

Macro-Thought Built by Informationize Learning Environment

Liu Jianhua¹, Liu Ningning¹, Ma Yuehui¹, CUI Yuehua¹, Su Xing²

1. Department of electrical engineering, Shijiazhuang Railway Institute, Shijiazhuang, China

2. 2 Northwest University for Nationalities, Lanzhou, China

e-mail: liujianhuasjz@163.com

Abstract: The development of modern information technology makes learning become a kind of more convenient and relaxed thing. The concept of school expands, people are free to learn without the limit of time and region and everyone can get more chances to learn. What should we do as to the informationize and socialize of learning environment? This is the content we will discuss in this paper.

Keywords: informationize; informationize learning environment; IT; socialize template

1 Introduction

Since 1990s, the information technology has kept innovating, the information industry sustained developing, and the information network popularized widely and the process of informationization is threatening, and sweeping the globe. At present, informationize has become a significant characteristic of global development.

The informationization of education is also conducted in full swing. The concept of lifelong education causes age no longer to be the obstacle of learning, each people can become a student and student's study also develop from school to society, that is to say, students can get knowledge they need expediently, even though out of school. Therefore, from the macro level, to create an ideal informationize learning environment is not only the responsibility of special educators, but also the common responsibility of society.

2 The Meaning of Informationize Learning Environment Ease of Use

Environment refers to the total body of all natural elements and artificially transformed natural elements affecting the existence and development of human, broadly, it also includes the complex of circumstances of human society. The subject of environment we are talking about is human, including the natural environment and the artificially transformed natural environment in which we live, as well as rules and conditions in the human society, namely, the artificial environment created by human through a long period. Human can't separate from either

the society or the limit of environment. But they have activity and can transform the environment and the society that will make their viability heartier. Likewise, we consider learners as the main body when we discuss the learning environment and people have been trying to find a way that will enable the learners to develop under the most favorable environment.

Informationization is a historical process in which man makes full use of IT, develops and uses information resources, facilitates information exchange and knowledge sharing, improves the quality of economic growth and promotes development and transition of the economic society. IT mainly includes sensor technology, communication technology, computer technology and micro technology etc. The concept of education informationization was brought forward in the 1990s with the conduction of American information superhighway^[1].

It is an indispensable and important part in the process of social informationization, especially educational informationization to create an ideal informationize learning environment. Informationize environment refers to the macro expression form or balance harmony state of their interrelationship in the links of growth, dissemination and use of information in one country, region or the globe. Learning environment is a rich concept that encompasses many factors. Anything around the learners that has direct relation with them from social principle, culture, and tradition to each kind of instrument, facility, relation, atmosphere, exchange, etc, can become part of the environment. The merit of the learning environment

relates to the height of learning and quality of learners. Good informationize learning environment is advantageous to train the learners' information accomplishment, enhance the learners' learning effect, make the learning content visualization, mold learners' individuality and creativity, enable the learners to adapt the society's demand and the social situation and develop themselves.

3 The Necessity of Improving the Informationize Learning Environment Constantly

3.1 Meet the Need of Era

The transforming spirit of humanity changed the human society to a new climax unceasingly, from the manufacture of ancient stone tools to the invention of steam engine, both are of epoch-making significance. Today, the advent of IT has become the beginning of another new period. Information revolution changed human society from industrial society into informationize society. This change affected all aspects of society and will have far-reaching influence on every member of society.

The arrival of information age, especially the emergence of internet makes the trend of political and economic regionalization and globalization more and more significant. The rapid and simple form has saved time and labor greatly, but it also accelerated the competition. It is no longer an exaggeration that "person who gets the information wins the world". The informationization of each field is conducted in full swing, education is not an exception. The emergence of IT strengthened the learners' subject position and enhanced the fairness of learning. The chance of study increased greatly, every learner can be the user of the study resources. The quality of education is directly related to a country's future and fate, therefore, the correctness and advanced nature of education is particularly important. More and more people are paying attention to the informationization and modernization in the field of education. People are assiduous in their efforts to let the learners get fully developed. How to make the learners be more creative and personalized while learning, how to promote the integration of IT and education are the hot topics people are discussing at present.

The impact of education on the learners should be multi-faceted and comprehensive. The society and school ought to provide the most conducive learning environment for the learners. Good learning environment can promote the learners' learning. After the emergence of IT, how to build and constantly improve the informationize learning environment became the problem demanding prompt solution.

3.2 The Need for the Development of Individuals

Human society has entered the information age in the 21st century, information is increasingly becoming the most active and decisive factor in the various fields in society, information accomplishment becomes one of the accomplishments the modern learners must prepare for. The basic learning capacity is embodied in how to gain, process, handle information and the acquisition and use of information knowledge, which also relates to information ethics and information consciousness, etc. Information accomplishment will not only become the basis of learners' self-learning ability, but also be one of the essential abilities to survive in society hereafter. Therefore, we should add more informationize elements to the process of ability developing to learners to benefit them from the informationize environment. The rapid development of IT, especially network technology makes the resources people can use increase rapidly, how to make the learners to enjoy the healthy and rich learning resources is one of our efforts.

In order to meet the demand of the society and live better, we should learn constantly and keep pace with times. Only in this way can we not be washed out easily. All walks of life are in constant innovation and development. Knowledge is no end and the ocean of learning is limitless. Learning is not only the task of school students as well as the basic approach for everyone to develop. The informationize and socialize of education provide a more convenient learning condition and richer resources to the people, mobile learning, long-range education and other product of modern IT are more and more well-known by people. Therefore, the socialized and informationize of learning environment will be the essential condition to

develop ourselves.

4 Micro View for Constructing the Informationize Learning Environment

Informationize learning environment is an ideal learning environment. As the main place for learning, the informationization of school education is the essential part of informationization of social education. Due to the rapidly development of IT, the informationization of education resources in the macro level can't be ignored. Network technology and modern communication technology make the learning environment no longer be isolated. World-wide resource sharing, distributed learning, lifelong learning have been possible. Therefore, the informationize learning environment should be conducted in a broader scope, and apply all resources that are available to the education and learning. Based on this, all from top to bottom, from the government to individuals, should give full play to the dynamic features for the construction of macro informationize learning environment, improve and maintain our common informationize social resources and environment together.

4.1 The Government to Strengthen the Management and Promote the Construction of Informationization to Be Carried out Orderly

4.1.1 Carry out Macro-Guidance and Monitoring

If it is said that the emergence of the first computer revolutionized human life in the middle of last century, and human felt the position as the most senior species being challenged for the first time, then the emergence of the network pushed human to a new era. With the network technology and information technology developing and popularizing gradually, the whole world begins to enter an informationized time. IT is penetrating in every field such as military, medical, health, education, business management, home study and entertainment, etc, none of which isn't effected by IT. As the process of informationization covers widely and involves multi-level, the state and government need to accurately grasp its direction of development to ensure that social informationization

will be carried out robustly and quickly.

4.1.2 Perfect and Propagate the Information

Legal System

The doubling time of the amount of information in human society is from 18 months to 5 years. If calculated according to this, the total amount of information in human society will be one million times more than that today after seventy years. The emergence of IT, especially network technology makes the amount of information in society increase rapidly, the content of information is more diverse and mixed, a large number of excellent resources are annihilated by the rolling flood of information, and it also provides convenience for people and chance of speculation and crime at the same time. Based on this, it is one of the government's essential responsibilities to perfect the legislation and fight against the crime. In recent years, cybercrime is numerous, as well as many cases of network encroachment right. These are all related to our inadequate legal on information and network. The continuously improvement of law will enhance people's sense of security, so we should list the relevant items on information and network in the content of laws and rules entirely as soon as possible. At the same time, the publicity of the law can not be ignored, so that people know law, obey law, use law, and safeguard their own legitimate rights properly to ensure society stability^[2].

4.2 Strengthen the Infrastructure Construction, Protect the Fairness of Study

At present, the information resources distribute unevenly, "information poverty" is a global problem. In the world, the education information is still mainly concentrated in a small number of developed country, many developing countries are forced to pay high costs to obtain the literature database and the right to use the database to the developed countries. For China, information resources are mainly concentrated in the more developed regions in the eastern part; the process of informationization in the western part is seriously behind the developed eastern part. Even the basic infrastructure can't be achieved in some poverty-stricken areas. For example, some remote areas even can't contact with computers, network, etc, it is very

inconvenient to use mobile phones, television programs are also limited to a limited number of channels and so on, something like this, all the problems are in urgent need of solution. Even in the east, the network bandwidth in some cities or schools is far from enough to meet the need of people, which sets up a barrier to the use of information resources and network programs.

Infrastructure is the basic condition for the application of IT, especially network technology. Although the state education budget rises year by year, but still can't meet the demands of society. Besides, sometimes the use of funds for education is not quite reasonable. However, alone with the further exploration, the process of China's education informationization will speed up. Increase the investment in education, improve the infrastructure, strengthen the technology, so that everyone has the opportunity to participate in their own interest in learning, that's the real purpose of education to achieve the quality requirement of all the people and promote the common development of the whole society.

4.3 Strong Accomplish and Universal Platform for Mobile Learning

While improving the infrastructure constantly, we can't ignore the technology that is advanced and likely to be popular. The existing creative industry like network and telecommunication industry etc, Provides some new learning opportunities.

Mobile learning is a branch of digital learning, a new type of learning which appears with the development of modern network technology, mobile communication technology and modern education. At present, it uses mobile phone as learning terminal and message and mobile internet as main forms, in addition, the acceptance equipment includes laptop with wireless network card, PDA (Personal Digital Assistant) "personal digital assistant" (including electronic dictionary, PDA, handheld computer equipment and personal communication assistant machine), smart phone, etc. this technology is based on network technology, follow the WPA (Wireless Application Protocol) wireless protocol, 3G communication protocol, GPRS (General Packet Radio Service) or

through Packet Radio Service, "Bluetooth" (Bluetooth) technology, namely, a short-range wireless technology that is used as cable or connection used on portable or fixed electronic device, which provides us with the functions that can be achieved in desktop or laptop such as sending and receiving E-mail, web browsing, streaming media, multi—media information, etc.

The future of learning will be more flexibility in the development of wireless devices, at the same time, learning platform is innovating. At present, mobile education has just begun, there is no large-scale, comprehensive platform, but with huge space for development. We want education to meet the requirements of the times, so we need to develop various forms of education resources and environment. Mobile learning makes learners' learning form diversified, is an highly efficient manner. The construction of mobile learning platform will become a important part of information technology. Digitalization, real-time, arbitrary, mobility will be the main features of future education^[3].

4.4 Information Environment Should Include the Strengthening of Physical Training, Moral and Legal Consciousness, Life Education, Etc

Social progress and technological development have brought people a more comfortable learning and living environment, and emancipated people from the heavy labour. But at the same time, people indulge in the enjoyment and are lack of the necessary training because of the too modern facility and tool, their physical quality declines quickly. Six percent of students in school wear glasses, the higher the grade, the higher the myopia rate, and the myopia age is becoming increasingly smaller. Physical test becomes a bottleneck for the majority of students. The only children increase and become the light of their parents' eyes alone with the improved quality of life and the implementation of family planning policy, and lot of things are done by parents. The proportion of obsess population in China is also on the rise, experts predict that the population of Chinese obesity will be more than 200 million. The trend of increase in children is evident. In addition, the vision of people who works in front of

computer for long term reduces very fast and they are very susceptible to cervical spondylosis, shoulder periarthritis, lumbago and leg pain and other disease. Technology is to service human, we should use it to live better, rather than being at the expense of their health. Therefore, we can't forget the publicity of improving physical quality and call on the whole society to strengthen the physical training in the spread of IT. "Body is the capital of revolution", the future society should be the collection of healthy and high-quality groups rather than showing a situation with developed technology and human degradation.

Information environment brings boundless space for development for people, in which there is not lack of inappropriate content. In recent years the number of information criminal cases is more and more especially among young people. They have poor self-control and are less susceptible to the temptation of the various networks, the impact is worse than the ordinary crime. At present the intellectual property rights and network legislation are uncertain, it is easy to play right into others' hands. In order to completely solve this problem, we have to widely implement the propaganda and educational work in network morality, legal awareness, and correct outlook on life and improve the security awareness and social responsibility

of people especially young people while constantly strengthen legislation, management and severely crack down on crime

5 Conclusions

The ideal informationize learning environment should be equal, healthy, and with rich and diverse resources, and everybody can get various nutrition. Informatonize construction is a long-term work, there will be many new challenges we will meet in the construction work with the further development of information technology. We have to be good at discovering the problems and adjust the thoughts in time, having the existing experience, continue to innovate and perfect the education, make the project-education-benefiting the nation and people develop better, and lay a foundation for the people's life-long learning and development.

References

- [1] http://www.gmw.cn/content/2006-12/08/content_519826.htm.
- [2] Karel Kreijns, Paul A. Kirschner, Wim Jochems. Identifying the pitfalls for social interaction in computer-supported collaborative learning environments: a review of the research. *Computer in Human Behavior* 19(2003) 335-353.
- [3] Ellen D. Wagner. Enabling Mobile Learning. *EDUCAUSE Review*, vol. 40, no. 3 (May/June 2005): 40-53. [http:// www.educause.edu/er/erm05/erm0532.asp](http://www.educause.edu/er/erm05/erm0532.asp).