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Distance Education Projects in Kyrgyzstan

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Issue 12: Kyrgyzstan - Applications



Kyrgyzstan is a landlocked country in Central Asia, one of the former Soviet Union republics, endowed with few natural resources, but it has a tremendously advantageous location on the major crossroads between Asia and Europe. Under the Soviet system the educational level of the population used to be very high in Kyrgyzstan. Recently the quality of education has started to worsen due to the continuous migration of the nation's specialists to more economically developed countries.

Distance education projects are evolving rather slowly in Kyrgyzstan compared to neighboring Kazakhstan and Russia where economies are booming and the government is supportive of such initiatives. Distance education in Kyrgyzstan is still not officially recognized as an educational method - current definition in the law is vague and it does not differentiate between distance education and so-called education by correspondence, a fact which according to local partners impedes its future growth and prevents many Universities from officially enrolling students in their distance education programs. Another problem is lack of distance education experts - designers and tutors of e-courses.

The most well-known distance education projects in Kyrgyz Universities have been initiated in partnership with Russian universities due to the educational tradition inherited from the Soviet Union and to the fact that Russian is still a commonly spoken language in Kyrgyzstan. At least two major Russian Universities have opened affiliates via distance education in the Kyrgyz capital of Bishkek employing a combination of satellite and Internet technologies. Upon graduation from these Universities, students receive Kyrgyz and Russian diplomas at the same time. It is considered to be an advantage because Russian diplomas are more prestigious in Kyrgyzstan and in demand among those students who eventually plan to immigrate to Russia or want to work abroad. For Russian Universities provision of distance education services to the former Soviet republics has become a profitable business.



Also, a few innovative distance education projects in Kyrgyzstan have been initiated and supported by international organizations. One of the first distance education projects was conducted in Kyrgyzstan in 1999 with the support of IREX and UNESCO in partnership with local television. Kyrgyz National TV channel provided its airtime for a course on informatics and computer science; additional information complimentary to the course was posted on the Internet. After three months students could take a test online. As a result, 42 students passed it and received a certificate.

One of the biggest projects expected to contribute to further development of distance education in Kyrgyzstan is the Virtual Silk Highway financed by NATO which provides fast and effective Internet connection via satellite to a network of Universities in the Central Asian region and Caucasus.

Virtual Silk Highway Project

In 2002, NATO provided a grant to the educational and scientific institutions of five Central Asian countries and Caucasus for the establishment of the so-called Virtual Silk Highway, a network of academic institutions in the region. The name of the project refers to the ancient Silk Road which was not only a trade route connecting Asia and Europe but also an all-important road for the transfer of information and knowledge between major regions of the world.

The Virtual Silk Highway Project provides a satellite channel for high-speed access to Internet giving access to the European Scientific and Educational Networks. The goal of the project was to increase information exchanges between the academic societies of Central Asian, Caucasus and European countries by integrating academic computer networks of these counties into the global information infrastructure and reducing the digital divide between industrially developed and developing countries.



It was emphasized by Askar Akaev, former president of Kyrgyzstan, during inauguration of the Kyrgyz component of the project that it should serve as a catalyst for the development of the Internet economy and creation of information society in the countries involved, while NATO stressed that Internet access could contribute to the creation of open societies and democratic processes while closing the gap between information-rich and information poor countries. In 2004, Afghanistan was also added to the group of eight former Soviet Union countries connected to the Silk Highway.

Configuration of the network

The academic and scientific communities in the countries concerned are connected to the Internet by way of a common satellite beam. The configuration consists of locating satellite dishes and network equipment in participating countries, a central distribution point (hub) in Western Europe, a contract with satellite vendor, and Internet access. Additional support comes from Cisco Systems who has donated equipment and from DESY (Deutsches Elektronen Synchrotron) of Hamburg, Germany who has offered to host the European hub. In December 2002, the shared bandwidth of 3.5 Mbps was increased to about 7 Mbps. In 2006, the satellite provider for the project was changed from EURASIASAT to TELENOR which will allow the bandwidth to increase even more.

In Kyrgyzstan the earth station is located at the National Academy of Sciences. Connection of the universities to the network backbone was implemented on the basis of separate copper lines with speed of 2 Mb per second. Several universities have now upgraded these lines to fiber optic capacity.

The separate communication channels for universities provide quality Internet connections, leading to the possibility of organizing distance education programs, spreading multimedia content and conducting videoconferencing.

In Kyrgyzstan when the project started 14 institutions formed the Kyrgyz Research and Education Network Association (KRENA), a group of educational and scientific organizations. Today this Association unites 29 institutions including the universities, Kyrgyz National Academy of Sciences, and several schools and libraries that are connected to the network.

Future of the Virtual Silk Highway Project

In March 2005, according to the agreement with participants of the Virtual Silk Highway project, NATO was paying only 50 per cent of the fees for the satellite services. Beginning in 2008, the partners are expected to pay the full price of services and take complete responsibility for the functioning of the network. According to Jacek Gajewski, NATO consultant on distance education projects, KRENA has developed quite a successful financial model and "we are not worried about the future of connectivity between Kyrgyz universities and scientific communities around the world."

Since the spring of 2005 the National Academy of Sciences within NATO's OCCASION project has promoted scientific exchange between Kyrgyz and foreign scientists and organized lectures and round tables for them via videoconferencing. Examples of such sessions include a conference on mountain medicine with scientists from Italy and a meeting of foreign and local seismologists. In principle, any academic institution can request a videoconferencing session for a fee. These services are typically provided to organizations that do not yet belong to the Association and do not have their own means for organizing such events.



According to Kadyrkul Karabukaev, the coordinator of the Kyrgyz component of the Virtual Silk Highway project, videoconferencing services could be beneficial for Kyrgyz educational institutions that do not have sufficient financial resources to invite foreign lecturers and cannot pay for their work and travel. Most of these

institutions realize the importance of improving the level of professionalism of local instructors and students by drawing on the expertise of foreign colleagues. While the advantages seem obvious, such videoconferences are typically organized only once or twice each month. The satellite technology is there, but few institutions are prepared to pay for such novelty services. Others claim that their teachers and students do not speak foreign languages, so they do not request lecturers from universities abroad.

Some future activities of the Kyrgyz Academy of Sciences will include the extension of the Silk network to Universities located in the south of Kyrgyzstan, especially in Osh, the second largest city of Kyrgyzstan. The Academy is lobbying to receive a subsidy from the government in order to interconnect southern Universities with a fiber optics channel. However, according to Karabukaev, at the moment officials are not providing the necessary support - negotiations at the level of governors of southern provinces have failed so far. Kyrgyztelecom, the state telecommunications company, claims that to subsidize such projects would be against the antimonopoly law. Karabukaev complains that such a situation is unfortunate especially when compared to Kazakhstan where the government is supportive of similar initiatives and provides subsidies whenever it can.

So far, the bandwidth provided to the Kyrgyz Universities within the Virtual Silk Highway Project is mainly used as a fast connection to the Internet, and local partners still have to develop scientific exchanges with institutions abroad or for distance education projects, possibly by means of NATO Networking Infrastructure Grants.

Noted below is the example of two Kyrgyz Universities connected to the Virtual Silk Highway. Their experience with the project is shown and some of their initiatives in the field of distance education are described.

Institute of New Information Technologies

The Institute of New Information Technologies under the Kyrgyz National University of Construction and Architecture is one of the members of the KRENA. It is using the technology provided by the Virtual Silk Highway project to tryout some distance education applications. The Institute designated one conference hall to be equipped with projector, cameras, television sets, screens, and fast Internet connection for conferencing using video.



In 2006, two students from the University went abroad on exchange programs. In order to graduate from their home Institute without coming back to Kyrgyzstan they defended their theses distantly. The defense was organized via videoconferencing and students presented their thesis projects from the USA and Germany to a panel of professors in Kyrgyzstan in an interactive session. It proved to be a useful and interesting experience which can be repeated.

Occasionally, the Institute conducts interactive videoconferencing sessions with German and French Universities for selected groups of students. However, according to the instructors of the Institute, one of the difficulties is that few students know these languages well enough to benefit from the lectures of foreign scholars. Also, due to the time difference many students cannot attend live lectures late at night.

In 2003, the Institute became an academic affiliate of Moscow State University of Economics, Statistics and Informatics by means of the distance teaching infrastructure. Today this Kyrgyz affiliate enrolls about 100 students. They start their education offline while attending a series of obligatory lectures in the Institute and later they continue with taking courses online. The Institute provides them with literature, electronic books and assignments via Internet. The workload and list of subjects can be selected individually. In principle, a student can complete the program in three years instead of the traditional five years.

According to Kerinbek Osmonov, Director of the affiliate, this project is possible due to the fast Internet connection which the Virtual Silk Highway provides. With this bandwidth their students also have a possibility to attend lectures of professors from Moscow via videoconferencing but so far not many of them have expressed a desire to do so. "Distant education requires certain intellectual level and preparedness, motivation from students which is not always there, unfortunately." Osmonov commented.

The advantages of distant education for students are obvious. Distance education costs less, about USD 260 per year while standard education costs about USD 450 per year. Also, there is no minimum number of students needed for the course to take place - if just one person wants to study a specific subject in a semester he or she can enroll.

The Institute is considering new programs on distance education to be organized for students from the United Arab Emirates and Kazakhstan who would like to receive a Russian diploma but cannot afford to study in Moscow or Saint Petersburg. They could easily stay and study at an accredited Russian affiliation in Kyrgyzstan where living expenses are much cheaper and the education itself costs less.

In general, according to Beishenbek Ukuev, Director of the Institute of New Information Technologies, distance education could contribute to the solution of many problems in Kyrgyzstan. More young people from rural areas who traditionally leave home after high school to study in the capital Bishkek or abroad would be convinced to stay. The country could stop losing its educated specialists if they had an opportunity to integrate into the world's intellectual community while being in Kyrgyzstan.

International University of Kyrgyzstan (IUK)

A few years ago, as members of the Silk Highway, IUK teachers participated in courses on economics and macroeconomics organized by the World Bank, the London School of Economics, the Russian School of Economics and other educational institutions. Nevertheless, the initiative died when financing of the project stopped, according to Vladimir Grebnev, Director of the Center on Distance Education at IUK.

Grebnev claimed that scientific exchanges among the Universities in the region are not taking place as expected within the Silk Highway due to economic and logistical problems among the Universities themselves. Partners so far have not developed effective models of interaction: "We could not agree on how to pay each other for a distant course, how to make it a part of the curriculum because educational programs at various Universities are so different." He believes that the Silk project indeed has provided a much needed satellite backbone communication lines to the Universities, but on a large scale the local partners are failing to develop content worth sharing regionally or even to be beamed to remote provinces in Kyrgyzstan.

Since 2001, IUK has developed its own distance education projects in partnership with the Russian Modern Academy of Humanities. Together they established the Kyrgyz-Russian Institute of Distance Education that is now operational within IUK. The Russian Modern Academy of Humanities is considered to be the best example of the effective use of distance education technologies in the former

Soviet Union. It is the biggest non-state educational institution in Russia, using satellite technologies, with some 170,000 students and 700 affiliates functioning in Russia and all countries of the former Soviet Union. It leases communication capacity on the two Russian satellites Express AM2 and Yamal 200-1, developing its own educational content and unique pedagogical models for distance education. In addition, the Modern Academy of Humanities has its own educational TV channel which is available to an estimated 8 million people worldwide via satellite, cable or Internet.

Affiliates in each country are provided satellite dishes and necessary networking gear in order to receive educational programming. Some 70 percent of the telecommunications equipment for Kyrgyzstan has been provided by Russian partners (including earth stations, servers, and test equipment) as a part of a credit which IUK paid off in two years.

Today, in the Kyrgyz Russian Institute of Distance Education, students can receive a Bachelor's degree in law, economics or computer science. The cost of education at the University is USD 350 per year. About 25 percent of tuition is paid back to the Modern Academy of Humanities as a fee for the educational content and services.

Three signals beamed via satellite include 1) video content and lectures, 2) administrative information, news and special programming for Cambridge distance course on European law 3) other data.

Each course consists of a certain number of blocks or "units". For each unit, students receive a minimum amount of information in textbooks which he/she needs to learn from the course and students can also attend video lectures and undergo training online.

The University has two labs; one is equipped for live lectures and videoconferencing sessions, the second one is for individuals who use the prerecorded video material. Live lectures are conducted by professors from Russia as a one-way audio and video stream. These lectures are simultaneously received by all affiliates of the Academy. According to the staff of IUK, it is not always convenient for students to attend live lectures due to the time difference with Russia. That is why 85 percent of the lectures are recorded for later viewing. Interactive conferences on selected subjects are also organized, on average, once per month.

The University appoints an instructor for each block of subjects who works with students by email discussing with them the aspects of the material which they have not understood from the lectures and from the readings.

The educational video content beamed from Moscow is actually available to anyone who has a satellite dish. The schedule of lectures is published on the

University's web site and, in principle, any person can take the course. There is some concern over the non-paying student and violation of copyright. In the near future, the Academy expects to encode the content.

There were 59 students who entered the Kyrgyz-Russian Institute on Distance Education in Kyrgyzstan in 2001; only 16 of them graduated in 2006. Some of the reasons for such a small number are thought to be that the Russian educational system imposes stricter requirements than those typically expected in a Kyrgyz University. To persist, students need to have strong motivation, ability to work independently with little guidance and a certain degree pressure from professors. Also, it is well known that the system of higher education in Kyrgyzstan is highly corrupted and students are used to bribing professors or "talking them into" a better grade. Distance education eliminates this human factor. Some students complain that it is difficult to study without having personal face to face interactions with their instructors.

In 2007, 300 students are studying at the Institute and IUK is not planning to enroll more as it is quite challenging to maintain such a technically complicated infrastructure. The University recently opened affiliates in the towns of Osh, Jalalabat and Karakol where separate groups of students are also taking some courses that are taught at a distance.

Distance Education reconsidered

Kyrgyzstan has about 50 Universities which is too many for such a small country. Educators, politicians, and students agree that this big number of higher education institutions inflates the quality of education - thousands of young people graduate with degrees each year but they do not have proper preparation for the real job market and cannot find employment according to their specialization.

Many experts agree that instead of a large quantity of Universities the country needs an educational system with a stronger emphasis on vocational training, retraining and improving qualification of existing specialists where distance education technologies should be applied selectively in the coming years.

According to Gajewski, one of the most important questions is the proper choice of a target group, ideally with high motivation to learn and appropriate methods of e-learning. One such exemplary e-training course is being developed now by NATO for 11 countries, including Kyrgyzstan, for the first contact psychologists dealing with victims of natural catastrophes, wars, terror acts. Within the project in Kyrgyzstan participating clinics will be connected to the Internet portal on the Silk network to provide professional help to individuals and communities affected by terrorism or disaster. Gajewski emphasizes the importance of taking into consideration the language problem (content not only in Russian and English, but also Kyrgyz) and mentality, traditions, religion of target groups when developing e-training modules for similar projects.

RELATED LINKS

- <http://www.silkproject.org/> - official web site of the Virtual Silk Highway Project.
- http://www.nato.int/science/virtual_silk/index.htm - NATO funded studies and projects - The Virtual Silk Highway.
- http://www.nato.int/science/publication/pdf/virtual_silk_highway.pdf - Description of the project.
- <http://www.ist-occasion.org/> - Occasion project.
- http://www.unesco.kz/education/he/kyrgyz/iuk_kg_e.htm - International University of Kyrgyzstan, Kyrgyz Russian Institute of Distance Education.
- <http://www.muh.ru/> - Modern Academy for Humanities, Russia.
- <http://www.mesi.ru> - Moscow State University of Economics, Statistics and Informatics, Russia.