# Distance Learning and
# Quality Assurance at Peking University

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**Abstract.** This paper discusses the distance learning and quality assurance at Peking University. It mainly illustrates our teaching notion of students centered, resources and techniques as basis, quality management as guarantee. At present, our School of Distance learning takes the e-learning delivery mode based network technique as foundation which has provided multiple flexible teaching and learning means and methods for students. We have developed multimedia learning resources. Student support service has been improved and formed a teaching mode combined teachers' tutorship with students' self-determination learning. All the above has constructed an elite cultivation system suitable for characteristics of adults' learning. Our School of Distance Learning has all the way thought highly of distance education quality. Having established inner quality assurance system, we also have framed and implemented quality standards, guarantee measures and supervision procedures according to school goals and capable persons' incubation during the course of teacher resources selection and management, course resources development, teaching process implement etc.

**Keywords:** Peking University, distance Learning, quality assurance

Established in 1898, Peking University is the first comprehensive state-run university in China. It began to make preparations in modern distance education in 1998. Utilizing modern information technology, Peking University has provided education support service to teachers and students by means of e-learning.

Modern distance education of Peking University has integrated all the educational resources of our university, and has developed itself both at our campus and out of school.

## 1  E-learning at School

Peking University attaches much importance to information construction. There are nearly a hundred network multimedia classrooms in our campus, which could hold about ten thousand teachers and students of our university. They can provide

preferable digital teaching service and have changes the traditional "chalk and blackboard" teaching mode. Many colleges and departments succeed in delivering e-classes. Courses on the web have become students' learning assistance out of traditional classroom. Students connect their personal computers to the Internet to learn courses, communicate with their teachers via online discussion and e-mail, hand in their homework, and participate in courses discussion, which has actually realized the open and flexible campus network. Through network teaching platform, teachers can finish related teaching and administrative activities such as courses selection and arrangement by teaching administrators, generation of teachers' course wares automatically, homework management, question-answering discussion, after-class discussion etc. In the mean while, Peking University has realized mobile learning. With the application of mobile and mutual connection technology, students can learn courses on the Internet through mobile terminals.

## 2    E-learning out of School

### 2.1    Programs and Levels

In order to exert advantages of educational resources in our university, modern distance education of Peking University has integrated all its distance education resources, and provided diploma and non diploma educational service.

At present, diploma education of our modern distance education has set up six branches of subjects such as economics, management, law, literature, science, and medicine, and included majors as the following, Law, International Economy and Trade, Finance, Financial Management, Marketing, Risk Management and Insurance, Administration, Chinese Linguistics and Literature, Information Management and Information System, Human Resources Management, Advertisement, Computer Science and Technique, Health Care Management, and nursing etc.

Non diploma education includes educational and training projects such as Distance Education for Elementary and Middle Schools' Teachers in Peking University, Teaching Chinese as a Foreign Language, and Medicine.

### 2.2    Student Scale and Distribution

At present, there are more than 37,000 students at school of modern distance education in Peking University. In total, we have fostered more than 36,000 junior college students and graduates, and trained about 10,000 primary and elementary teachers and medicine career men. Categorized by subjects, we have incubated 11,714 students majoring in law; 3,839 in economics; 4,803 in management; 960 in literature; 1,390 in science and 14,000 in medicine.

By the end of 2006, our School of Distance Learning in Peking University has set up 68 extensional learning centers in 29 provinces, cities and autonomous regions of our country. Among those, 15 learning centers (23% of the total number) were

established in western regions. There are 3,847 students at school, which is 17% of the total students' number then. Last year, 530 students graduated from our school, and the total graduate quantity is up to over 5,000. Our non diploma education, Distance Training for Teaching Techniques and Skills of Elementary and Middle School Teachers around China, has enrolled teacher students in western regions such as Xinjiang, Yunnan, Shaanxi, Shanxi, Inner Mongolia etc. And over 400 teachers were trained in this project. And 40 extensional learning centers have been established by our School of Distance Learning for Medical Education.

## 2.3  Education Mode

Attaching much importance to teaching tasks, our School of Distance Learning has realized a kind of distance education mode which is taking teaching mode as nucleus, course resources and technique support as foundation, student service as support, and teaching administration as guarantee.

### School Year System and Courses
In order to suffice students' individualized autonomous learning, our diploma education of our School of Distance Learning implements the teaching management patterns of complete credit hour system and flexible school year system. Schooling period for students of senior high school graduates is 4-7 years long, and that for those junior college graduates is 2-5 years. After their enrollment, students can choose their courses and exams freely according to their corresponding teaching plans. And within their study years, they can apply for graduation as long as they have fulfilled their required credits.

Total credit hours for those associate degree graduates are 85 or 88 (for Computer Science and Technique). Students should finish 22 to 30 subjects. And total credit hours for those senior high school graduates are 159 or 156 (for Law). They should learn 41 to 50 courses.

Non-diploma education contains Construction Plan of Educational Techniques and Skills of Elementary and Middle Schools' Teachers and E-learning Courses Development Project and Construction Plan of Teachers' Educational Techniques and Distance Training Courses. Courses offered include Resource Courses Recommended by Ministry of Education, Elite Lectures of Famous Professors in Peking University, Training Courses of New Notion, New Type Training Courses, Training Courses of New Techniques, Evaluation Courses of Teaching Cases of New Courses, Teachers' Training Courses for their Subjects, Training Courses of Teachers' Comprehensive Qualities.

### Teaching Mode
Based on modern information technology delivery, our School of Distance Learning has implemented a distance education mode, that is student centered, teachers directing, teaching parts as content, resources as basis, students' autonomous learning combined with teachers' guidance. Teaching parts includes lectures delivery,

tutorship, homework, practice and experiment, tests and assessments, graduation thesis, and other assistant teaching activities.

School of Distance Learning mainly takes the way of teachers' course wares asynchronously. Teaching begins with courses recorded well before, and typical courses will broadcast on live by satellite, video conference, audio conference etc.

Tutorship includes two types, synchronous and asynchronous. The synchronous one includes real time audio tutorship, face to face tutorship in teaching centers and telephone guidance. Asynchronous one are mainly course forum and E-mail tutorship.

We pay much attention to teachers' guidance and assessment to the courses. Students should finish learning activities preestablished in relative fixed time such as reading, exams, discussion, homework submission etc. Learning platform will automatically record students' learning activities and give marks to their test questions. And teachers will feed back in time to students' discussion and homework in prescribed time. Through communicative ways such as class discussion area, BBS messages etc. students can get in touch with their teachers and study partners freely so that many problems of learning course and class affairs can be solved quickly. We adopt process and whole course learning evaluation means and pay much attention to records and checks of students' learning process. While finishing learning tasks, students' marks will add up constantly until the final scores are given.

**Learning Mode**

According to their teaching arrangement and with the guidance of their teachers, students of our school learn course wares and other resources, attend tutorship, finish their homework, participate in experiments, practices and exams organized in local extensional learning centers, and finally finish their graduation thesis. Such a learning mode has realized teachers' guidance and assistance combined with students' autonomous learning.

**Distance Training Mode**

Non diploma education in School of Distance Learning, Peking University mainly adopts two modes, entire e-learning training, and face-to-face training combined with e-learning mode.

**2.4   Course Resources**

**Course Resources Media**

Resources of course wares are the basis of distance education. Diversified learning resources are provided to students by our school, such as paper materials, texts and references matched to different subject respectively, network course wares, disk compact course wares, subject resources websites of e-learning courses, digital library, and other e-learning assistant resources. These resources have covered all the majors and subjects, as well as non diploma trainings.

**Contents of Course Resources**
E-learning courses have realized synchronical device of teaching resources and activities. The following are provided, lectures delivery video, school teaching texts, review consideration, exercises, homework, reading literature, audio tutorship, teachers' blog, class discussion areas(or discussion areas for special topics) etc. All of these can suffice well to students' learning demands.

**Total Quantity of Resources.**
By the end of 2006, we have constructed 431 network courses in 8,906 credit hours in accumulative total (203 courses in 7,690 credit hours of diploma education; 228 courses in 1,216 credit hours of non diploma education). Now distance education courses in use are 375 in 6,517 credit hours (147 subjects in 5,301 credit hours of diploma education; 228 courses in 1,216 credit hours of non diploma education).

## 2.5    Technique Support

**Technique Delivery Mode**
Our School of Distance Learning has adopted technique projects based on Internet, including the following such as IP data broadcasted by satellite, course wares production system, course wares on demand system, mutual exchange system based on Internet, audio tutorship system, word questions-answering system, instant message transmission platform, video conference system based on Internet, online homework system, exams system, online educational management system etc.

**Distance Education System**
In order to implement our teaching and management tasks fluently and efficiently, Our School of Distance Learning has developed e-learning system of teaching, resources, teaching administration, service, which can preferably suffice the requests of distance education.

**Teaching System**
Our School of Distance Learning has developed teaching platforms such as autonomous learning style, introductory learning, tutorship system, online homework, online exams system etc.

In autonomous learning platform, we emphasize students' self study. It can support students' online learning, exams, course discussion, homework submission, communication in platform, scores inquiry etc. According to its functions, we can categorize the following modules, courses management, courses forum, website messages, courses preparation, resources areas, courses evaluation and management, individual data management and so on. Convenient to classes and courses management, it can preferably support students' autonomous study, professors' classroom teaching, teaching administration, controllers' platform as well as courses management etc.

In introductory learning platform adopted from Modular Object-Oriented Dynamic Learning Environment (Moodle), we pay much attention to interpersonal communication, plan and management of teaching activities. Its entire design is of conciseness and clearness, and teaching activities adopt linear procedures. Supporting the whole teaching process, this platform can also develop teaching activities totally according to course device notion, and in addition it can fully record students' learning process. Its management system adopts layer-class style so that evaluation and management tactics can be flexibly set based on demands. This has made convenience to teacher recourses training and management of local educational committees. Both teachers and students can attend real time and non real time communication and cooperation by use of its abundant interactive instruments. In order to keep students common experiences and background, this platform must provide schedule control system so that students can study at the relative speed. Introductory teaching platform consists of two sub-system, teaching and administration. Teaching system includes modules of course discussion areas, test, homework, evaluation, resources and so on. And teaching administration system includes user management, course management, platform maintenance, class management, and teaching supervision and control.

Tutorship system includes two categories, real-time and non real-time mutual exchange. Real-time mutual communicative system includes:

- conference TV terminal adopted Polycom View station 6000, and support H.323 and H.324 protocol
- adopt online video conferences and question-answering systems based on Internet
- question-answering systems of real time word mutual communication based on Chat Room

Non real-time mutual communicative system includes:

- course forum
- E-mail question-answering
- BBS

## Resource System

Resources system in our School of Distance Learning includes course wares making system, course wares on demand system, and digital library system.

## Teaching Administration System

Teaching administration system of our school is a set of MIS system that network autonomous development applies in teaching and teaching administration management. Its main functions are management of recruitment and entrance exams, recruitment management, freshman registration, enrollment, online course selection, exams selection, and tuition fees management, scores management of students at school, students' status management, and graduate management.

In the mean while, we have developed teaching centers platform. Both our School of Distance Learning and our extensional learning centers have a set of teaching and administrative information management system assigned to our special managers, which can synthetically manage daily tasks such as enrolment, finance, teaching,

teaching administration, students' status and so on. This realizes the scale and dimension of distance education and standardization of administrative tasks.

**Service System**

Service system includes website of our School of Distance Learning, official business system, E-mail and communicative system etc.

The website of School of Distance Learning is the platform which provides service in promotion, recruitment, teaching, teaching administration, learning assistant. It is really our students' online learning garden. In our website, there are mainly 8 columns, School Introduction, News Centers, Recruitment Column, Educational Administration, Teaching Column, Technique support and so on.

In order to make it convenient to carry on every teaching and administrative activity, to feed back students' information instantly, and to guarantee fluent delivery of information, our School of Distance Learning has spent large sums of funds to improve communicative equipments. For instance, we have had more than 30 telephone lines, and installed 48 telephone exchange machines at two working places. In addition, we've also applied one-telephone-number-suffices-all service and established short message service platform. All of the above ensures our fluent communication.

## 2.6  Students Support and Service

Our School of Distance Learning can provide preferably learning support service, including technique service, information and consult service, resource provision service, students' education and management, extensional learning centers service and so on.

All the learning activities of our students have been centralized into one platform which is learning space. It provides learning support service such as registration, tuition paying, courses selection, courses on demand, homework submission, word question-answering, course forum, audio tutorship, digital library and so on.

Our school can provide information and counseling service to our students by various means, such as network service (website, BBS, Email etc.), communicative service (instant message, telephone, fax, e-mail and so on), Emergency Center, Dean's Mailbox, and extensional learning centers service.

We have preferable resources to provide service. Certain officers are in charge of booking, delivering, and transporting teaching resources such as materials, Compact Disk and so on. Concerning course wares on demand, teaching centers should save them well and transmit them into server so that students can demand and learn at any time.

In order to supervise students well, our school has set up class, class forum and schoolfellow lists. Certain teachers are arranged in charge of students' daily tasks.

In order to enhance students' education and campus culture construction, we have organized many activities. At the beginning of every term, we organize term beginning celebration and entrance education to freshmen which can help students be familiar with e-learning style and know their role in study quickly. We also hold

activities of Commencement and graduates returning to their Alma Mater. These campus cultures can strengthen students ideology education.

Reinforce and increase abilities of local short distance service in extensional learning centers


# 3   Quality Guarantee of Distance Education

Quality is the basis of survival and development. Our School of Distance Learning has been always paying high attention to education quality, and all the way regarding quality guarantee as the basis and lifeline of long term development of distance education. And still they continuously improve their education, teaching and elite incubation. We have established a set of consummate inner quality guarantee system, including all main factors of e-learning quality guarantee, such as qualified teachers selection and management, course wares resources development, teaching process and so on. There also contains a set of quality standards, guarantee measures and supervision process in every education parts.


## 3.1   Strict Teachers Resources Selection and Management

Our School of Distance Learning pays much attention to strict selection management of qualified teachers so as to guarantee their teaching qualities. High qualified teachers are selected out to bear teaching tasks of distance education. Lead teachers are mostly associate professors and those who own above teaching title. Professors and tutors are mostly experienced teachers (on the job or retired), doctors and postgraduates in every departments and colleges. Some are excellent teachers working in other universities so that every student has their tutors to provide in-time guidance and service. In the mean while, our school also possesses a team of high-level e-learning management and technical personnel to meet the development demands of distance education. Our School of Distance learning has strict teachers' selection and management procedures so that all the teachers engaged are guaranteed to have experienced cautious choice and should attend distance education training before their classes begin. During the course of teaching, we also check their teaching results to guarantee their teaching qualities.

During several years' development of our school, we have already established a relatively steady team of part-time teachers. During the course of development, every course is charged by lead teachers usually several involved. Our staff in charge of developing and producing course wares cooperates with them to finish course wares. During the course of teaching, every course is dispatched to a host teacher who is charge of course learning guidance, homework disposal, online questions answering, exam outline organization, test assignment, and tutorship etc. Some extensional learning centers arrange local teachers of face to face tutorship who will be given relative trainings before fulfilling their responsibilities.

By the end of 2006, we have engaged 217 faculty advisers, among whom, 156 lecture teachers, 61 tutors (including questions answering, homework amendment teachers). In extensional learning centers, 776 tutorship and face to face teaching

professors are engaged, with 22,691 students in total, and the proportion between teachers and students are 1:23.

## 3.2    Improvement of Development Mechanism of Resource Establishment

Concerning development and assessment of curricular resources, our School of Distance Learning has made scientific subject standards and standardized teaching quality guarantee procedures. Quality guarantee process of course development and assessment includes the following:

Make E-learning course wares standards, including curricular scientific quality standards and technical standards of course development. According to SCORM standards, we have established teaching resources, realized course resources across platform, and constructed share resources feasible to different courses so that requests of high level e-learning contents can be satisfied.

Form 3 professional subject teaching teams successively in which subject experts evaluate teaching contents and raise improvement suggestions. Form one professional network teaching team who can direct teaching design of e-learning courses. Form a courses development team who are responsible for the analysis of e-learning courses demands, teaching design and research.

Constitute a set of facture standards, management statutes and quality management methods of high qualified courses of distance education

Implement supervision over courses in the whole process from their development to their assessment. Do well in implement and quality supervision to device, assess, promote, edit and evaluate courses.

Guarantee continuous check of courses, pay attention to students' feedback about courses results during the course of use it, and then improve their device constantly.

## 3.3    Enhancing the Management of Teaching Process

Teaching parts and process are the important aspects of teaching quality fulfillment. Taking classes as foundation, courses as master stroke, and important teaching parts as key, our School of Distance Learning has grasped teaching parts such as lectures deliverance, tutorship, question-answering, experiment, and tests etc. We care about mutual interaction between teachers and students much more, reinforce students' guidance and service during the course of study, and guarantee teaching quality during the course of education. Taking advantages of e-learning teaching platform, we strengthen supervision and evaluation of teaching process. It encourages students that we connect students' online learning activities and homework submission with their scores, which supervise and promote students well. Constituted consummate teaching management system as guarantee, our school has made clear quality standards of every main teaching part and service quality standards of teaching, management and technical personnel, and standardized teaching management procedures and collaboration mechanism. All these have efficiently guaranteed successful and fluent implementation of teaching process management.

## 4  Epilogue

From the experience of distance learning in our school, I would provide a quality assurance framework for distance education which there is an emphasis on four principles:

- Set up student oriented service option;
- Reinforce technical support service and resources infrastructures;
- Enhance management and service during the course of teaching;
- Constitute an efficient mechanism of evaluation.

   Efforts in distance education quality assurance make pleasing progress in teaching and learning, which satisfied students and their employers. Through early 10 years, our School of Distance Learning has achieved great achievements. We hope to cooperate with distance education institutes all over the world and exchange mutual experiences so that more beneficial contributions will be made to develop international distance education.

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