

REPORT to UNDP

UNITED NATIONS DEVELOPMENT PROGRAM

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This report is issued in accord with the stipulations of the contract entered up between The China International Center for Economic and Technical Exchanges (CICETE) of the Ministry of Foreign Economic Relations and Trade in the People's Republic of China, Beijing, and Frank L. Borchardt under the sponsorship of the United Nations Development Program: Foreign Language Training Network CPR/88/069/C/01/99.

Summary

1. The world-wide technical revolution is being driven by *non-traditional* users, such as modern language teachers and learners and is proceeding at a rapidly accelerating rate.

2. *Educational technology* proved to be *wholly appropriate* to the non-traditional area, *English for Special Purposes (ESP)*.

3. UNDP ESP Faculty trained by the Consultant in China is capable of *delivering usable electronic courseware, now*.

4. The UNDP ESP Network infrastructure in China is a precious accomplishment and *needs* some *continuing technological support*, to establish itself firmly and permanently on a self-sustaining basis.

5. *Cooperative* training and support *follow-up* should be undertaken in three directions: *U.S.-China, China-U.S., and China in-land*.

6. Formal mechanisms should be put in place assuring the *rights of authorship* to original courseware developers to encourage their work toward such time as (1) the courseware could be marketed to recover costs, (2) support CALL work at the home institutions, and (3) reward the hard work of the courseware developers themselves.

7. An *international conference* should be scheduled for *China in '94* to provide incentive for vigorous development in China so that by the conference time China's contribution to the world's work in Computer Assisted Language Learning (CALL) could be showcased proudly along with the rest of the international scene in CALL.

Observations:

It is the considered opinion of Frank L. Borchardt (henceforth “the Consultant”) that the faculty he trained at three institutions) the Nanjing Aeronautical Institute, the Xi'an Foreign Language University, and the Beijing Second Foreign Language Institute) represents the first and, probably, largest cadre of indigenous courseware developers, fully capable of delivery courseware *now* (not after this technological development or that further period of training).

The Consultant was impressed by the talent and enthusiasm of the faculty he met in all three locations. The happiest constellation he found in Nanjing, where excellent technical facilities unique to the Nanjing Aeronautical Institute are combined with a willing and able faculty common to all three institutions.

In Nanjing the technical resources are intelligently distributed across three areas: technical development, faculty development, and student delivery stations. This distribution is absolutely necessary for the flourishing of any kind of educational technology.

The appropriateness of educational technology in the ESP area became crystal clear in the course of this consultancy.

The kind of Computer Assisted Language Learning (CALL) that could be delivered at once, with little or no further training and additional technological development, conforms precisely to the hard copy learning materials presently in use at all three institutions.

The obvious advantages of computer assistance in this area include 1. immediate updatability, 2. immediate feedback in a private environment, 3. outside-the-classroom availability. Furthermore, the general similarity between the dreaded TOEFL test and CALL drill-and-practice will certainly improve scores.

The basic advantages of computer assisted instruction accrue beyond the more basic and more subtle advantages of making technology available to non-traditional users. It goes without saying that faculty and students in mathematics, the sciences, and engineering need access to high technology. The technological revolution on-going in modern industrialized countries, however, is most definitely *not* taking place in centers of high technology. Those are wholly comparable around the world and in no way distinguish one economy from another. It is among *untraditional* users that the revolution is taking place: small businesses, home economics, *and* education beyond mathematics and the sciences, and, frankly, among the teachers and learners of modern languages.

The Consultant knows that the issue of young people's mastery of high technology (lest they become its slaves) and of modern languages is of burning concern to progressive countries around the world. National adoptions of hard- and software constellations have taken place in an effort to address these concerns, for example, in Denmark and the Netherlands. The first Ibero-American Congress on “Educational Informatics” has just taken place in Santo Domingo (10-12 June) with some 450

participants as an instance of this concern on a continent-wide basis. The profession is responding to demand from around the world to bring its services closer to home with the possibility of establishing formal associations in Europe (Budapest) and founding a Spanish-language association for the Ibero-American area. Professional meetings are to be held in Maastricht, the Netherlands, 12-14 August, with presenters from *four continents and sixteen different countries*.

At each Chinese location, the Nanjing Aeronautical Institute, the Xi'an Foreign Language University, and the Beijing Second Foreign Language Institute, the Consultant discovered extraordinarily talented, able, and diligent individuals, who are wholly capable of producing interesting, exciting and useful electronic courseware, and doing so *now*.

They have the talent; they have the software; at Xi'an and Beijing they are lacking only the hardware. This is especially the case for delivering courseware to the students.

UNDP has accomplished one of the most stubbornly difficult of tasks in education: establishing an infrastructure. There are departments, curriculum, courses, faculty, and students in place in three major learning centers in China. These now have initial access to the best of modern technology for the education of their charges in *both* non-traditional uses of high technology *and* the learning of English.

Before UNDP decides to abandon to self-support its work of ten years, it needs to be certain that this large, impressive, and effective infrastructure, the ESP Network, is indeed capable of self-support and will not perish in the ocean of unsolved problems otherwise besetting China.

It is the Consultant's considered opinion that a relatively small continued investment in technology and training (in the range of \$250,000, but reversing the usual UNDP proportion between hardware and support) would put the ESP Network on a solid footing for the further delivery of still desperately needed language training *and* equally necessary experience with high technology for untraditional users.

Itinerary:

The Consultant arrived in the People's Republic of China in Shanghai on Thurs. 7 May 1992 and was received by Professor Wu Jianguo of the Nanjing Aeronautical Institute and Mr. Roger G. Wong, Director of Foreign Affairs for the China National Aero-Technology Im/Export Corporation, Shanghai Branch. According to schedule, the Consultant toured Shanghai, the major transportation monuments, and the Pudong Development Area. The Consultant proceeded on Sat. 9 May by China Eastern to Nanjing, where he was received by Dean Zhang Zengchang. According to schedule, the Consultant visited the Yangtze Bridge, the Zhong Hua Gate, and the Sun Yaxian Memorial and Pagoda. On Monday 11 May the Consultant gave a general lecture on Computer Assisted Language Learning (CALL) and Educational Technologies, and, on Tuesday through Friday 12-15 May conducted tutorial sessions on CALIS (Computer Assisted Language Instructional System) with the staff of the Nanjing Aeronautical Institute UNDP ESP (English for Special Purposes) faculty. The Consultant also toured Yangzhou and Zhengjiang in this period, and was accorded a festive dinner in the Confucian district of Nanjing with the

ESP staff. The Consultant proceeded with CALIS seminars on Mon. and Tues. 18 and 19 May and lectured to the English students of China Eastern Airlines on Tues. 19 on educational technologies. He was privileged to observe actual English instruction in this time period, and was accorded a festive dinner with the President of the Nanjing Aeronautical Institute Professor Zhu Jianying.

Due to revisions in air service, it was necessary for the Consultant to return to Shanghai for connections to Xi'an. He arrived in Xi'an on Friday 22 May accompanied by Lu Zhenyun of the Nanjing Aeronautical Institute and was received by Tan Zhiming, Dean of the Training Department at the Xi'an Foreign Languages University and guided by Jiang Dengzhen of the UNDP ESP Center at Xi'an. The consultant conducted CALIS tutorials on Saturday 23 May and Monday 25 May, and otherwise toured the major monuments in and near this historic city. On Tuesday 26 May the Consultant departed Xi'an for Beijing and was received by Professor Zhang Mingsheng of the Beijing Second Foreign Language Institute. Daily seminars were conducted on the use of CALIS for ESP, interspersed with touring the major sights. Festive dining was hosted by Vice President Huang Jiandong. The Consultant requested and was granted interviews by Marcia de Castro of UNDP and Kent Smith of IBM China and was received by the Deputy Director General of CICETE, Zhang Guang Hui, Mon. A.M. 1 June. The Consultant departed China Mon. P.M. 1 June from Beijing.

Recommendations:

1. that UNDP contemplate an extension of UNDP ESP Network support specifically toward the moment when proper technical facilities can be installed in all three, not just one of the ESP Network locations;
2. that arrangements be made for follow-up training, such as from the Consultant's own project at Duke University, which will be willing to bear the cost of international travel to China and the cost of the trainer's salary at home, if the host institutions would bear the cost of in-China travel, room-and-board, other customary living expenses, and touring;
3. that arrangements be made for follow-up training in the United States for technical and subject-matter experts (e.g., Lu Zhenyun, Wang Zhengjiang, Zhang Ping in Nanjing, Li Baocheng in Xi'an, and Liu Huiyan in Beijing), specifically at the Duke Project's facilities, where the Duke Project can provide a workplace and infrastructural support;
4. that arrangements be made for follow-up training inside the network, that the best technicians and courseware authors (e.g., Lu Zhenyun, Wang Zhengjiang, Zhang Ping in Nanjing, Li Baocheng in Xi'an, and Liu Huiyan in Beijing) be encouraged to communicate with one another in the development of courseware and be prepared to engage in further training of their colleagues;
5. that formal contacts be established with developers of educational technologies at other Chinese institutions, such as Bei Da and Qinghua Beijing;
6. that cooperative measures be undertaken with other educational projects in China, such as the IBM/Tianjin Bureau of Education/Tianjin Electronics and Investment Bureau's "Model Schools"

collaborative, where UNDP ESP Network expertise may be the first line of practical courseware delivery in China;

7. that formal mechanisms be put in place assuring the rights of authorship to original courseware developers to encourage their work toward such time as (1) the courseware could be marketed to recover costs, (2) support CALL work at the home institutions, and (3) reward the hard work of the courseware developers themselves;

8. that formal mechanisms be put in place to share exercises developed at all sites in the ESP Network toward the soonest possible achievement of a critical mass of courseware;

9. that the UNDP ESP Network approach in-land Chinese computer manufacturers for outright support of the UNDP ESP's goals or trade in kind (services) to get the technology placed as soon as possible and where it is most needed;

10. that preparations be made for an international conference in China in '94 which would provide an incentive for vigorous development in China so that by the conference time China's contribution to the world's work in CALL could be showcased proudly along with the rest of the international scene in CALL.