gamma > 0$  is the curtain index, usually taken between 2 and 3. To handle noise in phase distributions, plotting a cumulative scale distribution is a common smoothing method, i.e.,

$$p_k = \sum_{k'=k}^{\infty} P(k'). \quad (6)$$

If the network level is the distribution of the screen rate, the cumulative distribution of the western digital level roughly corresponds to the distribution of the screen rate of the screen indicator.

### 3.2. Basic Model of Complex Networks

3.2.1. *Random Graph.* The ER random graph model is a  $W$  option  $P$  connection between  $n$  isolated nodes. At the time, the random graph has the following appearance or phase transition attribute: whether almost every irregular graph has any attribute (such as a connection) for every common probability, or almost every irregular graph has this attribute.

The average degree of the ER random plot is  $\langle k \rangle = p(N-1)$ . The average path length is sufficient  $L_{ER} \propto (\ln N) / \ln \langle K \rangle$ . It has a smaller global feature, but grouping is a coefficient. This means that the random ER chart has no clustering attribute. The approximate random distribution of the ER planning phase is approximately the Poisson distribution:

$$P(k) = (n, k) p^k (1-p)^{N-k} \approx \frac{\langle k \rangle^k e^{-\langle k \rangle}}{k!}. \quad (7)$$

3.2.2. *Network Model.* Complex networks provide a small, global WS model that establishes the probability that  $E$  randomization will reconnect to each edge of the nearest neighbor network. Obviously, depending on a fully regulated network, it can be done by adjusting the  $c$  value from fully accepted small-world model WS is

$$C_i = \frac{2E_i}{k_i(k_i-1)}. \quad (8)$$

The WS is a unified or exponential network; the small-world model was first demonstrated experimentally by Stancy Milgram in the 1960s as a sociological problem, and, i.e., it is possible to pass messages from one person to another in society through the transmission of an average of 6 people and to explain the structure of the display rate distribution mechanism, the scaleless BA model takes into account two important network constraints: network range and preferred communication. Ba's mismatch model

structure algorithm is: whenever a new node enters the M node network, it is linked to an M node and connected to a connected probability node category, after step  $T$ . The edge of the MT BA node is generated by the scaleless BA model, its average path length. The average path length  $L$  is another important parameter of the network. For most real-world networks, regardless of size, the average path length is generally small.

$$L \propto \frac{\log N}{\log \log N}. \quad (9)$$

Illustrate that the network model is also small world. Its clustering coefficient is

$$C = \frac{m^2(m+1)^2}{4(m-1)} \left[ \ln \left( \frac{m+1}{m} \right) - \frac{1}{m+1} \right] \frac{[\ln(t)]^2}{t}. \quad (10)$$

The average aggregation coefficient in this article is the same as that of the BA network model, so the number of network nodes  $m$  can be used as the abscissa and the network scale can be used as the ordinate.

The degree distribution of the BA network model can be obtained by the principal equation method. The BA network model is the BA network evolution model first proposed by Barabasi and Albert.

$$P(k) \frac{2m(m+1)}{k(k+1)(k+2)} \propto 2m^2 k^{-3}. \quad (11)$$

**3.3. Fractal Structure of Complex Networks.** In fact, complex systems have many freckled structures and complex network learning, where complex systems also have worrying abstract features? At first, people were skeptical of the problem, because the most common symptom of fragmented objects is self-probability at the magnitude of change, and this metaphor requires the realization of an energy-rights relationship. However, complex networks often have a small global dimension, i.e., network quickly connects to the diameter of work, rather than the expected power-law relationship. Why is the power-law relation so important in the same problem of separate shapes? Academician Zhang, a famous Chinese scientist, elaborated on this: "The growth process and emergence of its own uniform structure can be concentrated in the simple embodiment of the power law, which is an important state of self-development, under its domination, the system can maintain a smooth evolution and development, the level of its own structure is uniform, and the fractal dimension or relative index is the evaluation criterion of the system function." Until 2005, Song et al. extended the rearranging group analysis method and the box coverage method in fractal theory to the study of complex networks, and found that a large number of real networks have self-similar structures on all long indicators, indicating fractal characteristics, thus eliminating doubts about this theory. The purpose of the reconstructed group analysis method is to change the

observation scale and obtain quantitative changes in an individual. For example, suppose that the purpose of the reconstructive swarm analysis method is to change the observation scale to obtain a value of  $p$ , expand the observation scale to twice the original, and once again measure the value of the physical quantity to  $h$ , using the appropriate scale change  $f$  such that  $p$  and  $h$  have the following conversion relationship:

$$p' = f(h). \quad (12)$$

$f$  subscript 2 indicates a tripling of the scale of observations, and if the proportion of observations is doubled again, the relationship is as follows:

$$p'' = f(p') = f_2 \cdot f_2(h) = f_4(h). \quad (13)$$

As can be seen in the definition of the analytical method of the recombinant group above, this is closely related to the decentralized image. Fractals have the characteristics of "no change after scale changes," and it can be said that shapes that can still retain their original state after group reorganization are fractals. Song et al. generalized the method of box superposition in fractal geometry into complex networks, which included the process of reformulating the network. The specific implementation step is: the total length of the given box is denoted as  $L_B$ , calling it all sets of boxes in this group. The distance between any two nodes in this series collection is less than  $L_B$ . Each box is then treated as a new node (if there is at least one end between nodes in different boxes, there is a connection edge between the new nodes), creating a new network that reuses the box length on this new network  $L_B$ . The box covers the network, repeating the above process until it becomes a single network node. After in-depth derivation and empirical analysis of some current complex networks, Song came to four important conclusions: the minimum required  $N_B$  With box size  $L_B$  Power-law relationship:

$$N_B \approx L_B^{-d_B}. \quad (14)$$

The power of the network degree distribution means that during the reorganization process, the allocation capacity of the network class will remain unchanged. Remember the degree of the node, that is,  $k$  is the degree of the network node after rearranging, and there are:

$$p(k) \approx k^{-\gamma} \longrightarrow p(k') \approx (k')^{\gamma}. \quad (15)$$

The degree  $k$  of the box (new node) after reordering can be met with the maximum contained in the box without reordering.

$$k' \sim S(L_B)k. \quad (16)$$

There into  $S(L_B)$  with the size of the box  $L_B$  satisfies the meditative relationship.

$$S(L_B) \approx L_B^{-d_k}. \quad (17)$$

There into  $d_k$  called the box index.

Box index  $\gamma$ , power exponent, and kernel dimension of the network degree distribution  $d_k$  satisfy

$$\gamma = 1 + \frac{d_B}{d_k}. \quad (18)$$

These conclusions indicate that complex networks have self-similar structures and fractal features. Exposing the fractal features of complex networks once again gives people insight into the beauty of complex network searches, while also giving people a new perspective to better understand and understand the topological characteristics of networks. In fractal geometry, fractals are generally considered to be indistinguishable from autographic similarity. In fractal geometry, fractals are generally considered to be no different from automatic similarity. However, fractal and autosimilar in complex networks are two different concepts, where autosimilarity refers to the scale invariance of the reconstructed network, and fractal characteristics mean that the size of the box is power law in the smallest number of boxes required to cover the entire network. Gallos et al. studied the autosimilarity of complex networks and found that even complex networks without fractal features may exhibit self-similarity properties after reformulation.

**3.4. Emergent Research on Fractal Structures of Complex Networks.** Since there are many truly complex networks, the self has similarities and fractals. So how did fractal structures come about? What is the relationship between fractal structures and small-world phenomena, such as small-world events and scaleless properties? Scientists are interested in these questions. First of all, the strong isolation of network nodes led to the emergence of fractal structures. According to the proposal of the Dynamic Growth Model (DGM), the dynamic growth process of DGM can be seen as a reversal of restructuring. The model  $k$  creates fractal and nonfractal networks, the original node of the query node with the degree of  $k$  at the size scale of  $i$ -time, and the new node of  $k$  (black node) added at  $t + 1$  moment and connected to the initial node. It can be calculated that the mathematical framework of DGM is as follows:

$$N(t) = nN(t-1), \quad (19)$$

$$\tilde{k}(t) = s\tilde{k}(t-1), \quad (20)$$

$$L(t) + L_0 = a(L(t-1) + L_0), \quad (21)$$

there into  $N(t)$  of nodes in the network representing  $t$ -time,  $k(t)$  represents of a node at  $t$ -time, and  $Z$  represents the diameter of the  $i$ -time network, which can be recorded as

the initial network diameter. The value of  $n$  has nothing to do with  $e$ , and  $n = 2m + 1$  is reasonably deduced from the iterative process.

## 4. Complex Networks Are Key Factors in the Application of Ideological and Political Education

### 4.1. Classification and Model of Complex Networks

**4.1.1. Small-World Network Model.** Experimentally demonstrated most of the real networks on the world have the shortest path of the small-world network, and the focus coefficient is relatively large, as shown in Table 1. However, when the rule network has focus, the average path is relatively large. So the small-world network has the nature of a small world, and the aggregation coefficient is very small. In this paper, a preferential small-world network model is studied, based on which the relationship between the synchronization ability of the network and the various geometric features in it (such as the cluster coefficient, the degree distribution, and the median number) is studied in detail.

The subscripts calculated in the network model are arbitrary, and the number of points and edges of the actual network can be compared to this random network to see real work has high cluster coefficient properties. Visible and stochastic networks do not accurately characterize the actual network and show that the in the years of important breakthroughs in complex network research, proposed a network model that is both small world and high aggregation, randomly configuring network shortcut networks between conventional networks and random networks, and connecting each edge of the rule network to new nodes large cluster coefficients, both the rule network and the random network. In each particular case, a rule network and a random network are special cases of networking.

**4.1.2. Scaleless Network.** While small-world models may represent small world and high aggregation in the real world, theoretical analysis suggests that a degree of nodes is still exponential. Empirical results show that the degree distribution described by power-rate distribution for most large real-world networks can be relatively accurate. This is shown in Table 2.

The subtext and the ratio of external distribution power (in) degrees show that most networks have capital in the distribution of rank. It represents the average path length calculated from subscripts and real networks, stochastic network models, and network models, respectively. The power-rate distribution does not have the peak of the exponential distribution, most nodes have only a few connections, there is no feature scale in the random network, and it can be said that this degree of distribution for the network has the power rate of the network characteristics. Explaining the network mechanism, Magic and got the network model, claiming the first are constantly connected, and the second means that new nodes enter, and it is best to choose nodes of degrees in the connect. In addition to determining the sample algorithm and the

TABLE 1: Actual network small-word phenomenon.

Network	Size	$\langle k \rangle$	$L$	$L_{\text{rand}}$	$C$	$C_{\text{rand}}$
https://www.sitelevel/	153,127	35.21	3.1	3.35	0.1087	0.00023
Internet, domain level	3,015-6,209	3.52-4.11	3.7-3.76	6.18-6.3	0.18-0.3	0.001
Movieactors	225,226	61	3.65	2.99	0.79	0.00027
MEDLINE, co-authorship	1,520,251	18.1	4.6	4.91	0.066	0.00005
Math.co-authorship	70,975	3.9	9.5	8.2	0.59	0.000054
E. coli, reaction graph	315	28.3	2.62	1.98	0.59	0.09
SilWoodParkfoodweb	154	4.75	3.4	3.23	0.15	0.03
Workds, synonyms	22,311	13.48	4.5	3.84	0.7	0.0006
Powergrid	4,941	2.67	18.7	12.4	0.08	0.005
C. elegans	282	14	2.65	2.25	0.28	0.05

TABLE 2: Scale-free of the actual network.

Network	Size	$\langle k \rangle$	$\gamma_{\text{out}}$	$\gamma_{\text{in}}$	$L_{\text{real}}$	$L_{\text{rand}}$	$L_{\text{pow}}$
WWW, site	325,729	5	2.45	2.1	11.2	8.32	4.77
Internet, router	150,000	3	2.4	2.4	11	12.8	7.47
Movieactors	212,250	29	2.3	2.3	4.54	3.65	4.01
SPIRES, co-authors	56,627	173	1.2	1.2	4	2.12	1.95
Math.co-authors	70,975	120	2.5	2.5	9.5	8.2	6.53
E. coli, metabolic	778	7	2.2	3.4	3.2	5.1	1.5
S. cerev, protein	1870	2.39	2.4	2.4	1.2	3.2	2.89
Citation	783,339	9	3.5	6	2.3	1.7	4.4
Phone call	111	3	1.2	2.1	2.1	5.2	2.1
Word, co-occurrence	460,902	70	2.7	2.7	3.0	2.1	5.3

simulation analysis, they obtained the analytical solution using the mean field strength method in statistical physics, for which the results showed that after a sufficiently long evolutionary period, the volume distribution of the network no longer changed over time. The degree distribution is stable to an exponential power-law distribution.

**4.2. Students Hope that Network Resources Will Be Used in the Teaching of Ideology and Politics.** From Figures 1 and 2, it can be seen that students have high expectations for the use of network resources in political classroom teaching, and even indicate that the use of network resources to teach will increase their preference for the course. Therefore, teachers of science point of interest of students and introduce the Internet into the classroom to cultivate the core literacy of ideological and political science.

**4.2.1. Ideological and Political Teachers Have a High Degree of Attention to the Internet.** Teachers in science and thought classes pay more attention to opinion than students, so they focus on the political elements of public events the most. What this shows is that teachers in science and political classes are generally somewhat sensitive to political consciousness.

**4.2.2. Ideological and Political Teachers and Students Recognize the Value and Impact of Networking.** According to Table 3, science generally believes that online public opinion will greatly affect students' ideological concepts, because it has become an important task to educate students on public opinion in the teaching of political science. According to the figure, 60% of teachers believe that the teachers of the high school political science class before the network public opinion have realized that the use of network public opinion resources in classroom teaching is not only important but also of great value.

**4.2.3. Ideological and Political Educator Are Less Willing to Resort to Complex Networks.** Educators in school not only undertake of inheriting the fine moral character of the Chinese nation and the moral quality of the new era. At present, the network + technology of school widely used, many ideological political workers in colleges and universities are affected by their own quality level and are unwilling to deeply use the Internet relevant education and teaching work, which also affects the overall work. Through the investigation of the understanding and application of Internet technology by science class, as shown in Table 4.

The results of Table 4 show 28% of those who "know, often use," 60% of those who "understand, but do not often use," 10% of those who "do not understand," and 2% who do not understand at all. Although many teachers have solid professional knowledge of master Internet-related operation technology, they are reluctant teaching complex networks. In the face of emerging problems, colleges and universities will also actively introduce relevant talents to make up for the vacancies work and will also actively organize politicians who are already on the job to receive training activities on Internet knowledge.

**4.2.4. The Entertainment and Fragmentation of Complex Networks Have a Great Impact on the Ideological and Political Education of Colleges and Universities.** The content of ideological and political education in colleges and universities itself is a complete knowledge framework, there is an inevitable. Carried out based on the Internet shows the characteristics of fragmentation, which will split the complete



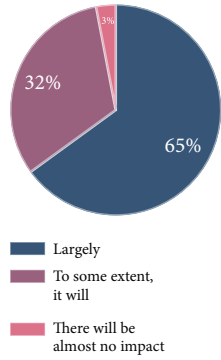


FIGURE 1: Whether network resources affect students' liking for ideological and political education.

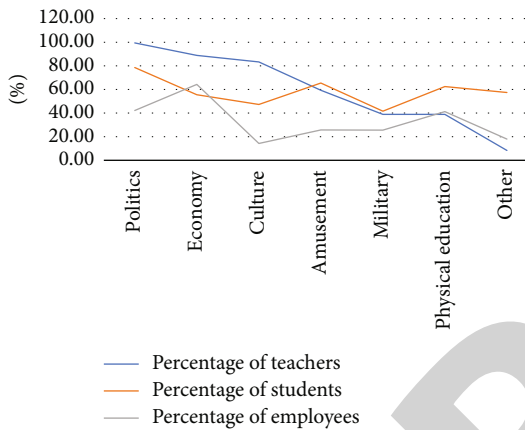


FIGURE 2: People's attention to ideological and political education.

TABLE 3: Teachers and students feel the influence of network politics.

The influence of the Internet on ideological politics	The impact is very large	The impact is generally large	Almost no impact
Number of students	50	45	5
Percentage	50%	45%	5%
Number of teachers	60	25	15
Percentage	60%	25%	15%

TABLE 4: Survey of teachers' understanding and application of network technology.

Whether to borrow the network	Number	Proportion
Understand, use often	70	28%
Learned, but not used often	150	60%
Do not understand, rarely use	25	10%
Do not understand, do not use	5	2%

knowledge system, or let students re-learn some key knowledge, which will also have some adverse effects on the development of students. Table 5 is a survey of the impact of that on content, and the survey 78.2% of people believe that has

TABLE 5: Degree of influence of network technology on ideological and political education.

The degree of influence of network technology on ideological and political education	Number	Proportion
Cripple	860	78.20%
Intensifier	140	12.70%
I do not know	100	9.10%

weakened the impact of ideological and political education, and 12.7% of people believe that Internet + technology has enhanced ideological and political education and has a great impact.

4.2.5. *The Degree of Influence of Online Ideological and Political Education.* Because of limited time available to complete the survey online, we compiled a total of 33 questions. Of these, 27 were about choice, respondents' ideological values, and ideal attitudes. There are 6 selection questions, mainly related to students' work in networking and political ideology education and outcome evaluation; The setting question is closely related to the topic of the article, which provides an appropriate basis for the content of this chapter. As shown in Table 6, of the 1145 students, 52.22% were male and 47.78% were female, and the male and female samples were relatively moderate in terms of gender; in terms of grade distribution, 21% in freshman year. This figure is also relatively average. Students rely heavily on the Internet during their daily internet access, and the survey surveyed 1,145 students with varying degrees of Internet access. For the time spent on the Internet every day, the proportion of people who spend 0-2 hours is 1.59%, the proportion of people who spend 2-4 hours is 12.47%, the proportion of people who spend 4-8 hours is 29.88%, and the proportion of people who spend more than 8 hours is actually 52.47% of the total population. It can be seen in Table 6 that the current Internet world has a huge attraction to students, and there is also a huge temptation on the Internet, and the inability to control their behavior and the lack of ability to resist temptation are also important factors that cause students have time on the Internet every day, which shows that it is of great significance to use effective online.

4.3. *Data Analysis on Students' Ideological and Political Education Teaching Objectives.* In the first part, students know little about the purpose of the lesson before class. As Figure 3 shows, during your learning process, the system asks you, "Do you have a clear understanding of the learning objectives of this lesson before each lesson begins?" At the time, 155 of the 565 respondents said they regularly understood the academic goals of each lesson, 27.43% said they sometimes understood the teaching goals of each lesson clearly, and 50.97% said they never knew the educational goals of each lesson. "Can you clearly understand the attention and difficulties of any political education?" Of the 565 people who often clearly identified teaching problems, 104

TABLE 6: Degree of influence of network ideology and politics on students.

Variable content	Category	Number	Percentage
Gender	Man	598	52.22%
	Woman	547	47.78%
Age	Freshman	247	21.60%
	Sophomore	235	20.49%
	Junior	238	20.74%
	Senior	195	17.04%
	Graduate student	230	20.12%
The length of time spent online each day	0-2 hours	59	5.19%
	2-4 hours	143	12.47%
	4-8 hours	342	29.88%
	More than 8 hours	601	52.47%

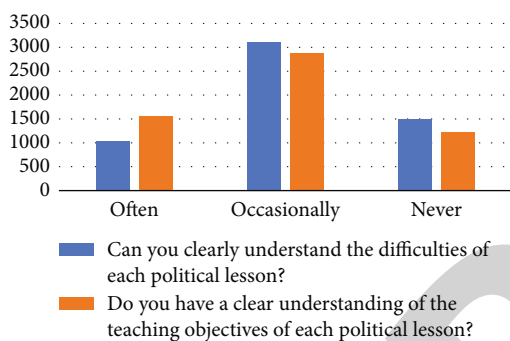


FIGURE 3: Whether students are clear about the teaching objectives and difficulties of this lesson before class.

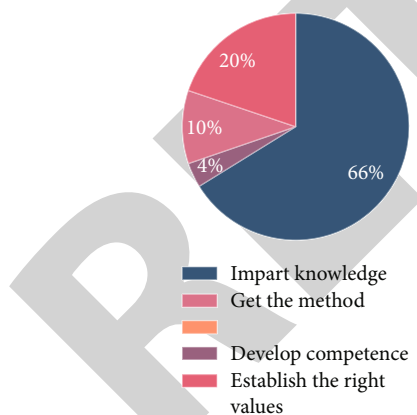


FIGURE 4: Students' views on the purpose of teaching by teachers.

asked. 18.41%, 311% said that people can clearly identify problems in teaching from time to time, which is 55.04%. 150 people never knew the teaching difficulties, accounting for 26.55%.

This experiment is a questionnaire survey of the teaching what goals do you pay more attention to in the three-dimensional goal? At the time of the survey, 36 of the 44 teachers surveyed said that it was more important to achiev-

ing their knowledge goals, accounting for 81.82%. As shown in Figure 4, the question in this survey is: Why are your political teachers more important in their goals? Of the 565 people surveyed, 374 said that teachers paid more attention to classroom knowledge transfer, accounting for 66.19%, 20 said teachers paid more attention to training ability, accounting for 3.54%, and 59 said that teachers paid more attention to teaching teachers, accounting for 10.44%. Teachers are more likely to help create the right values in teaching, accounting for 19.82%. For most teachers in political science training courses, the data show that bachelor's degrees place great emphasis on imparting knowledge to students in teaching, and a small number of teachers move away from educational philosophies and begin to focus on fitness goals, targeted abilities of procedures and methods, and an understanding of the value of effective behavior.

As shown in Figures 4 and 5, the survey question is "Can we better understand the basic principles of Marxism, the course of Marxism, the course of Marxism, and the theoretical achievements of political science?" At that time, 230 of the 565 respondents said that they had an in-depth understanding of related knowledge accounted for 40.71%, 318 respondents said that they had a basic understanding of related knowledge accounted for 56.28%, 15 people said that they did not know much about knowledge accounted for 2.65%, and there was almost no understanding of related knowledge. So from the data, most students have an understanding of politics.

### 5. Conclusion

In network technology, the number of people using complex network technology is expanding, of which young students occupy the main position, and young students are the objects of that technology + era. However, there is a contradiction between the high demand for college students to seek self-worth recognition and growth and development in complex networks and the insufficient supply of students. The construction of online carriers lacks the tracking and application of new technologies, the integration between different platforms is not enough, and the interactivity and user

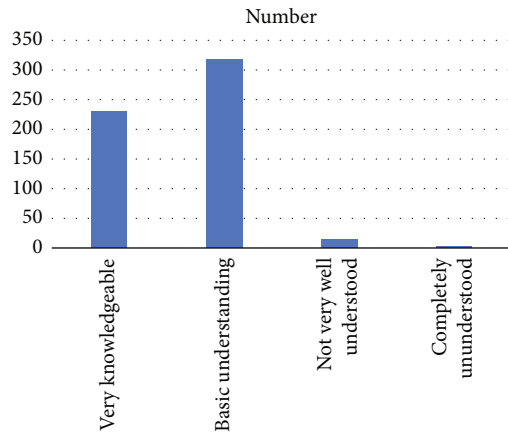


FIGURE 5: Statistical chart of students' mastery of ideological and political knowledge.

stickiness of school autonomous platforms need to be enhanced. Students should actively promote the effectiveness of network technology and ideological and political education, and strive to explore the overall improvement method of network technology problems of backward content, insufficient innovation, and old teaching methods. It plans to cultivate a successor to socialism in the new century under the influence of education on the Internet, ideology, and political education.

### Data Availability

The experimental data used to support the findings of this study are available from the corresponding author upon request.

### Conflicts of Interest

The authors declared that they have no conflicts of interest regarding this work.

### References

- [1] S. Bocaletti, M. Evancenko, and V. Latola, "Modularity of complex networks is detected by dynamic clustering," *Physical Review E*, vol. 7, no. 2, pp. 14–152, 2007.
- [2] E. J. Hearnshaw and M. M. Wilson, "A complex network approach to supply chain network theory," *International Journal of Operations and Production Management*, vol. 33, no. 4, pp. 442–469, 2013.
- [3] S. Abe and N. Suzuki, "Complex-network description of seismicity," *Nonlinear Processes in Geophysics*, vol. 13, no. 2, pp. 145–150, 2006.
- [4] J. J. McAuley and L. Costa, "Rich-club phenomenon across complex network hierarchies," *Applied Physical Letters*, vol. 91, no. 8, pp. 084103–084141, 2007.
- [5] A. Sintler, S. P. Gorman, and A. Reggiani, "Complex network phenomena in telecommunication systems," *Network and Space Economics*, vol. 5, no. 4, pp. 351–370, 2005.
- [6] C. Chen, "Complex network structure influences processing in long-term and short-term memory," *Journal of Memory and Language*, vol. 67, no. 1, pp. 30–44, 2012.
- [7] D. King, "On the construction of ideological and political education," *Teaching and Research Press*, vol. 24, no. 18, pp. 117–241, 2005.
- [8] C. Jia and L. Dan, "On the infiltration of ecological civilization education into the ideological and political education in Higher Vocational Colleges," *Science Education Article Collection*, vol. 56, no. 4, pp. 337–341, 2016.
- [9] Y. Yu, "On the ideological and political education of college students in the new media era," *Open Journal of Social Sciences*, vol. 10, no. 1, pp. 1–14, 2022.
- [10] Z. Liu, "The practice and thinking of flipped classroom mode in ideological and political education," *Modern Educational Technology Press*, vol. 47, no. 20, pp. 157–216, 2013.
- [11] S. Geng and Y. Kang, "Analysis of School Reform Mode from the Perspective of Stakeholder Theory," *The innovative Social Science Journal of Shanxi University*, vol. 51, no. 2012, pp. 99–104, 2019.
- [12] C. L. Silicon, "Theoretical research summary of ideological and political education in the world today," *Teaching and Research*, vol. 23, no. 7, pp. 133–148, 2000.
- [13] Y. Song, "On the optimization of ideological and political education in higher education," *Henan Social Sciences Press*, vol. 114, no. 13, pp. 9–77, 2005.
- [14] Y. Liyi, Z. Weili, and H. Dong, "The analysis of ideological and political education media for college students under the new media environment," *Chongqing University of Posts and Telecommunications Magazine (Social Science Edition)*, vol. 44, no. 91, pp. 115–152, 2010.
- [15] Z. H. Chen, "People-oriented is the core thought of ideological and political education in colleges and universities," *Journal of Beijing Institute of Technology (Social Science Edition)*, vol. 61, no. 9, pp. 142–271, 2008.