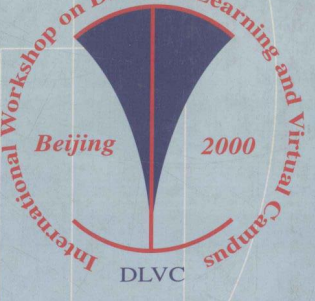
Distance Learning & Virtual Campus

Proceedings of the International Workshop on Distance Learning andVirtual Campus
November 14-15, 2000, Tsinghua University, Beijing, China



Editors: Zhao Chunjun
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远程教育与虚拟校园

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内 容 简 介

本论文集收录了2000年11月14~15日召开的“远程教育与虚拟校园国际研讨会”的精选论文。

这次会议由清华大学和英国Lincolnshire and Humberside大学联合主办，由清华大学现代管理研究中心和清华大学继续教育学院承办。该论文集共收录来自英国、美国、中国（包括台湾地区）等国家的会议论文二十余篇，这些论文主要涉及远程教育与虚拟校园在近期发展情况，支持远程教育的最新产品，远程教育和虚拟校园在建设世界一流大学过程中的作用和发展方式等问题。

该论文集是一次有关远程教育方面的科研和应用成果的荟萃，可以为从事远程教育与虚拟校园工作的教师、科研人员提供参考。

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International Workshop on Distance Learning and Virtual Campus

November 14-15, 2000

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PREFACE

Information technology has become an enabler for reengineering the pedagogic strategies of the teacher and for widening the contexts within which learning can occur. Teaching is no longer confined to a time and a place. With computer and communication technologies, the time and physical boundaries of the traditional classroom are being stretched to a *learning space*. A growing number of universities worldwide are now offering virtual education programs. Several companies are also providing on-line training for their employees. Distance education, virtual classes, and on-line training are just a few of the multitude of terms that are used to describe different implementations of this technology-enabled learning space. Although the interface, the format and structure of these methods and products may differ, some common characteristics, such as web-based, asynchronous, collaborative, hypermedia framework etc., do describe the bright prospect.

As one of the prestigious higher education institutions in China, Tsinghua University started its distance learning program rather early and has been approved by the Ministry of Education of China to promote distance education nationwide. Tsinghua University commits itself to provide life-long learning opportunity for people working in enterprises, research institutes, managerial circle and universities, and to meet the social needs in this aspect.

In order to trace the international trend in distance learning, improve the techniques of distance learning and virtual campus in practice, and let the experts in this fields have better chance to explore the new research direction. Tsinghua University and University of Lincolnshire and Humberside jointly organize this International Workshop on Distance Learning and Virtual Campus, which is hosted by Research Center for Contemporary Management and School of Continuing Education in Tsinghua University. Experts from Florida International University of USA, Chicago DePaul University, Leeds University of Britain have submitted papers and will attend the workshop. British TechniCAL, Taiwan Star Art, Guangzhou Kuangshi and other companies will offer presentation and exhibits at the workshop. EU-China Higher Education Cooperation Program Director, General Director of Dept. of University Students, Affairs of China Ministry of Education, H.M. of British Embassy and other distinguish guests will attend the workshop also. Delegates from Hunan University, Beijing Posts and Telecommunications University and many other Chinese universities also attend. This proceeding includes 26 papers presented at the plenary meeting and sessionswill. It is hoped that the publication of this proceeding will benefit those working in the area of distance learning and virtual campus.

We want to thank all the sponsors. And we express out deep appreciation to all committee chairs, members, session chairs, for their many helpful actions and cooperation in responding to requests for the workshop.

Zhao Chunjun
Chen Jian
November 13, 2000

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The Practice and Prospect on Distance Learning in Tsinghua University

Hu Dongcheng , Wang Aimei , Sun Xuewei , Yan Jichang
The School of Continuing Education,
Tsinghua University,
Beijing 100084, China

ABSTRACT

This paper gives a detailed description on current situation and prospects of the distance education in Tsinghua University. The main technologies of the Tsinghua Distance Education consist of satellite, computer network and cable TV, and these three technologies complement each other. In particular, the establishment of Tsinghua Network School in this year has provided the students of distance learning more convenient opportunities, breaking through the limitation of time and space. Meanwhile, the administration of educational affairs using network computer has been realized. The distance education programme is focused on the engineers and managers in service. Current subjects are as follows:

a) Post-graduate courses, e.g., Computer Application Technology, Business Management, and Civil and Commercial Law

b) Under-graduate courses for students who have already had professional diploma, e.g., Economics, English, Law and Arts Design

c) Short courses, e.g., the reform of state-owned enterprises, the rule of WTO, JAVA Language.

Mankind is marching into a new century characterized by an information society. Conventional education methods are faced with severe challenges. By using the latest technological achievements and new concepts in distance education to establish a virtual university, which meets needs of engineers and managers to obtain all different knowledge, is the only way to construct a lifelong education system and achieve an environment for learning society.

The modern distance education is a new kind of models of education that takes the computer network and satellite communication technologies as its basis and multimedia technology as its means. It merges information technology into education and has been paid more attention to the field of education all over world. It will definitely produce a great impact and changes on education. Meanwhile, it will promote the development of information industry and drives the development of economics.

Tsinghua University is the first university which carried out the modern distance education among conventional universities all over China, and great progress has been made since the end of 1997 when the University just commenced on the project of distance education. Through the practice, we have gained some valuable experiences and performed useful exploration for the development of the distance education and relevant policy formulating in our country.

REVIEW

In February 1996, President Wang Dazhong of Tsinghua University put forward the idea that Tsinghua University should lead in launching modern distance education programs in China. The University Council approved the project at the same year. The construction of the distance education system in Tsinghua University commenced in June 1997 and completed the preliminary phase in September. Mr. Kuang-qiu Chao, a patriot from Hong Kong Novel Group Corporation donated 150million US$ for the construction of the system that gave the full support for the smooth construction of the system. On November 20, 1997, Vice Premier of China Li Langqing visited Tsinghua University. When inspecting the distance education program, he affirmed the achievements of distance education in Tsinghua University fully and made important instructions on China's development of modern distance education. He urged us to make more contribution in cultivating more high talents by sharing the excellent educational resources of Tsinghua University with the people all over China, especially in remote border provinces and minority nationality regions. In the spring of 1998, Vice Ministers of the Ministry of Education of China Wei Yu and Zhou Yuanqing both visited the system on distance learning expressing their kind concern and support. Many leaders from other provinces, cities and autonomous regions visited the program and gave us many useful suggestions. The distance education has been made encouraging progress and will be further improved under the guidance and support of the State Council, Ministry of Education, and so on.

GUIDING IDEOLOGY

Tsinghua University is one of four universities that the Ministry of Education of China approved to start nationwide pilot experiments on modern distance education. We follow the guiding principles that the Ministry of Education has put forward for the development of modern distance education in our country, that is, Overall Planning, Advancing by Demand, Broadening Opening to the World and Improving Quality.

We should participate and push forward the national project of distance education by making full use of dominant disciplines, technology, courses, teachers and administration of the University, so as to enhance the University's function of services to the society and promote the progress of constructing Tsinghua University as a first-class university internationally.

VARIOUS EXPERIMENTS ON THE METHODS OF INTERACTIVE DISTANCE TEACHING

In China, now the economic and technologyical development in different regions is quite uneven, and information infrastructure in different regions is quite uneven. In large cities and coastal areas, Internet access is popular, but in the mid west part, there may be only local area network, local cable TV network, or even simple TV reception facilities. Under this Chinese context, our distance education adopts an integrated technical approach. We use satellite, computer network and cable TV, and these three technologies complement each other. That makes us can transmit the teaching program to all the regions in China.

a) At the beginning, the teaching programs broadcasted by the university are transmitted to remote sites using a band width of 4M of KU band Asia-II communications Satellite, offering interactions between instructors and students in both real time and non-real time manners.

b) With the development of network infrastructure, more and more web-based courses will put on CERNET and CHINANET. We have offered the courses in Beijing through Beijing Education and Sci-Tech Information Network (BEST INFOR) with ATM 155M bandwidth. In particular, Tsinghua Web School has been established this year. This semester three courses are offered only through web, and more than 20 courses are offered through satellite and web simultaneously. The establishment of Tsinghua Web School has provided the students of distance learning more convenience, breaking through the limitation of time and space. Meanwhile, the administration of educational affairs using network computer has been realized.

c) The number of cable TV users is exceed to 8.000million in our country, it costs lower and is convenient for student to study at home. At present, some remote sites, e.g. Xiamen City, have used the cable TV to conduct the distance education.

The above three network platforms have same transmitting protocol of TCP/IP.

Real time interaction is realized by constructing two-way virtual classrooms using VSAT sites and /or conducting full bi-directional interactive discussion and questioning and answering using exiting PSTN or ISDN-based video conference system. For VSAT system, the transmitting quality is good but the facilities costs are very high, and it takes up the band of satellite. So it is not impossible to establish many VSAT sites. For ISDN videoconference system, the transmitting quality is good and the facilities costs are not very high, so there are many remote sites to adopt ISDN as interactive means. But not all region in China are ISDN accessible. For Video-phone and Desktop video-conference system, the costs are low but quality is poor, so the system is seldom used now.

OFF-CAMPUS SITES CONSTRUCTION

The Tsinghua Distance Education has now more than 90 off-campus sites with a wide coverage all over China. The establishment of remote sites is mostly done in collaboration with four kinds of organizations, as following:

a) State -owned large-and-medium-sized enterprises, e.g., Iron and Steel Firm, Laiwu, Shandong; Qilu Petrochemicals, Shandong; The First Automobile Works, Changchun, Jilin; Daqing Petrochemicals, and so on.

b) Universities, colleges and schools at different levels, e.g. Yunnan University, Jiangnan college, Sichuan Radio and TV University, Zhejiang Radio and TV University, and so on

c) Government agencies, e.g. Bureau of Science and Technology, Nanhai, Guangdong; Association for Science and Technology, Shijiazhuang, Hebei; and so on.

d) Scientific and technological research institutions, e.g., 014 Basc, China Aerospace Corporation, and so on.

On the basis of the instructions of vice premier Li Lanqing, we pay attention to develop the remote sites at western regions, up to now, we have established 18 off-campus sites at the western regions including Xinjiang Autonomous Region, Qinghai Province, Guangxi Province, Yunnan Province, Ningxia Autonomous Region, Shanxi Province, and so on.

TYPES OF COURSES

The distance education in Tsinghua University is focused on postgraduate continuing education, oriented mainly towards in service staff of science and technology and business management with bachelor degree. Its target is to train and provide more high level human resources equipped with advanced science and technology and versatile experts in different fields to companies and regions so that they can better serve in the nation's economic development. Main types of courses are as following:

a) Training on new and advanced technology, short courses highlighting the latest and major technological advancement and know-how, e.g., the reform of state-owned enterprises, the rule of WTO, the impact of WTO accession on Chinese enterprises, JAVA Programming, and so on.

b) Master degree courses for university graduates with working experience. Three courses are available now, that is, Computer application technology, Business management and Civil and Commercial law. More than 4000 students are studying the courses now.

c) Bachelor degree courses for students who have already graduated from colleges for professional training. Four courses are available now, Economics, English, Law and Arts Design. More than 2500 students are studying the courses now.

QUALITY ASSURANCE MECHANISM OF THE DISTANCE EDUCATION PROGRAM

Technical support is the prerequisite for distance education.

As we said above, In China, now the economic and technological development is quite uneven. It varies from different regions to different organizations even in a same region. But the delivery of courses and interaction between teachers and students in distance education depends on media.

The quality of courseware is a key factor for the quality of distance education.

There are several factors which affect the quality, and those are:

Content analysis: In our university, for credit courses, the curriculum of every subject and the syliabus of every course are reviewed by the degree sub-committee of the related subjects. That makes the contents of courses conform to the request of the Ministry of Education and the Degree Office. For training courses, the content of a course is determined on demands of audiences.

Teachers: We select excellent professional teachers to provide courseware scripts and take part in the making of courseware.

The instructional design: With the development of educational technology and distance education, there is a change in educational concept and idea. The student-centered education will become a main aspect. The instructional design should adapt to the change and make the courseware more suitable for distance learning.

Educational research: We encourage the teachers and administrators working at distance education to do the educational research. It is very important for promoting the quality of the distance education. The development of technology brings us challenges accompanying opportunities.

The specific technology used by us will vary from courses to courses according to the characteristics of the courses.

Make students accessible to coaching, interaction.

We organize the real time discussion and questioning and answering between teachers and students on the basis of the needs of the students. We also encourage discussion and communication using various methods among students. And we open discussion forum on Internet and students interact both with the instructors and with the other students.

Control the outcome of the students and assure the quality of students who are awarded degree.

The strict exam system makes the outcome of students with high quality. The exams are held at the appointed places and time. The invigilators are the teachers from the university to avoid cheat on exam.

ACTS IN THE NEAR FUTURE

The implementation of web-based distance learning overall.

Tsinghua Web School has been set up in April of this year. The center of information network and modern educational technology of Tsinghua University will be established. It is formed by merging original Computer & Information Management Center, Audio-Visual Center and Research Center of Multi-media Educational Software together. It will serves as technical support in teaching through web. It will be in charge of system operating, standard formulating, web-based courseware evaluation and production, in the meantime, it will be in charge of the operation and management of satellite system also. Tsinghua University Academic Affair Office and the School of Continuing Education have started the project of web-based courseware production, and it is estimated that about 40 web-based courses will be completed by the end of this year.

With the upgrading of China Education and Research Network, We will carry out distance education through web nationwide. In order to provide more convenience for student's learning, we will build the mirror websites at CHINANET and other websites in different regions.

Enhance collaborations with the institutes beyond Chinese mainland.

With the characteristics of globalization and opening of modern distance education, it is with great significance to implement the collaborations with the institutes beyond Chinese mainland. We have conducted the cooperation with the School of Professional and Continuing Education (SPACE) of the University of Hong Kong, World Bank Institute (WBI), UNESCO, APRU (Association of Pacific Rim University), MUCIA (Mid-Western University Consortium for International Activity), with the focus on training courses. And we also hope to spread the distance education of Tsinghua University over the special administrative districts of Hong Kong and Macao, Taiwan, Singapore, and so on.

With a welcome to the 21st century, the Tsinghua Distance Education System, characterized by multiple level offering, guaranteed quality courses, more flexibility and convenience, will spread out to the public, in a daring strive for further progress and making contribution to the cause of education in China and around the whole world.

Introduction to the Conference on Virtual Learning Systems

Professor Roger King
University of Lincolnshire and Humberside, UK

We are meeting at a time when China is on the verge of joining the World Trade Organisation and when its use of mobile phones is projected to rise to well over 50 million this year. Truly we can say that we live increasingly in a global world and one that appears to be shrinking rapidly. While nation states remain a key focus of regulation, we seem to be experiencing a transformation in the spatial organisation of social relations and transactions. The rise of electronic communications – which is a contemporary phenomenon – has produced a distinct kind of space-time compression where territorial 'place' provides fewer barriers and where territorial distance is covered effectively in no time.

In such circumstances the opportunity to overcome the barriers to higher education created by geographical distance through the use of technology becomes a matter of pressing importance. But by enhancing access to a university education through the use of communication and information technologies do we also diminish that education? To what extent can we preserve the crucial human construction of knowledge with the more impersonal, atomised and surface characteristics of technology? Can technology and pedagogy be reconciled?

A recent survey by the Commonwealth of Learning found that across the world there are few, if any, examples of teaching and learning being mediated entirely through the application of information and communication technologies. The most common applications of such technologies are found in administration, materials development and distribution, and where possible, student tuition in the form of student-student and student-tutor interaction.

It is the latter, the enhanced interactions and communications facilitated by technology, that provides the best means of reconciling the advantages of technology with appropriate pedagogy. For communication is the essence of quality learning and teaching.

However, we have to recognise that academics and other staff have legitimate concerns about the increasing use of technologies. This applies particularly if they are used to a tradition of the authoritative, independent scholar where the prime aim is the transmission of information and knowledge from the teacher to the student. If teachers believe that learning should be structured and directed by teachers, then they are not likely to be attracted to using information and communication technology strategies, which enable a more learner-centred approach to education.

Moreover, such technologies increasingly tend to disaggregate or 'unbundle' the collective elements of the traditional teaching role. Following 'Ford-like' processes to be found in industry it introduces increasing specialisation of tasks, functions and expertise.Those who are good at writing materials, write materials; those who are effective class facilitators, facilitate; those who are good with large groups of students, lecture; and so on. All of this requires the skills of teamworking to enable the sum of the parts to become coherent learning experiences. (Are teamworking skills found easily in the specialist scholar?) Technology helps in all of this, but there is a large bridge to be crossed to ensure matching staff motivation and effective managed learning environments.

So, we need to pay increasing attention to the needs and concerns of staff. They need to be helped and trained. We live in a time of great change, and change is threatening and often resisted. Resources for staff development are an absolute pre-requisite for the successful introduction of technology into the university learning experience.

We have to recognise as well that many students do not want to be taught in isolation or impersonally. If given a choice they will often prefer face-to-face tuition, especially if they are young. (Older learners are more likely to prefer the convenience of technology-mediated education). Furthermore, while access to computers is growing all the time, there is a great danger of deepening the divide between the 'haves'and the 'have nots', and producing greater inequalities between social groups and between countries.

The Commonwealth of Learning report indicated that one of the ways to overcome some of the problems of access and the need for face-to-face interaction is through the use of access networks of distributed learning centres. The concept involves the creation of community-based access points where connectivity to networks is provided, and access to information and communication technology appliances is made available. The idea of the technology-based community learning centre provides an essential component of any virtual education system that aspires to be broadly accessible.

We must recognise also that the up-front costs of implementing high-quality virtual learning systems are usually very substantial, even if it is believed that ultimate savings are possible through standardisation, resource-sharing, economies of scale, and increased productivity. As such costs are often beyond the financial capacity of any institution, often the only way forward is through consortia of institutions, or strategic alliances with computer and media companies. Passing the cost onto the student is too prohibitive and is likely to make a university's position, in price terms, uncompetitive.

It is likely that, as we look forward, electronic forms of learning and teaching delivery will be used in conjunction with other media, and that we will not find a 100% virtual university. Interestingly, many of the new private and corporate universities to be found in the world, and especially

in North America, are little more global or virtual than conventional universities. Similarly, Sir John Daniel, Vice Chancellor at the UK Open University, has observed that there is no magic, all-purpose medium and, for example, print on paper continues to be the solid base for nearly all the Open University's courses.

Most corporate and private universities, as well as the online and commercial divisions of conventional ones, are moving towards a multi-media approach to both on- and off- campus provision. For the most part such bodies may be classified as 'market-makers' rather than as simply responding to articulated market demand. There appears to be little existing market research on student perceptions of e-learning, and little is known of the extent to which customer resistance or technological inaccessibility exercise powerful constraining influences. Certainly, from what we know, there are strong student dispositions for a considerable component of face-to-face learning, especially at postgraduate business or management levels where registration is often accompanied by a need for social networking. Private and corporate universities are reluctant to economise greatly on small group activity, preferring to achieve efficiency through virtualising non-classroom operations.

As we are here at the world-famous Tsinghua University, another question to ask why should high status universities regard virtual and distance education as anything other than peripheral to the main core activities of conventional teaching and research? Besides, is not a certain degree of exclusiveness necessary to keep one's exclusiveness, rather than seeking larger numbers of students which might dilute the 'brand'?

Corporate and private universities, including those specialising in niche areas or corporate training, have a particularly focused, highly professionalised and very specialised approach to staffing and administration. It is this that produces the efficiency in their operations for which they are known rather than the application of electronic technology to the direct learning and teaching process. There would be quite difficult management and human resource challenges for conventional universities if they simply adopted the organisational structures of the private and corporate providers or simply tried to ladle on technology inappropriately. Are the conventional universities capable of responding successfully to these challenges, particularly when their traditional residential and on-campus activities may require rather different values and decisional structures?

University education (as Sir John Daniel has remarked) is a subtle and complex process, and the uses of technology that start with a simplistic model of higher learning as information transfer are not likely to add much value. Moreover, many of the people who have made great contributions to technology and business did so by using their time at university to learn and experiment outside the formal curriculum (e.g. Bill Gates, Linus Torvalds). Often this learning and this experimentation takes place through the student coming into contact with one or more of the many communities of practice for which universities are a congenial home. This in turn suggests that we should be wary of using information technology to strip out the whole notion of student cohorts by individualising all learning. OU students attach considerable importance, for example, to tutorial groups and residential schools.

Consequently, it is important to guard against the temptation to use the internet simply as a means of squirting content down the pipes. This temptation for academics is quite real, as distance learning on the web is asynchronous. This compares with earlier notions of distance learning where broadband networks were used to teach simultaneously and synchronously to a number of groups at distant locations. Asynchronous teaching, argues Daniel, tends to take academics away from the teaching model they are most familiar with, so in using the web, they tend to revert to the older pedagogic model of correspondence education and dumping content.

As a result, the current trend is to embed teaching on the web within a wider range of activities and to use the term web-enhanced courses rather than web-based. The use of the Web at scale indicates that its most powerful and popular use is for communication between people. There is a necessity, therefore, to consider more clearly the role of communication in learning and teaching at university level.

There is also a danger too in ignoring discipline and subject differences, and in generalising about the likely impact of technology from the specific cases of those areas, such as business and computing studies, and continuing professional development, where technology may be used relatively unproblematically. Nor should the cultural difficulties in conventional universities collaborating with the private sector be underestimated, particularly over time scales. It is not yet clear the extent to which staffing structures which support 'traditional' forms of individualistic teaching are suitable for more collaborative and materials-based programmes. Moreover, with the development of government-initiated quality assurance regimes in many countries, their impact on virtual and borderless provision are yet unknown, and they may prove to be too cumbersome and costly.

In conclusion, colleagues, the world of electronic communication offers numerous opportunities for improving accessibility and the quality of learning and teaching. But that opportunity needs to be harnessed to the more traditional higher education concerns with quality, pedagogy, and well-trained but knowledgeable scholars.

European Studies in a Time of Change - the Need for Understanding

Ian Barnes
Jean Monnet Professor of European Economic Integration
University of Lincolnshire and Humberside

INTRODUCTION

The emergence of China as a major force in the world trading system together the gathering pace of European integration has created a synergy of interests. Both are highly dependent upon trade whilst at the same time there is a need for both to gain an understanding of each others culture and economic perspective. One way of moving forward would be for greater direct contact in the transactionalist mode of gaining an understanding. However, the lack of geographical proximity means that this is unlikely to happen. The alternative is to exploit the developing technology to ensure that there is a structured access to the key themes within society. There are 950,000 documents on the EU's website, therefore the task of addressing fundamental issues concerning the European Union via simply visiting this site (europa.eu.int) are massive. Knowledge needs to be structured in away that make it manageable.

This paper therefore critically examines the following themes:

a) The dependence of the EU and China on the world trading system;

b) The need to promote each others economic and cultural positions;

c) How an understanding of European issues can contribute toward this?

d)What is the best way – does technology provide the answer?

The paper concludes with the view that there is a need for a structured approach to the delivery of material. Organization is the key to a better understanding.

THE DEVELOPING INFRASTRUCTURE

The EU has invested in the development of products which are designed to assist learning. It is a difficult to evaluate the effect of many of these programs because of the tendency for initiatives to be on the basis of a "one off" and restricted to a technical solution rather than being designed to promote the delivery mechanism rather than the content of message. Hence the DELTA telematics program and more recently the Fourth Framework, Socrates and Adapt have all made a contribution to the development of the virtual teaching environment. European wide initiatives in education need to overcome problems related to European cultural differences. Should student work in a way which promotes independent learning, or is learning a collective experience? If we wish for a collective approach, then we must narrow the pathway. An independent approach leaves the student to navigate there own way, but can result in students being lost the process.

Added to the above, the attempt to adapt a message to an external audience inevitably comes full against the practical difficulties of Europeans working together. There is no European system for the assessment of student work even when work has been completed. What is its worth? How can we credit what has taken place elsewhere, especially when there are different values attached to it?

WHAT IS THE MESSAGE THAT WE WISH TO GET ACROSS?

The idea of deepening the degree of understanding between the European Union (EU) and China has at its heart a need to understand the ideas that underpin the respective systems. The EU is an example of very successful economic integration and political co-operation. It has turned the continent around form being a catalyst for global conflict to one which seen as a generator of prosperity and peace. The EU has achieved this by a process based upon shared interests and trade. The EU aspires to have itself understood, not as a federal state, but as a group of countries that have pooled their sovereignty in the pursuit of peace and prosperity

The motive behind the EU's involvement in a dialogue with China is:

a) To engage China further on the world stage, through an upgraded political dialogue with the international community;

b) To integrate China in the world economy by bringing it more fully into the world trading system, and by supporting the process of economic and social reform that is underway in the country.

Part of the process of greater understanding is to understand what lies behind the diplomacy. It is important that the EU tells the world about itself because of its:

a) Importance as a market place;

b) Contribution to the world trading system;

c) Fragmented nature – Europe is very diverse;

d) Complexity of relationships – particularly with respect to the EU and the Member States;

e) Rivalry and competition with the US and Japan;

f) Diversity and differential development – feature it shares

with China.

The process of greater understanding dates back a number of years now. The legal framework for relations with China is the 1985 "EC-China Trade and Co-operation Agreement". An EU-China Joint Committee reviews all aspects of Sino-European trade and co-operation relations once a year. The EU-China political dialogue was formally established in 1994, through an exchange of letters, in recognition of China's status as an emerging power. It was upgraded in April 1998 with the first ever EU-China Summit, held in London, at Heads of Government level. The second EU-China Summit was held on 21 December 1999, when the President of the Commission Prodi visited Beijing. The third summit was to be held on 23 October 2000, again in Beijing. These summits permit an exchange of views covering such topics as economic and trade issues - including WTO accession - bilateral co-operation and regional developments.

As the Chinese economy has expanded, this has an enormous impact on trade relations. There has been more than a twenty-fold increase in total two-way trade since economic reforms began in China in 1978. Total two-way trade was worth Euro 70 billion in 1999. the Euro has gone from a trade surplus at the beginning of the 1980s to a deficit of over Euro 30 billion in the 1999. China is the EU's third non-European trading partner after the US and Japan. In 1999, the EU was the largest Foreign Direct Investor in China, excluding Hong Kong, as European business invested US$ 4.5 billion. However, the EU's share of total foreign direct investment in China is still only 9% of the total which is half that of US or Japanese.

The EU has experienced considerable economic growth and expansion since the end of the 1950s based upon the removal of barriers to trade within its internal market. This trade has also helped to promote greater contact and political understanding and helped to reduce the prospect of military conflict between the Member states. This process of economic and political integration will, it is hoped, continue within the EU. At the same time aspects of this model of trade leading to greater understanding are part of the EU's external face. So that just as the EU has sought to remove barriers to the free movement of goods and enterprise, it is a model which it hopes its trading partners will also adopt.

What the study of the European integration teaches us, is that the EU has only achieved its successes after having to face considerable problems. These arise from the diversity of language and culture within Europe, the very different resource bases of each economy and the differences in social values. The very particular way that the EU takes its decisions is also worthy of note. Despite the wide variety of interests, in most cases a common purpose can be agreed. Clearly not always, otherwise all members would have signed up the single currency.

The EU has had to reconcile its differences, in part because Europe was the primary source of the two world wars. However, its success has been to develop co-operation through a greater understanding of shared problems and recognition of the extent to which we are all part of an interdependent world. In terms of external relations this is emphasized by the emphasis that the EU places the accession of China to the World Trade organization. The bilateral EU-China Trade Agreement signed in Beijing on 19 May 2000 was a major step forward in EU-China relations. This, together with the US-China Trade Agreement signed last year, has paved the way for China's accession to the WTO perhaps as early as next year.

EU-China Comparisons in 1999

	People's Republic of China	EU
Population	1,254 million	369 million
Surface	9.6 million km^2	3.24 million km^2
GDP growth	7.1%	3.3%
GDP per capita	775 US$	22,575 US$

1999 figures, sources: *World Bank, The Economist Intelligence Unit* and OECD

The above table shows us that there are significant differences between China and the EU in terms of both size and income levels, yet they are both global economic powers. Behind these figures lies a huge degree of complexity that only research and education can help us to understand. For the Europeanist, the task is to understand the interface between the two systems. This suggests a need to inform the Chinese audience of what is taking place in the EU and to listen to what his Chinese hosts have to say about their country. There is much to say about the EU, including trying to explain the difference between the short-term media driven agenda and the long-term nature of the European enterprise. In particular there is a need to understand the structure of European society and the problems it faces. This is against a background of the collapse of the USSR and the movement away form central planning. There is a strong likelihood that the EU will expand into Central and Eastern Europe. An EU of 21 Member States or even as many 35 in the longer term is a distinct possibility.

WHAT ARE THE PRACTICAL BENEFITS OF STUDYING EUROPEAN STUDIES?

The benefit of a course of study which examines both the practical and theoretical dimensions of EU's development could be of great importance to the Chinese audience, especially of it is delivered in away that can be access by more than academic elite. For the EU, it is developments that promote an upgrading in the dialogue between China, the EU and the rest of the international community, and will support rising of the EU's profile in China.

What are the practical benefits of studying European studies

a) The EU has shown itself willing to fund projects in China. A new policy launched in 1995 meant that funding rose from Euro 20 million per year 1991-4 to Euro 70 million per year to 1999.

b) Understanding the EU's priorities clearly means that the money can be spent more effectively especially with smaller but visible projects being funded.

c) The EU is keen to supply technical help where required as way of supplementing direct aid.

d) The support of agencies related to the EU, for example the European Investment Bank is a way of ensuring additional funding for developments.

e) Major EU developments have an impact upon the global financial market. In particular the introduction of the Euro.

f) Total two-way trade between EU and China was worth Euro 70 billion in 1999. The EU has gone from a trade surplus at the beginning of the 1980s to a deficit of over Euro 30 billion in 1999. Whilst the EU complains about the problems of market access to China, understanding the EU market place still offers significant benefits to Chinese exporters.

HOW DO WE GET THE MESSAGE ACROSS?

The virtual approach does save money once the infrastructure is in place. However, the cost of establishing the infrastructure should not be underestimated. There are problems related to the experience of delivering the material. There is no doubt that systems do have far greater capacity than in the past, although there is a debate about the extent to which this keeps pace with the knowledge base in addition there are practical restrictions such as the laws on copyright which must be overcome. Practical barriers from the point of view of teachers are:

a) Established educational philosophies may lead to reticence.

b) There are difficulties in establishing credits related to virtual study.

c) Independent learning may pose too much of a challenge. Many students and teachers prefer a didactic approach to instruction because it offers control.

d) Single mode teaching of subjects like European studies offers control and direction.

e) There are concerns over quality assurance in general. Much of the material which is accessed on a random basis on the World Wide Web is of doubtful quality.

The solution is to spend time and effort developing the general methodologies used to harness technology. This does not require an extensive output of text, but more a synthesis of applications that work well. In particular the teaching strategy and the resources need to be integrated. If this is done well, the student can access a far greater range of materials and at the same time be subject to the views of a far wider range of scholars. The overall space with respect to learning is widened considerably.

a) Technology needs a strategy is it is to be integrated well within the system.

b) There are several different formats for delivery – there is not just one that will work.

c) The aim should be to offer more flexibility in the process of acquiring knowledge of European affairs.

d) Teachers should not be replaced.

e) Technology should only be applied when an improvement in teaching quality is likely to emerge.

CONCLUSION

There is no doubt that greater understanding of European and Chinese cultural and economic issues does have significant benefits for both entities. Any attempt to provide a curriculum in European studies by virtual means needs to take account of both the cultural problems associated with this mode of delivery and the need to address the issue in a structured way which incorporates the needs of the academics driving the unit of study. Given this, benefit of virtual delivery of European Studies is:

a) The technology does give students a greater control over the delivery of their learning.

b) It offers students the potential to be able to exploit guided choice.

c) It provides a medium for student discussion.

d) It is a gateway to better research and analytical approaches.

e) It can be a motivating factor, although not on its own.

The virtual method is worthwhile only if it improves the quality of teaching and learning. European studies offer an opportunity to test this out.

Traditional, Distance and Virtual: an Exploration of Concepts

David Lippiatt
Managing Editor
University of Lincolnshire and Humberside
Hull HU6 7RT

INTRODUCTION

Although progress might vary from time to time and from place to place, the history of education in general is one of ever-widening access, so that educational resources which once were available only to elite in society are now available to a much greater number of people of all ages and from a wider range of social backgrounds. This increased participation in education is generally regarded as a good thing for a variety of social, economic and political reasons which are intimately bound up with the well-being of the people involved, and most governments in most countries have policies to increase participation yet further. With respect to higher education, the 'declaration' emanating from the UNESCO World Conference on Higher Education in 1998 claimed that 'there is unprecedented demand for and a great diversification in higher education, as well as an increased awareness of its importance for sociocultural and economic development', and that same declaration referred to the fact that in the latter part of the twentieth century there had been 'an over sixfold increase in student enrolments worldwide, from 13 million in 1960 to 82 million in 1995.' [1]

In most countries, throughout much of the last 50 years, access to education has been achieved in traditional fashion by the building of campuses with classrooms or lecture halls, a supply of teachers, funds to pay them and to pay for writing materials, books, desks, and so on. It has also depended on there being an educational culture represented in a system of laws and regulations, values and practices, which in turn are bound up with the values, traditions and beliefs of a society as a whole. Politics and social values also determine where the funds come from to pay for all of this, and although that issue is not the focus of my concern in this paper, it is nevertheless now of considerable importance in most economies where questions about the future funding of educational systems, their quality, and the 'value for money' which they deliver are very much to the fore.

The expansion of the traditional educational infrastructure then supports the model at the heart of most education systems whereby pupils or students attend in particular places at particular times to learn from teachers in classes or lectures. If there are books available, they also learn by reading and undertaking various activities or assignments until, at the end of a specified period, the effect which this overall 'package' of educational experiences has made on the individual is assessed and an award made, or not as the case may be. It is imperfect, sometimes unfair and wasteful processes, which at the speed of the academic year rolls like an Indian juggernaut, and I'm not sure it is the best we can afford.

So far as the individual's experience is concerned, life in the education system largely and not surprisingly reflects the general life pattern of movement from complete dependence on others for survival during infancy to progressively less dependence in childhood and adolescence, maturing to some independence as a young adult, and hopefully considerable independence of thought, action and responsibility in maturity. In the education system, there is movement from great dependence on the teacher at a primary stage, to slightly less dependence at the secondary stage, then an expectation of independence and some growing practice of it as an undergraduate, and considerable independence at the postgraduate stage. Overall, certainly in the primary and secondary stages, there is a fairly strong tendency to see the educational transaction in terms of the teacher actively doing things ('that's what they are paid for') and pupils passively having things done to them. In higher education, this dependence tends to wane, although it varies between institutions and between cultures.

Admittedly this is a rather rough picture painted with the broadest of brush strokes, and it does little justice to the thousands of conscientious teachers the world over who daily strive to make the educational process a meaningful one. But it does characterise much educational provision and practice which is disturbed from time to time by critical reports calling for renewed vision and new ways of doing things, though often without the resources to match.

It was one such vision during the 1960s in the UK which led to the inception of the Open University. If greater access to education has been achieved through the expansion of traditional facilities, it has also been considerably improved in the last 30 years or so by the emergence of open and distance learning systems, particularly for those, generally adults, who might have missed out on earlier traditional opportunities. At the time these systems began to appear, their justification was in terms of overcoming the limitations set by traditional education. An 'open learning' system was 'open' insofar as it overcame the barriers which closed opportunities to people, whether they were to do with age or formal educational qualifications, or the requirement to attend in a particular place at a particular time, or the method of study. Most open learning could take place because of the development of distance education that now went beyond the correspondence methods which a cheap postal system and cheap printing technology had afforded a century earlier. Alongside that printing technology, the 'new' media of television, audio cassettes and telephones were now in widespread use, and harnessed for educational purposes.

But how was such technology to be used? Given the expense of making a television programme and time on air, what was

the justification for making it? How could you get best value for money out of it, and how could it be fitted into a distance learning system to best pedagogical effect? How could students achieve the kinds of standards which warranted the award of a degree through the use of television, printed distance learning materials, and tutorials? Lacking the social forms of support, the conventions and constraints which accompany 'traditional education', how could students be encouraged to stay the course? These questions took on greater significance in the context of students paying relatively large sums of money for their courses directly from their own pockets. Whereas in traditional education the 'cash transaction' was masked by the payment of state grants, most often distance education did not attract such support.

Having to find answers to these questions in the hostile climate in which open and distance learning systems 'grew up' in the last 30 years of the twentieth century raised the level of debate, at least in some quarters, about how students learn and how resources could be used to optimal effect, not just in distance learning systems but in higher education generally. One of the most influential works came from Diana Laurillard who at the time of publication (1993) was a Senior Lecturer at the Institute of Educational Technology at the Open University.

'RETHINKING UNIVERSITY TEACHING'

Laurillard's book 'Rethinking University Teaching' [2] is predicated on the fact that:

"Teachers in higher education are slowly accepting the fact that they have to become more professional in their approach to teaching, matching their professionalism in research. The notions of quality audit and teacher appraisal are new, and in their existing forms are ill-founded, but they represent a challenge that teachers will have to face."

Laurillard goes on to say that:

"If you believe that teaching is about imparting knowledge, then the main requirement of the lecturer is that they should possess that knowledge in the first place. This used to be the prevailing view of university teaching, which is why academics are appointed on the basis of qualifications in subject matter knowledge. There is probably also an implicit requirement that they should be capable of imparting the knowledge as well as knowing it, but since this is done through lectures, and they can all talk, the requirement has not been dignified with any sort of qualification. For this model of the nature of teaching the practical help would consist entirely of increasing subject matter knowledge. Of course 'imparting knowledge' does not succeed as a teaching aim, as many essays and examination papers testify. Academics have always been well aware of this, but while higher education was an elitist enterprise it was possible to make this failure the responsibility of the student, reified in the 'fail' grade. This is not now the prevailing view – 'The aim of teaching is simple: it is to make student learning possible.'"

The question then to be answered is 'what makes student learning possible?' In such a paper as this it is not possible to do justice to the intricacies of Laurillard's arguments, but some significant stages in the development of an answer to the question are as follows.

The first stage recognises the kind of learning that academics expect students to achieve:

"Academics have ambitious definitions for student learning. When asked to define the nature of learning in their subject area they produce descriptions of high-level thinking, such as 'critically assessing the arguments', 'compiling patterns to integrate their knowledge', 'becoming aware of the limitations of theoretical knowledge in the transfer of theory to practice'..."

But such levels of thinking are not achieved just by acquiring 'high level knowledge', as though knowledge were an entity that could be transmitted from teacher to student.

Laurillard argues that academic knowledge has a second-order character. It is not acquired directly through experience. It relies on symbolic representation, or 'description', as the medium through which it is known.

".. as students of a subject, we must consciously stand back from our experience and then, having reflected upon it, argue about it. A critical perspective, necessary for academic understanding, is not a normal adjunct of learning at the level of experience. The two levels are also observably different – the one being action on the world, the other being talk about those interactions with the world."

Having sought a way to generate a principled teaching strategy, given what we know about the characteristics of student learning, for Laurillard the best expression of an empirically-based teaching strategy is as follows:

"The learning process must be constituted as a dialogue between teacher and student, operating at the level of descriptions of actions in the world, recognising the second-order character of academic knowledge, and having the following characteristics:

Discursive

a) Teacher's and student's conceptions should be accessible to the other.

b) Teacher and students must agree learning goals for the topic, and task goals.

c) The teacher must provide an environment within which students can act on, generate and receive feedback on descriptions appropriate to the topic goal.

Adaptive

The teacher has the responsibility to use the relationship between their own and the student's conception to determine the focus of the continuing dialogue.

Interactive

a) The students must act to achieve the task goal.

b) The teacher must provide meaningful intrinsic feedback on the actions that relates to the nature of the task goal.

Reflective

The teacher must support the process in which students link the feedback on their actions to the topic goal for every level of description within the topic structure."