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Energy Procedia 5 (2011) 945–951

Energy

**Procedia**

IACEED2010

# Cultivation of environmental values for university students under strategic background of environmental informationization

Zhang Chuanhui<sup>a\*</sup>, Zhang Hanwei<sup>b</sup><sup>a</sup> Northeast Forestry University, Haerbin 150040, China<sup>b</sup> Heilongjiang Institute of Science and Technology, Haerbin 150040, China

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## Abstract

The strategy of environmental informationization is promulgated for environmental protection under the background of information development in new period. At the present, the cultivation of environmental values for university students should be closely combined with the strategy of environmental informationization. Moreover, the environmental value of harmonious coexistence between human and nature should be created and developed. Starting from the strategic development of environmental informationization and the present environmental values of university students, the authors investigated the significant and measures of both environmental informationization promotion and the environmental values cultivation of university students.

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Selection and peer-review under responsibility of RIUDS

*Keywords:* Environmental informationization; University students; Environmental values; Cultivation;

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## 1. Introduction

Facing with the informationalized society that is changing everyday, the countries all over the world take development of information technology and informationization promotion as the main pathway and important direction after economic crisis. The promulgated national strategy, which is aimed at developing informationization, trends to extend informationization to each domain of society, and it has become the development tendency of nationality and society. On the first meeting of national environmental informationization work held in January, 2010, the work of environmental protection and

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\*Corresponding author. *E-mail* address: [zch789@hotmail.com](mailto:zch789@hotmail.com)

informationization development was deeply associated. The cultivation of environmental values of university students is not only related to comprehensive development of high-level talent, but also the necessary requirement for great rejuvenation of Chinese Nation. At present, aiming at cultivation of environmental values of university students, it should be closely combined with the development strategy of environmental informationization. Moreover, the environmental values of harmonious coexistence between human and nature should also be cultivated.

## **2. Development of environmental informationization strategy**

Informationization is a main tendency of development in the developing world. In the process of coping with financial crisis and considering the pattern transformation of economic and social development after crisis, aiming at the information infrastructure, information foundation application and informationization development, many countries promulgated national basic strategy. Information network is connected to all nationalities as a change of network and new employment post as the mode for development transformation. Such a trend is highly emphasized in our country. Over the past few years, Party center and the State Council have been attaching importance to the informationization work and raise it to a height of state strategy as the key domain for promoting leapfrog development of productive capacity, strengthening comprehensive national power and international competitive power and safeguarding national safety. The strategic arrangement of driving industrialization was about informationization, promoting informationization by industrialization and taking a new road to industrialization.

Environmental informationization is an important component for informationization construction of state. Under the new situation of rapid environmental protection development, the state actively adapts to the tide of informationization development, giving full scope to the mainstay effect of environmental protection in construction of ecological civilization and providing foundation support for promoting scientific development.

The work of environmental informationization in China started in the mid 1980s. Over the past twenty years, environmental informationization development underwent a path of incessant exploration together with environmental protection cause. Since the beginning of new century, Party center and the State Council highlighted environmental protection and made a series of new ideas, such as construction of ecological civilization, promoting historic transformation of environmental protection, rehabilitating rivers and lakes, exploring a new road for environmental protection in China, etc. Furthermore, environmental protection is taken as the mainstay and radical measure for construction of ecological civilization. Moreover, the strategic status of environmental protection was further clarified in the new period. Higher requirement to environmental protection was also posed. Meanwhile, new opportunity and challenge for the environmental informationization occurred. In the recent years, external conditions are provided for the application of environmental informationization by rapid development of Internet and mobile communication technique. The recognition of environmental protection department at each level is gradually improved, and the input of construction fund is increasing every year. Therefore, construction drive is obviously accelerated. The exploration practice of "digital environmental protection" has been firstly performed in Beijing, Shandong, Jiangsu, Fujian, Guangdong and Shenzhen, etc. Due to the establishment of digitizing model of environmental management business and comprehensive application platform of environmental information, the conventional management is gradually transforming to digitizing environmental management to realize standardization of environmental data, integration of business management, visualization of environmental monitor, automation of comprehensive office, normalization of performance appraisal, publicizing of environmental service and scientific environmental policy-making [1]. On the first meeting of national environmental informationization work

held in January, 2010, the experience in construction of environmental informationization of the recent years was summarized, moreover, the new circumstance and problem confronted by environmental informationization construction was deeply researched. Meanwhile, the environmental informationization construction work for the present and later periods was investigated and arranged. The important support was also provided for further improvement on the service level of environmental informationization to explore a new road for environmental protection in China and promote the historic transformation of environmental protection.

### **3. Present situation research on environmental values of university students**

Environmental values reflect the rational consideration of people on environment, and it is the sum of idea, viewpoint and notion of people on environment. O. Brien and Guerrier put forward early in 1995 that environmental values being the constructive or supportive behavior is directly aimed at environmental attention and environmental responsibility [2].

The cultivation and education of environmental values to university students are a kind of new thought formed in the new education background, new social and economic development demand. The education on environmental values of university students in China was started in the 1980s, it is deemed by some scholars that along with the ecological crisis in each domain of society. Therefore, modern education must be timely carried out on ecological thought education pattern and new type education thought should also be established to form ecological rules in students. There is rich connotation in cultivation of environmental values. The cultivation mode include classroom teaching, practical experiment, media propagation and typical demonstration, etc.; the cultivation contents include ecological theory, ecological knowledge, ecological technique, ecological culture, ecological health, ecological safety, ecological merit, ecological philosophy, ecological ethics, ecological technology, ecological mark, ecological aesthetics and ecological civilization, etc. Through the cultivation and education of environmental values, university students can form new ecological values, sustainable development viewpoint and ecological civilization viewpoint, so as to realize harmonious development of human, society and nature, and lay thought foundation for socialist harmonious society [3].

Over the past twenty odd years, China gained considerable development in the cultivation content and education mode of environmental values, but there is still certain inadequacy and problem in depth and range of environmental values cultivation.

Firstly, the cultivation of environmental values is not highly emphasized, and its system is not integrity. Environment science has been taken by Ministry of Education as the first grade subject for a long time. Although the specialty of environment science is set in many institutions of higher learning nationwide, the popularizing education that gives priority to environmental values in universities is still sparse. Compared with other popularizing education subject, the ecological environment education, which gives priority to environmental values, is not put to the appropriate status. In some institutions, improving the environmental science quality of entire university students is not yet included into the cultivation objective, furthermore, the foundation curriculum of ecological environmental education is not included into the common learnings for students of all specialties such as the setting of specialty, the setting of basic cultivation specification. The arrangement of curriculum contents do not sufficiently embody the comprehensive feature of environment science and the thought of sustainable development. Some institutions of higher learning even misunderstand the education that gives priority to imparting simple knowledge of environmental protection as education on ecological environment.

Secondly, environmental values are not permeated into the education idea. Our entire education and teaching system is established on the basis of traditional "theory of knowledge". The deep layer thinking manner transferred by such kind of education is: "nature can be recognized" and "knowledge is

strength" ..... However, the limitation and destructiveness of recognition of human on nature are not sufficiently explained. Many examples of changing nature after human "having grasped knowledge" are usually showed in our teaching and the textbook, and the sorrowful consequences caused by misuse of knowledge strength by human are seldom mentioned [4].

Thirdly, specialized teachers are in shortage. The teachers engaged in popularizing environmental values education in institutions of higher learning are relatively deficit, the ability of existing teachers to utilize knowledge is somewhat insufficient, and the cultivation quality of environmental values is affected.

Fourthly, the cultivation is backward, and the modernized education methods are lacking. Facing with quick development of informationization, the present environmental values cultivation in institutions of higher learning has not been got rid of the "duck-stuffing" education pattern, which includes written education and memorizing mechanically. The education methods, such as distance education and multifunction media teaching, etc., are not efficiently utilized. As a result, the environmental information education and teaching in institutions of higher learning are always laggard.

Therefore, it has become an urgent duty for educational workers of higher learning institution to ascertain the cultivation of environmental values in institutions of higher learning and to let the environmental values cultivation be more suitable for the environmental informationization development.

#### **4. Meaning and measures of promoting construction of environmental informationization and cultivating environmental values for university students**

The cultivation and education of environmental values for university students are not only the need of cultivating high-level talents, but also the important loop and inevitable requirements for lifelong environmental education to the whole people in China. Facing with the increasingly severe environmental problem, it is not enough for university students that enjoy high-level and deep-layer higher education to merely rely on learning and application of science and technology as well economy and law. In the strategic condition of environmental informationization, it is the deep layer countermeasure to erect and cultivate correct environmental values for solving the problem of environmental ecology and realizing sustainable development.

##### *4.1. Meaning of erecting environmental values of university students under the environmental informationization strategic background*

(1) It is the objective requirement for construction of environmental informationization and development of global informationization. At present, informationization is deeply promoted to deeper layer and wider scope worldwide. Unprecedented profound change is brought about to production mode, lifestyle and economic and social development by information technology and information resources. Informationization level increasingly becomes a key factor for measuring the comprehensive strength and international competitive power of a country. Environmental informationization is an important component of informationization construction of state, and it is to provide powerful foundation support for being actively adapted to the tide of informationization development, amply giving scope to the mainstay effect of environmental protection in construction of ecological civilization and promoting scientific development. As the institutions of higher learning that convey high-level talents for state strategy, it is necessary to raise the strategy of environmental informationization and cultivation of environmental values to the height of state strategy, it shall be taken as the key domain for promoting leapfrog development of productive capacity and strengthening comprehensive national power and international competitive power as well as safeguarding national safety, so as to make active contribution.

(2) It is a literal sense of scientific outlook on development. It is put forward in scientific outlook on development: "insisting on people foremost, erecting outlook on all-round, coordinated and sustainable development, and promoting all-round development of economy, society and people". In a considerably long period time of the past, the resources of nature were deemed as inexhaustible, people indiscriminately fetched something from nature, but incurred disastrous destruction to nature while successfully conquering and transforming nature, as a result, survival of mankind was beleaguered, and disaster might be brought about to themselves. The problem of environment is a problem complex of the world, it is the result of benefit contradiction between mankind and nature, people and people as well as between economic and environmental benefits, and it is a complicated multi-level problem with multiple latitude and multiple visual angles. It is required to change traditional development pattern, establish the green productive capacity that is conducive to sustainable development and strengthen preservation of ecological environment, meanwhile, system innovation shall be performed, and new path shall be opened for sustainable development of social economy through scientific system design. Contemporary university students are the mainstay for promoting historical development and social progress, their attitude to ecological environment and behaviour selection itself are the important components for realizing all-round development of themselves, and respecting life and nature as well as consciously observing behaviour rules and code of conduct are important markers for lofty morality of university students. Institutions of higher learning shall take scientific outlook on development as the guiding principle; explore the new path for cultivating environmental values in the new period with Chinese characteristics that embodies scientific outlook on development, so as to improve the comprehensive quality of university students and promoting all-round development of university students.

(3) It is an important carrier for moral education in institutions of higher learning. The development of moral education system in institutions of higher learning needs education of environmental values, which objectively needs to extend the function of moral education in institution of higher learning, and the development of modern higher education shall be promoted by education of environmental values. By means of molding ideology in moral education of institution of higher learning, students shall gradually establish correct political direction, it has important directing effect for cultivating excellent moral character, training civilized behaviour habit and gradually forming scientific world outlook, outlook on life and value notion. But the curriculum of moral education was mainly set mainly around handling the relationship between people and others, collective and society in the past, the contents of mankind and nature and environmental value notion were neglected, not conforming to the requirements of present scientific outlook on development. The work of moral education in institutions of higher learning under the background of environmental informationization shall be combined with the requirements to talent cultivation in the information era, and the contents of modern moral education shall be extended. The cultivation of environmental values shall be included in the moral education system of institution of higher learning, so that university students can receive systematic, long-term and effective education of environmental values, and form the environmental moral quality necessary for information society, meanwhile, the vigor of moral education work in institution of higher learning shall be strengthened.

#### *4.2. Measure for promoting construction of environmental informationization and establihsin g environmental values of university students*

(1) Developing environmental values education organization of higher learning institution under the strategy of environmental informationization

Establishing and developing the environmental values education system of higher learning institutions under strategy of environmental informationization is the organizational guarantee for ensuring effective strategy of environmental informationization and strengthening the environmental values of university

students. Therefore, the problem of implicit responsibility for education of environmental values should be solved in the aspects of organization and management to change the circumstance, which is of weak response by education department of the environmental protection department over the past years. The environmental education of university students should be included into the educational system of locality and state, and it should also become the important duty of education administration departments and the university students. Environmental education of university students should be changed into the common objective of public institutions from the current individual behaviour.

(2) Establishing and developing cultivation system and its mechanism for environmental values of university students

Corresponding department should jointly formulate "Plan program for environmental education of university students", and the cultivation of environmental values for students at each level should form systematic and entirety. Overall educational objective should be elevated, the basic teaching principle shall be established, teaching essentials at each level should be put forward and the general suggestion as well as the guidance instruction should also be provided in the basic teaching method on the extracurricular activity, out-of-school activity and social practice activity loops, etc. Meanwhile, the cultivation of environmental values is needed to be commonly promoted by school, family and society, only under mutual cooperation by the three sides can the efficacy of cultivation of environmental values be fully given scope to. Therefore, relevant method should be promulgated for organically combining and coordinating three of them. All the factors and means must be brought into play, so as to construct excellent atmosphere for education of environmental values. Keeping the permeation and durability of correct environmental values, people can accept spiritual baptism in excellent macroscopic and microscopic atmosphere and their realm of thought can also be improved.

(3) Playing the role of environment informationization and innovating the media for cultivating the environmental values of college students

We should further play the role of modern informationization media and enhance the environmental propaganda and education for the whole society. According to vivid and interesting forms, we can spread the new outlook of ecological civilization and ecological environment ethics, and advocate environmental ethics to make the concept of sustainable development concrete and operated by the aspects of ecological environment and humans, environment and humans production and consumption, ecological environment and the development of science and technology, population and resources, etc, which is useful to form the better atmosphere for protecting environment in the whole society, and to create appropriate external social conditions for college students' environment education. We should encourage the college students to carry out the ecological experience education, establish environmental organizations, set up research teams and expand environment knowledge contest, etc, by modern information way actively, to protect education well under favorable environment.

(4) Standardizing teaching establishment, strengthening teaching teams and improving informationization level of teachers

Various universities should design the public curriculum of environmental values education, and the textbook should be compiled by the features of universities of different categories and levels. It not only gives college students meaningful environment education, but makes it useful to have better environmental awareness, environmental knowledge and basic skills for those who are prepared to teach environment education for college students, future teachers and other people.

Meanwhile, it's necessary for various universities to take measures to encourage teachers and educational theory workers to do the theoretical and practical research on of environmental values education of the college students, to make environmental education of the college students develop healthily in the close link of theory and practice. Teachers' training on environmental values education for the college students should be taken in the work process of education department, and environmental

education should be the important content of training management personnel and backbone teachers of college students. In addition, we should make the specific plans for training teachers on environmental values by the needs and train the theory and methods of environmental education for in-service teachers to ensure teachers' equipment in each place and each university and improve the informationization level of teachers.

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