Co-operation with Educational Institutions: a Strategic Challenge for Statistical Offices

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1. Advancement of statistical literacy and user skills

Knowledge of statistical information and of its use is needed everywhere in society. One key task of statistical offices is to advance the use of statistics and statistical literacy. Knowledge of statistics and statistical literacy are similarly needed both to understand and analyse everyday information and to support decision-making.

Statistical literacy has been defined in various connections (see e.g. Gal 2002, Wallman 1993, Watson 1997). In general, statistical literacy means the ability to understand statistical regularities and principles, concepts and methods. All need basic statistical literacy to comprehend everyday news information since numerical information and statistics are constantly flooding through different media. Many actors in the information society also need more in-depth information to support their reporting, data collection and decisions and interpretation of numerical information.

Statistical offices have various means of advancing the use of statistical information, such as communication and education, production of easy-to-use products and services and development of different distribution channels for dissemination of statistical information. One major way of furthering the use of statistical information and of developing the operation of the statistical office is co-operation and networking with the key customers and interest groups.

Co-operation with educational institutions provides a multidimensional field for disseminating statistical information more widely to society and thus enhances the socially responsible activity of statistical offices. Through co-operation with educational institutions statistical offices can work within two time spans. In the short term they can provide their inputs for different teaching programmes, teachers' further education and research in the educational sector. In the long term young people are being raised into future information users, decision-makers and data providers in co-operation with educational institutions. Networking with educational institutions is also vital for the recruitment measures of statistical offices.

2. Development of customer-oriented services and products

Any actions directed to different user and customer groups require of the statistical authorities profound knowledge of their users and customers and of their activities. The strategic challenge is to understand the needs of different user and customer groups and set goals for meeting them. In addition to the social responsibility of statistical authorities, this goal setting is also steered by their striving for a profitable activity, continuous product development and new innovations. In this connection, systematic management and development of customer relations (Customer Relations Management) is often mentioned. The services directed to different target groups are based on segmenting of customer groups, in which case services can be planned to meet the needs of each target group. A concept used alongside Customer Relations Management is eCRM. This concept was created as a result of the new customer service potentials created by the development of technology, information networks and information technology (Brown 2000, Greenberg 2001). The use of information technology is essential for the educational sector.

The ultimate goal for Customer Relations Management is partnership with the customer. For a statistical authority important information can be obtained through partnership to support product

development, for instance. As a result, more customer-oriented products can be produced, which is of mutual benefit to both customers and statistical authorities. Satisfied customers are the best advocates for a statistical organisation and in this way they can increase people's familiarity with the services it provides. (Clark & Payne 1995; Payne 1995).

Statistical offices' co-operation with educational institutions is founded on all the objectives regarding educational institutions, such as teaching of statistical literacy and dissemination of statistical information generally to society. In addition, specific goals should be set for different educational sectors. Segmenting and its action programmes can cover such as:

- Universities and institutions of higher education
- Polytechnics
- Vocational education
- Upper secondary schools
- Comprehensive schools
- Early education, and
- General education.

After segmentation the action plans and co-operation modes are planned for each target group, which could consist of such as organisation of training, production of learning materials, creation of segment-specific webpages, dissemination of statistical data, research co-operation, sale of products and product development in collaboration with the educational institution.

3. How different statistical offices promote co-operation with educational institutions

Increasingly many statistical offices use networking with the educational sector and co-operation with educational institutions and their different activity forms as a major way to enhance the use and knowledge of statistics. Part of the International Statistical Literacy Project was to discover how national statistical offices further statistical literacy and user skills.

As a whole, the mission of the **International Statistical Literacy Project (ISLP)** is to provide those interested in statistical literacy with information and resources and to aid them in the development of statistical literacy around the world. At present the main focus of the project is on the development of a series of webpages that will provide users with resources that are useful for the development of statistical literacy at all levels from Primary/Elementary School through Adult Learners. There are also webpages for journalists and the mass media. Further, there is a webpage devoted to useful datasets and a webpage listing statistical literacy projects, websites, etc. that have been developed by national statistical offices, national statistical societies and other non-profit organisations (http://course1.winona.edu/cblumberg/islplist.htm).

National statistical offices have their own webpages within the ISLP project: Descriptions and links to training programs and learning material sponsored by national and international statistical offices. At the moment, the pages contain descriptions of the training programmes and learning materials produced by 27 national statistical offices or international organisations. The information on the pages was collected in 2003-2004 by an extensive inquiry. More information is added to the pages all the time. The general tendency seems to be that more and more is being invested in services for educational institutions and different co-operation modes. The Internet and the web learning environment create increasingly better opportunities for this. Several statistical offices already offer web learning materials through the Internet. One of the top countries in co-operation with educational institutions is Statistics Canada, which has many years of experience of providing various kinds of services for different educational sectors.

4. Statistics Finland's experiences of co-operation with educational institutions

In Statistics Finland's development of customer relations educational institutions are defined as one of the key customer segments. In addition to educational institutions, Statistics Finland's other key customer segments are such as local administration, central administration, business,

research and organisations. The strategic and key customers for the agency are specified within each segment, whose development is assigned to cross-statistical teams and specially named customer-specific responsibility persons. The educational institution segment is divided into sub-segments, of which Statistics Finland at the moment gives particular attention to co-operation with polytechnics, universities and institutions of higher education. Co-operation with the other educational sectors mainly occurs through visits to Statistics Finland by students of different institutions. In customer work with educational institutions Statistics Finland has focused on advancing statistical literacy and user skills and on increasing the competence capital in statistics.

Statistics Finland has for years been organising customer training. In recent years customer training has worked particularly on the web learning environment and web learning materials. Statistics Finland's web learning environment at the moment includes a web school open to everybody, study entities tailored for polytechnic instruction and a closed web learning environment used to support multiform teaching.

The target group for the Web School is users of Statistics Finland's webpages. The material is suitable for educational institutions as support to mathematical and social subjects, for example. The study material does not require any prior statistical knowledge, so it is also well suited for adult students improving their general education. The material intended for self-study is composed of exercises and examples from genuine statistical data. Statistics Finland's Web School has regularly received positive feedback from numerous students and teachers of different subjects. The positive comments have particularly concerned the Web School's ability to clarify things that are difficult to understand and handle.

In the project Virtual Statistics – statistics into part of polytechnic instruction – Statistics Finland and its partners, City of Helsinki Urban Facts and three pilot polytechnics, Helsinki Business Polytechnic Helia, Helsinki Polytechnic Stadia and Arcada Polytechnic, offer to polytechnic staff further training related to statistics. The project aims to strengthen management of statistical information and to incorporate it into polytechnic teaching. The project is supported by the European Social Fund.

The Virtual Statistics project is based on needs surveys conducted at the polytechnics. Training is provided in lecture-based training events and as self-study on the web. The training focuses on basic statistical methods and concepts and economic statistics. The overall aim is that statistics could be integrated into practical teaching and teachers could utilise the study packages directly for their lessons. The web learning materials would also support teachers in their further training. The fundamental objective of the training of educational staff is to distribute knowledge about statistics through them to polytechnic students.

Collaboration between Statistics Finland and universities is quite versatile. Statistics Finland co-operates with the University of Jyväskylä Master's programmes in statistics and economics, from which Statistics Finland takes in undergraduate trainees every year, similarly as from other educational institutions. Research and teaching co-operation is ongoing with other university departments, such as Statistics, Political Science, Economics, Sociology and Information Systems. As an example of teaching co-operation, Statistics Finland has arranged the Summer School of National Accounts for students of economics and other university lecture series on statistics. In addition, the services of Statistics Finland's Research Laboratory are offered to support thesis work.

5. Co-operation between statistical offices as a challenge

Advancement of statistical literacy and user skills is a challenge for each statistical office. The educational content is the same for all statistical authorities: understanding of statistical thinking, statistical concepts, regularities and methods. The new technology enables learning from the experience of others and acquisition and distribution of open information on the kinds of services and learning materials that have been developed to support customer services of statistical offices. Through co-operation and exchange of experiences the services offered to educational institutions can be developed into more functional and customer-oriented. Statistics Finland's materials, which

will also be translated into English and Swedish, will be available worldwide to all those in need of statistical information.

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RÉSUMÉ

Cet exposé décrit l'importance de l'enseignement de l'aptitude à lire et à utiliser les statistiques, et celle de la coopération avec des clients dans l'activité de l'institut statistique. Pour les instituts statistiques la coopération avec les établissements d'enseignement constitue un moyen primordial pour promouvoir l'aptitude à lire et à utiliser les statistiques. L'exposé est constitué en partie d'une enquête réalisée dans le cadre du projet de l'IASE (Association internationale d'éducation statistique) et des expériences de la Statistique Finlande en matière de coopération avec le secteur de l'enseignement. L'exposé donne également un aperçu plus détaillé de l'école en réseau ouverte de la Statistique Finlande et du projet coopératif Virtual Statistics (statistiques virtuelles) réalisé avec les écoles supérieures d'enseignement professionnel. Les établissements d'enseignement et les écoles supérieures sont considérés comme des clients et des partenaires coopératifs importants du point de vue stratégique, et également comme des partenaires pour le développement de produit.