

# Recent E-Learning Initiatives Related to International Training in Official Statistics

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## Abstract

Recently the United Nations Statistical Institute for Asia and the Pacific (UN-SIAP) in Japan started an initiative to develop an E-learning system in order to expand the effectiveness of its limited resources. This paper describes the specificities of the international training environment of the Institute and the potentialities of E-learning in this system. SIAP appeals on the international community to cooperate with the institute in its efforts to realize a successful implementation.

Récemment l'Institut Statistique pour l'Asie et le Pacifique des Nations Unies (UN-SIAP) au Japon a commencé une initiative pour le développement d'un système d'E-étude afin d'augmenter l'efficacité de ses ressources limitées. Cet article décrit les spécificités de l'environnement international de formation de l'institut et les potentialités de l'E-étude dans ce système. SIAP en appelle sur la communauté internationale pour coopérer avec l'institut aux efforts de réaliser une exécution réussie.

## 1. International Training in Official Statistics by SIAP

SIAP has the mandate to train governmental officials of developing countries in the UN-ESCAP region in all aspects related to the production and analysis of official statistics. The Institute organizes courses in its own premises in collaboration with JICA (Japan International Cooperation Agency) or in overseas locations; the latter in principle jointly with the involved national statistical organization. With exception of country-focused programs, the admission is open for participants from the whole region or from specific sub regions. Yearly repeating Japan based curricula are, amongst others: 'Modules on core official statistics' (6 month), 'Statistical computing for trainers' (2), and 'Interpretation and analysis of official statistics' (2). Courses in the outreach program vary in duration from 1 to 4 weeks; examples are: 'Sampling surveys', 'Disability statistics', 'Poverty indicators' and 'Human Development Reports'. In addition to the course programs SIAP started recently a system of research fellowships in which participants may complete a 2-month research project under guidance of faculty members of Institute.

On a yearly base, between 300 and 500 participants attend SIAP's courses. The number of Participants Course Weeks counted for about 1350 in the year 2000. This is just a minimal fraction of the training needs of the National Statistical Organizations (NSOs) in the ESCAP-region, which was tallied in a survey in 1999 to be more than 6000 potential trainees. The educational level, work

experience and position of the course participants diverse immensely. This heterogeneity influences, undeniable, the effectiveness of the programs and offers an additional challenge to the lecturers who already have to cope with the consequences of a multi-cultural and multi-racial environment.

In principle, all courses and fellowships are completely free for participants. In case of attendance of a course in another than the home country, reimbursement is even made of additional costs as travel and daily subsistence. The attractive financial conditions are possible thanks to the generous provision of facilities and financial contributions by the Japanese government and, on a more modest scale but still substantial, by other national governments and international organizations like UNDP and World Bank.

United Nations SIAP has a relatively small staff with a director, deputy director cum lecturer, 5 statisticians/lecturers, 1 training assistant and supporting staff. In addition to the UN-staff, a special unit, assigned by the Japanese Government, provides organizational and administrative support. For the conduct of its courses SIAP regularly appeals on external lecturers.

## **2. The future of E-learning for training in official statistics by SIAP**

The programs of SIAP are relatively expensive, not always adequately effective and certainly not satisfying the enormous needs for well trained statistical staff in the region. Higher quantities of alumni may easily be realized by the implementation of distance education. Obvious other advantages are the elimination of time and place barriers for the training and the possibility for individual participants to work in their own pace and with minimal disturbance of their daily tasks. SIAP is momentarily focusing on E-learning: enabling the transfer of material and the subsequent communication interaction between teachers and students via electronic media and more precisely via Internet. A strategic consideration for this choice is the fact that the introduction of E-learning fully complies with priorities and initiatives for addressing the International Digital Divide as recently defined by as well as the United Nations as the Japanese government. Usage of modern communication technology for human capacity building and education in developing countries are key elements in the proposed action plans.

A possible scenario for distance education could be that within the NSOs supervisors are designated, who organize the administrative and organizational matters and deliver practical support to enrolled staff members. The trainees may access the Virtual Statistical Training Institute via the Internet on their own computers or, and even preferably, on the high tech equipment, which is installed in locally set-up study centers. Provisions could be offered to the students to transfer training material to their own workstations in order to continue the study activities on other times and in other locations. The E-learning courses will contain structured 'lessons' together with printable reference documentation and links to other information resources. Depending on the contents and the character of the course, interactive demos or exercises may be incorporated in the material. Each course offers, furthermore, to the participant the possibility to access the virtual discussion-room for the communication among each other and with the training staff. Exactly the same as in the traditional classroom, the discussions are a fruitful instrument in the learning process. Finally, each lesson concludes with a test or assignment to ensure whether the student has

understood the subject and -equally important- to assess whether the quality of the course material was satisfactory. Preference will be given to centrally monitored automated self-testing. In case of online final exams for certification, a construction has to be sought to guarantee the 'authenticity' of the examination candidate. Each course will most probably have two modes: standard is the active course during a pre-fixed certain number of weeks in which a pre-determined number of participants is allowed to communicate within the virtual class room. Outside these periods the material and -even the self-testing system- could be kept accessible, but now the 'inactive mode'; thus, without teacher support and may-be without a final certification.

In a concept as sketched above, the four implied groups at the side of the training-organization are the 'contents'-providers, the supervising trainers, the course administrators and the computer technicians. Application of new technology in an integrated network system makes it possible to un-bundle the various activities. The actors don't need any longer to belong to the same organization or to operate in the same location and on the same moment. For the specific situation of SIAP this may open unlimited ways for expanding its activities. Many qualified potential contents-providers are operating in the worldwide circuits of official statistics. Involvement of these experts in the design of the course material and the supervision of courses would substantially enlarge the available training capacity. Technical support can be sought at donor organizations and further enhancement is, according to SIAP's expectations, realizable by the set up of cooperative associations with other institutes and the private sector. The specific action plan with regard to the promotion of IT in the area of distance education within the Japanese ODA program could hopefully become a stimulating source for assistance.

The proposed E-learning system offers for the Statistical Institute for Asia and the Pacific several additional advantages. The involvement of 'outside' expertise in combination with the active contribution of lecturers, learners and ex-learners will enable SIAP to expand in an incremental way its knowledge-base related to official statistics, which has to be considered as an indispensable element of the training environment. The foreseen parts of this data base are: documentation on statistical methodology, application of Information Technology and best practices, links to statistical data bases, reference material and contact-addresses. Another important benefit of a large-scale E-learning would be the fact that the same infrastructure and contents may be used for in-house training in the national statistical organizations. Adaptation of the material to the local circumstances and translation into the national languages will make it much easier to reach a larger critical mass. A side effect, but of high importance, of the sketched E-learning system will be the linking with each other of students, teachers and experts from different social, cultural, economic and experiential background. This may contribute to the improvement of the mutual understanding and the extension of the international friendships and exchange of knowledge and experiences.

On the longer term, the introduction of E-learning will certainly lead to a revision of the training policies and curricula of SIAP. Distance education will evolve into the preferred instrument for the wide scale training in practical aspects/methodologies/tools and production and interpretation of official statistics. Subsequently the, expensive, Japan based programs could be targeted to trainees with either higher management perspectives or with potential to become senior specialists or

trainers. Country training deserves in the future to get more the character of on-the-job training with clearly defined product deliverables. Lastly, regional courses may migrate into workshops, dealing with emerging issues in official statistics, like environmental-, poverty-statistics, quality management and Information Technology. The results and materials of all courses will obligatory be incorporated in the knowledge base of the Virtual Statistical Training Institute.

### **3. The European VLCATS project for the training in official statistics**

In Europe a project with the name Virtual Library for Computer Assisted Training in Statistics (VLCATS) is set up within the 5th Technology Framework Program of the European Commission. The project, carried out by a consortium of private sector companies plus training institutes, commenced in March 2000 and has as completion date ultimo December 2002. The total budget counts for 2.6 million Euros, of which 50% is funded by the European Commission.

The defined final deliverables looks similar to the potential 'technical infrastructure' for the E-learning system of SIAP. Unclear is to what extend this will be different from on-the-shelve solutions for E-learning as offered by the commercial market. Per definition the primary objective of Framework programs is the development of practical applications for Information Technology. That could be a valid reason for a focus more directed to technology than to contents. However, parts of the documented deliverables are as well as electronic courses, addressing areas of interest to Official Statistics, as standards with respect to the structure of teaching material.

This European project is for SIAP certainly interesting and the Institute intends to take initiatives to explore potential partnerships. Openings are already offered in the statement of the VLCATS consortium on possibilities for statisticians and institutes from non-EU countries to benefit from the knowledge gained in the EU countries.

### **4. Conclusions**

For the United Nations Statistical Institute for Asia and the Pacific the initiative of E-learning is a great challenge. Its implementation could lead to a substantial increase in trained statistical staff in the region and -since E-learning is not location bounded- most probably even on a global scale. The time appears to be ripe for a fast effectuation and for adequate actions. The political intension to narrow the Digital Divide and to use E-learning for Human Capacity Building in developing countries is certainly manifest. The technological conditions are becoming more and more favorable. However, a strong network of partnerships is necessary for a soon and impartial realization. Therefore SIAP invites interested (statistical) communities, like national and international organizations and institutes, private sector companies, educational institutes and governmental offices, to participate in the network and to assist the institute with its appealing new task.

### **RESUME**

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