



## Developing Ambassadors of Statistics

Petteri Baer\*

Statistics Finland- [petteri.baer@stat.fi](mailto:petteri.baer@stat.fi) - [petteri456@hotmail.com](mailto:petteri456@hotmail.com)

Organizing training on statistical items provides organizations making use of statistical information and individuals participating in these training courses with a deeper and broader understanding of statistics. Providing training services brings along numerous benefits also for the organizer, usually the National Statistical Institute. This presentation counts up and highlights the benefits of organizing short training courses on statistical items based on the over 30 years long experience of Statistics Finland.

**Keywords:** Statistical training, Understanding statistics, Evidence based decision making, Presentation skills

For more than 30 years Statistics Finland, the National Statistical Institute of a small arctic country in Northern Europe, has systematically provided chargeable training services to adult external users from different organizations on items, deepening the knowledge and understanding of official statistics.

The core idea of this training activity is to increase the number of persons in a great variety of user organizations have accumulated a more thorough and deeper knowledge and understanding of statistical items. Participants in the usually one-day training courses on statistical topics have become – sometimes even without noticing it themselves – *Ambassadors of Statistics* in their own work environment. Resulting from this training activity, the *Ambassadors of Statistics* are able to provide advice to directors, colleagues and work mates in their own organizations on how to use different statistical source materials. They know where to find statistical information, they know how often they are updated or whom to contact when more information or a deeper insight in the use of data is needed.

This training activity has been a win-win undertaking, bringing benefits both to the participants in the training courses as well as to Statistics Finland. Corresponding activities, but maybe on a smaller scale, are carried out by the National Statistical Institutes (NSIs) in other Nordic countries - Sweden, Norway and Denmark.

In fact, calling this activity a win-win undertaking may be too modest. This presentation will provide an insight and understanding of the reasons, why the work on developing *Ambassadors of Statistics* should rather be classified as a win-win-win-win-win activity.

### **All organizations need good publicity – Win number 1**

Statistical agencies produce their data, service databases and media releases not “as such” but for being used. The “raison d’être” of statistical agencies is the need of information different organizations, decision makers, researchers and citizens have for having a more or less precise understanding on the state and the development of social, economic, environmental and other phenomena. Statistics are not produced for archives or historic research, although also these are important users of statistical information<sup>1</sup>.

---

<sup>1</sup> As W. Edwards Deming noted already back in 1942: “Data are not taken for museum purposes; they are taken as a basis for doing something. If nothing is to be done with the data, then there is no use in collecting any. The ultimate purpose of taking data is to provide a basis for action or a recommendation for action”.



It is the continuous need for decision making, understanding and learning which makes statistical information so important. The enhanced importance of statistics today has invited wide circles in society to consider “Statistical Literacy” to be important in the same way as the overwhelming amount of information makes it necessary for civilized individuals to pay attention to keeping up “Media Literacy”.

Statistical agencies do numerous efforts to spread their information and knowledge of relevant statistical sources to a wide range of users. Media and press releases highlight sources and information, deriving from fresh statistical data. The internet is a good tool for spreading the information, acting also as a good data-searching tool.

Statistical training provides a deeper insight for users of statistical information. Statistical training highlights how the data has been collected, basic methodological issues, interesting comparisons over time and over geographic entities, where and how frequently fresh statistical information on this and that topic can be obtained. Participants of statistical training courses usually obtain a role as information sources and, possibly, opinion leaders on statistics in their own constituencies and organizations. Actual and factual information is spreading. Improved understanding of quality and accuracy emerges, knowledge of the richness and the limits of statistical sources become better known. Statistical information is not perceived anymore as data solely on GDP, prices and unemployment. Eyes open up to see the richness and quality of the data supply official statistics<sup>2</sup>.

In order to defend and increase the amount of resources for statistical production and development of statistical services – be they budgetary, revenues from chargeable services or allotments from funds supporting scientific research and education – statistical agencies need to have an increasing number of users and friends. Statistical training assists strongly in promoting this sort of goals. As the saying goes: “Only used statistics are useful statistics”.

### **All decision makers need facts and evidence – Win number 2**

Imagine a country, about which there is no information available about the GDP, neither on the level nor on its growth rate. Imagine a country for which no information or only heavily distorted information on price changes are available.

On what kind of information would it be possible to monitor the recent development? What sort of information would investment decisions be made on? What sort of information would estimations on the efficiency of the government’s economic policy be based upon?

Reliable and comparable statistical information has become one of the infrastructural cornerstones of any developed society. Concerning key economic data this goes without saying. A great variety of social phenomena, environment, and well-being cannot be monitored or even discussed without access to relevant statistical data. In recent years, we have been inspired with discussions and efforts of measuring even human happiness by statistical methods.

Today no bigger investment decisions are made based solely on the feelings or “business nose” touch of the capital owner. No public administration prepares construction works without abundant planning work on cost calculations, scenarios and revenue expectations. In all this sort of work accurate and up-to-date statistical information is an important and unavoidable element.

Not only for evaluating and estimating the future but also in monitoring the past, statistical information is of vital importance. Finishing a big project without monitoring the observed development with the original goals is in today’s world considered incomplete. During election campaigns the by official statistics observed development is compared with policies and promises of governments, be the commentator from the oppositional, the governmental or a non-partisan side.

---

<sup>2</sup> About the role of statistical information in decision making, see Petteri Baer: Proactive is the Magic Word, in Country-led monitoring and evaluation systems, UNICEF, New York (2009), pp. 158-165



Trustworthy statistical information is one of the key preconditions for a well working democratic society.

For all the reasons, highlighted above, access to statistical information and knowledge of statistical sources are important. Statistical training provides a closer and deeper insight into these, be the need of this emerging from decision-making processes, research or analysis in the business or public sector, in the media or education. Safeguarding and defending interests, lobbying or promoting a cause can today less and less be based on beliefs and prejudices. “What are the facts?” “With what do you motivate your standpoint?” “What has the recent development in this field been?” are questions, which are impossible to respond without statistical information. Sole strong opinion statements, which are not backed with facts, are not taken seriously. Statistical training provides good tools for coping better in this sort of situations.

### **Direct feedback builds bridges between users and producers of statistical information – Win number 3**

Not in all, but in numerous cases, professional statisticians work in an environment which is quite specific and to a certain extent apart from other parts of “normal business” and public administration. Producers of official statistics are in possession of quite developed – and with this quite complicated – methodological standards and rules, they have a good insight into production structures and IT methods of statistical work and, in most cases, production of statistical information takes place under harsh time constraints. When the statistical material of the previous quarter has been finalised, the need to commence the production of the statistical material of the next quarter is already banging at the door.

Very little or no time is usually allocated to work related to dissemination and spreading the statistical information just finalized. Very rarely producers of regularly published statistical information have time to think about developing the presentation forms. Simply inserting new figures into old presentations is a frequently used shortcut. Time pressure often prevents statisticians in the daily routines from communicating the findings of the statistical work with users. Not to speak about communication with potential users of the produced material. Dissemination, marketing or explaining statistical results is often concerned to be the responsibility of “others” in the statistical agency. Statistical agencies tend, for a number of reasons to be product oriented - building relations to users may be concerned to be of no importance at all. “Our work is to produce statistics”. Full stop.

In a training situation, questions and answers are a normal element of the learning process. When a statistical expert provides his or her audience with background information about statistical topics, questions arise, answers provoke additional questions, the entire interactive situation generates discussions, and different viewpoints are exchanged. Training courses provide besides answers to the trainees also increased understanding of the users’ aspects to the presenters. Discussions in training courses provide important feedback to presenter-statisticians about additional aspects to the statistical observations, about improved possibilities to make the topic or the statistical results understandable, about new and more modern technological ways to spread the statistical information.

It is not rare that trainers of courses on statistical topics express their gratitude both to the audience and to the organizers of the training courses for the interesting and good feedback received in the training situations. Without the training activities for external users, the amount of direct feedback and discussions would be much more limited. A qualitative aspect on the feedback provided in training courses is additionally that participants usually belong to the “correct” target group for providing feedback – contrary to replies coming from often superficial pop-up questionnaires and less targeted feedback requests.

Summarized feedback from questionnaires individual course participants have filled in after each training course also provide valuable first-hand information, assisting statistical agencies to develop their services.



#### **The need to overcome introvert attitudes – Win number 4**

The stereotype of a statistician is a professionally dedicated and generally introvert person. The stereotype statistician has already in university chosen statistics, possibly because he gets kicks of solving mathematical problems by himself and enjoys working with figures in a concentrated manner. When invited to present his knowledge to an audience in a training situation he prefers to talk to the screen or the blackboard where his presentation is reflected.

Practice shows that the main part of fear of teaching and non-pedagogical presentation habits can be overcome. In fact, more easily than it is often believed. Besides good instructions about basic ways to prepare and present a good lecture, accumulating practical experience in presenting is needed. And vice versa – without practice no progress in presenting techniques can be obtained.

Training courses for external users have in Statistics Finland shown to be a very good way to invite partly reluctant statistical experts to gain additional experience in serving as presenters in different situations. The number of good presenters grown substantially through this kind of accumulated practical training experience.

#### **Good presentation skills is a key to success – Win number 5**

In a globalizing world, professional statisticians need good presentation skills more than ever. In the framework of the European Union and other regional organizations, statisticians often come together for jointly decisions on professional issues of mutual interest, to decide on schedules, upon ways to finance projects and other matters. With lousy or inexistent presentation skills, it may be difficult to defend one's own position, especially as the discussions take place in a for most participants foreign language or with the delay of interpreting.

Building relations to people from different categories of statistical users and customers is a work, in which presentations skills are of great importance. Catching the attention of new potential customers and users of statistical information may be cumbersome without developed presentation skills. It is vital, that the relation builder has a "touch" of the spheres of interests of the audience and that he or she is capable of adjusting the presentation or discussion in accordance to that. Monotonous presentations about issues related to statistical methodology or production techniques are usually not the best starting point for igniting interest in the statistical services available.

During training courses, organized by Statistics Finland and other statistical agencies providing this sort of activities, experts of the organization receive as a "side product" of their own presentations good training in mastering presentation situations. The presenter accumulates experience in presenting and learns practicalities from training situations.

In these ways, the systematic training activities for external users of statistical information also serve as an additional internal training structure, assisting key experts and staff members of the statistical agency to improve their presentation skills.

#### **Revenues from training services cover the costs and assist funding new development – Win number 6**

Training external users of statistical information by the statistical agency is not a gold mine of revenues. The main function of this activity is to promote the use of statistical information as well as to support the contact building activities of the statistical agency. The training activities are organized for the aim of fulfilling the strategic goal of making statistical information better known and more understandable for decision makers, research and education as well as to citizens in general.

In Statistics Finland, statistical training for external users has from the very beginning in 1985 been defined as an "additional" activity in support of the basic core processes of the agency. The training activities for external users have all the time been developed and maintained as a chargeable surplus service of the agency.



Throughout the three decades, the quantity of training courses provided has fluctuated. At its lowest, there has been only some ten chargeable courses annually. In years of more intensive work on training, the number of chargeable training courses has amounted to 40. In 2010 – 2014, the number of chargeable training courses for external users fluctuated between 10 in 2010 and 28 in 2011. In this year, 2015, the number of this sort of training courses will be around 25.

Most of these training courses are open for anybody to participate. They are advertised on the web site of the NSI and through direct marketing activities using targeted e-mails to selected categories of potential users, depending on the content of the training course marketed. Additionally, some businesses and organizations in the public sector order specifically for them customized chargeable training courses. The inspiration for requests for customized training courses usually comes from the promotion activities of the open chargeable training courses.

Additionally to the presented forms of chargeable training activities, Statistics Finland organizes numerous sorts of internal trainings, including IT trainings. In part of these trainings, producers of official statistics from other organizations are entitled to participate. On the web site of Statistics Finland, a “Statistical School” training program can be found, consisting of eight modules presenting the most important fields of statistics electronically. Statistics Finland is also actively involved in the European Statistical Training Program (ESTP), organized by Eurostat. In this context, two or three international training events are annually organized in Helsinki. Eurostat compensates financially the costs of the ESTP courses. Each training course usually lasts for four working days.

The annual revenues derived from the chargeable training activities Statistics Finland organizes today sum up to EUR 150 000. With such an amount of revenues, the organization receives an additional financial capacity to employ full time staff members on an annual basis.

In the Attachments of this presentation, detailed information on the volume and the development of chargeable training activities in the last few years can be obtained.

### **Summing up around the slogan of good sportsmen – “Just do it!”**

Summing up, the main conclusions of the given presentation are the following.

1. For any statistical agency, and especially for a National Statistical Institute, it is recommendable to explore the possibilities of setting up a training structure for external users;
2. Potential target groups for this sort of activity are, inter alia, economists, planning officers, researchers, managers and decision makers in the most different organizations. Not only in the central and local public administrations but in businesses, non-governmental organizations, trade unions, branch and employers’ organizations, media and educational institutions;
3. Some specific professional groups benefit a lot from this sort of training activities: for instance market researchers, information officers and environmental specialists are in a constant need of updated and systematic statistical information in the fields of their actual interest;
4. Training can be an important part in the process of building closer relations to different categories of users of statistical information. Feedback received in training situations is often well to the point and therefore concrete and valuable;
5. The preparation of presentations as well as the presentation situations serve as good training opportunities in developing the presentation skills of the agency’s own staff members. Systematically accumulated feedback from training situations is useful for developing statistical services. Feedback from training situations also provides the organization with information useful for improving the agency’s human resource development activities;
6. Improved presentation abilities of staff members is of great value in building user and customer relations and when interacting with different stakeholders of the agency.

Accumulated experience in training supports interaction and communication abilities needed when staff members participate in international meetings, seminars and conferences.

7. Revenues from providing chargeable training services are helpful for covering the costs these activities and they can additionally bring about financial support for developing new statistical services.
8. Through statistical training, the statistical agency promotes statistical literacy and develops the network of *Statistical Ambassadors*. A growing network of *Statistical Ambassadors* can be very helpful in the agency's work on building relations, inviting specialists into focus groups or inspiring support and advocacy activities in the today almost continuous struggle against budget cuts or in accumulating increased resources for the development of improved statistical services.

## Attachments

### Attachment 1

**Number of different sorts of chargeable training courses on statistical topics, organized by Statistics Finland in the year 2014, including information on presentation hours and trainees**

#### Statistics Finland – External training activities in the year 2014

	Basic external training courses	Customized training courses	Co-operative training courses	European Statistical Training Programme courses	Sum total
<b>Number of training courses</b>	12	6	2	4	<b>25</b>
Number of training days	12	5	1	16	<b>35</b>
External participants	197	120	37	84	<b>439</b>
Internal participants	9			4	<b>13</b>
<b>Participants, total</b>	<b>206</b>	<b>120</b>	<b>37</b>	<b>88</b>	<b>452</b>
Number of training days received by participants	199	114	18	345	<b>677</b>
External presenters					<b>24</b>
Internal presenters					<b>87</b>
<b>Presenters, total</b>					<b>111</b>
Presenting hours, external presenters					<b>54</b>
Presenting hours, internal presenters					<b>164</b>
<b>Presenting hours, total</b>					<b>217,5</b>
<b>Feedback score, scale 1 – 5</b>	3.90			4.45	<b>4.18</b>

## Attachment 2

Targets set for revenues from chargeable training courses on statistical topics (blue line) and amount of revenues gained (red pillars) by Statistics Finland in 2005-2014

