

Teaching national accounts – In-house, outside, and online

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Abstract. The national statistical institution of Finland (Statistics Finland) not only collects, processes, and publishes data, but also bears the responsibility for advising and training users of the service it provides. There are various training possibilities available, and many are used for teaching national accounts. Statistics Finland has offered courses for data users, school visits, university courses, and material on Internet pages. International courses as well as internal training have been provided. Technological change brings new possibilities for training and we need to consider the best options for different situations. The feedback received from earlier training is important for development.

Keywords: University courses, international course, feedback

1. Introduction

The System of National Accounts is probably the most widely used statistical system in the world, and quite often the national statistical institutes oversee the production of those figures. This is also the case in Finland, and Statistics Finland is responsible for offering training on the topic to users. This article discusses the different training offered on national accounts by Statistics Finland.

There has been internal training for new employees, customer courses subject to a charge for the public, and lecturers for educational institutions. Statistics Finland has also offered a 4-day international course for the junior staff of European statistical institutes as an introduction to the System of National Accounts. Newer modes of training include an e-Course on statistics on the Internet, a massive open online course (MOOC) together with the Open University of Helsinki as well as an online international course.

2. The System of National Accounts as a topic to be taught

The System of National Accounts (SNA) is an internationally agreed methodology for describing the econ-

omy. It covers both the structure of the economy and the changes happening in it. The figures are comparable between countries and years. Since the figures are available worldwide, they are also used widely, unfortunately sometimes in situations where they are not suitable. Probably the most well-known indicator calculated in national accounts is the gross domestic product (GDP), but there are also other important indicators such as the adjusted disposable income and the actual consumption of households, the tax ratio, budget deficit and public debt of the general government and the profit share of non-financial corporations. The figures from national accounts are used in decision-making at different levels.

Most of economic statistics – meaning statistics describing prices, quantities, or values – are produced according to internationally agreed rules, so the figures are comparable between years and countries. This offers the possibility to evaluate the changes over time or between countries. Especially with national accounts, the change might be more important than the level – we might not have the exact data, but when we follow the same data from time to time, we can see the changes. Unlike the source data, national accounts figures are also calculated backwards when major changes in the methods or sources occur – comparable timeseries are important, and we need to inform the users of the changes, as well.

There is an entire framework behind national accounts calculations. The whole system uses the same

ideology and concepts, but things can be viewed from different points of view, such as production, income, financial issues, regionality, supply and use, etc. Some knowledge of the basic concepts and theory is necessary for making calculations. Quite commonly national statistical institutions (NSI's) oversee the production of the national accounts' figures, and so it is in Finland, too. Since the complete system is quite complicated, the best knowledge is where the calculations are made. Statistics Finland is responsible for teaching users about the sources, calculations and use of statistics, including national accounts. Training sessions are a good possibility to connect with users and to learn more about their hopes and needs.

Statistics Finland is a sort of link between data producers and users since we collect and handle the data so that we can publish usable results. We must pay attention to the response burden of the data providers, and we should listen more carefully to our users concerning their needs. We could use more time on explaining our products, including how they can be used and what cannot be found in them. Lecturing about the basic ideas of national accounts is one way "to explain" things, but we also need to find new ways for this work in the future.

Statistics Finland publishes statistics quite efficiently, but the publication schedule does not always allow a lot of time to analyse the results. The basic publications should be kept mainly quite short, which on the other hand restricts the number of analyses. The concepts in national accounts have a specific meaning inside the framework but might be meaningless to people not familiar with the system. We should either use more familiar terms, although they might be little incorrect, or then we should explain the specific concepts better. One promising way to share knowledge might be making short videos on our Internet pages, explaining, for example, some of the terms. This way we would not need to write the same definitions every time, and even with a short publication text we could use more space for analysis, and people would still have easy access to the terms, if needed.

The System of National Accounts (SNA) has been developed over the last seventy years and nowadays the system is already very complicated. The revision of the system is done through long international negotiations. Producing national accounts figures is always teamwork, and there is always something to learn.

3. Our training environment and materials

Statistics Finland has been organising courses mainly on its own premises. The room used for the training

can seat up to 30 people, all with good visibility. Microphones can be used if the room is crowded or the lecturer prefers to have one.

In learning situations, the learning environment includes the actual place, space, and equipment, but also the other students and the atmosphere. The lecturer cannot always influence all these elements, but it helps if they are understood, and the possible limitations are considered. New technology offers both more possibilities and risks, and the quality of the material is even more important than earlier. If the material is hastily made, has many errors, is "recycled" from previous talks without adapting for that occasion or does not function with the existing equipment, the listeners feel that they are not appreciated.

Over the net – like on our e-Course for Statistics or on different online courses – we are not able to affect the environment of the participants, but we can try to make sure that our webpages are suitable for different devices and that our recordings are clear without interruptions. On online courses we should try to ensure the connections and to make sure that our environment is as quiet as possible.

Lecturing is about sharing professional knowledge – it has been said that "if you do not want to share your knowledge, you should not be teaching at all". Teaching is not about showing how much the lecturer knows, but it is about helping others to know what the lecturer has already learned. Most of the time during in-house situations at Statistics Finland we lecture in a very "traditional" way; in front of the audience, using (mostly) PowerPoint presentations. If possible, we try to apply a "learning by doing" methodology so that the participants can also actually do something themselves, not only listen. The idea is that they use whatever they have just learned for a real situation to see if the knowledge can be applied. It has been said that knowledge is built by participating in action – just listening is not usually as efficient as doing something real, and quite often the learning is even more efficient if you can share the knowledge and action with others [1].

Sometimes it is impossible to involve the participants, but in most cases, we try to include some simple exercises. The idea is to teach the very basic ideas which remain the same even when things get more complicated, with for example contradictory, missing or incorrect data, or with more details.

When somebody understands the basic idea – knowing what they are trying to achieve – it is possible to follow that path also in more complicated situations. Especially with national accounts, it is much easier to

make the calculations for the real, more complicated, and not-so-perfect (in sense of both information and data) world, when you understand the basic idea and have practiced the main idea of the calculations in simple form in a “perfect world”. Adapting to the more complicated situation is easier when the core idea is clear.

Within Statistics Finland we have people with limited pedagogical skills, but with a deep knowledge of a certain topic, and they are able to get the message understood. Learning does not depend on the lecturer’s pedagogical skills alone. Other things – such as knowledge or enthusiasm – can make up for some missing pedagogical skills. As, for example, Korthagen has said: good lecturing is more than just technique; it comes from the identity and integrity of the lecturer [2].

We should not be afraid of mistakes – you usually learn more from them than from flawless, clear answers. In reality, you might have contradictory information from different sources, or the information might be missing or incorrect, and as a statistician you must deal with those situations. When you are trying to solve a problem, you need to recognize the problem first, then look for strategies, check the results, make corrections, and repeat the cycle, if needed.

According to Auvinen, expertise is no longer simply an individual property, but more like a shared form of expertise, which also means that social interaction and collaborative learning are considered ever more important for the overall development of expertise [3]. At Statistics Finland the training is teamwork. For example, the training materials are “common property”, so that we can reuse and modify old materials. Having more lecturers – at least two persons being able to talk about each topic – gives us flexibility and security in case of absences.

We are trying to encourage people to collaborate even more concerning lecturing. For example, when the materials are openly available, lecturers can see what others are planning to talk about. We always have a strict time limit for lectures on the courses, so looking through what others are planning to talk about helps us to cover everything which is needed once, but only once. If somebody notices that there is a “gap” between two lectures or that the same thing is covered in different lectures, it is always possible to talk about that with colleagues. We have always been able to solve these situations if we have noticed them.

We carefully consider the order of lectures on our courses so that the participants learned at least the most important concepts during the previous lecture to be

able to follow the next topic. In our 1-day customer courses the topic is usually quite specific, but we try to cover that topic from different angles.

4. Internal training at Statistics Finland

When new employees start working with national accounts, they might have only a weak idea of the system, if any at all. For newcomers as well as for interested source data colleagues we organize some internal training. Usually the course lasts about 8 to 10 hours in total, divided into four separate sessions over different days, with a few experts speaking each day. The idea of the internal training is to explain the main features of the system, such as classifications, data sources, concepts etc. and it is the same for all newcomers. Superiors and the closest colleagues conduct more specific training for actual jobs.

With our internal courses we can take the time we need. The participants receive some materials printed on paper, including exercises done during the sessions. The idea is to let people work together in small groups, so that they can share their knowledge and learn from each other. For example, we might go through the concept of production, and then go through an exercise with different examples, asking whether those cases are calculated as production or not in national accounts. Usually the chance to try things yourself is an efficient way to see whether you have understood the idea or not. The challenge is to offer exercises that are challenging, interesting, and varying without being too easy or too difficult. The internal training has been quite informal, more like talking about the topic, not like actual lecturing. It has been organized on average once a year – sometimes more often, sometimes less frequently, depending on the number of newcomers in the National Accounts and Balance of Payments departments. Nowadays it has been suggested by the researchers that the theory and practice should be more closely connected to each other, not taught separately. This way it would be possible to understand sooner what the theory means in practice and how it can be used [4]. This is what we are at least partly trying to accomplish with the internal training.

5. Customer courses for anybody

Traditionally Statistics Finland has organized 1- or 2-day customer courses subject to a charge. On these courses the participants are offered a set of lectures by experts. As training for lecturers, we have also had “internal customer courses” inside Statistics Finland

for new lecturers, so that before you talk to the paying audience, you have practiced at least once internally in front of your colleagues. Colleagues are probably the most demanding and exciting audience: after that lecturing to strangers goes just fine!

Usually there is a lot to cover in a very limited amount of time on our customer courses, so mainly it has consisted of lectures with material on paper for the participants. Some questions and discussions are possible during the day, and it is also possible to answer questions raised beforehand during the lectures. The basic 1-day course on “GDP and other measures of the economy” has been quite popular, and it has been available about once a year. There have been also some other basic courses on national accounts, for example on sector accounts, supply and use tables or on balance of payments calculations. Those other courses have been organized about every second or third year. The courses have been organized on the premises of Statistics Finland, and the day includes a few breaks, including a little longer break for lunch. Lunch is eaten together in a designated area, so it has been possible to continue the discussions during lunch. Mainly the participants have been from different ministries or other government organizations, research institutes, news agencies, banks, different interest groups or schools. The GDP-course has covered some of the very basic ideas and concepts, some widely used statistics like the Quarterly National Accounts and Supply and Use Tables, as well as a short presentation about relevant timely topics. We have also had a known user of the figures as a visiting lecturer, talking about real experiences, including the pros and cons of using national accounts and our calculations. With our public customer courses, we do not have time for exercises, but there is a possibility to try to involve the listeners by asking some questions and offering them a chance to comment or ask questions.

In national accounts the concepts and their meaning are very specific, and as Auvinen writes, the challenge for the expert lecturing on his or her topic is to connect the theory, his/her work and the “real world” of the listeners [3]. There is the challenge of explaining complicated things in a short time so that they make sense and are useful for people who might not know them beforehand.

6. Experts meet students at our premises at the schools and via remote connections

Statistics Finland also offers lectures to school classes, either on our premises, or at different schools.

Especially when the first statistical day was celebrated (20th October 2010, and since then annually), a lot of experts from Statistics Finland visited schools in different parts of Finland. We met students from the 3rd grade up to the high school classes. Mainly the presentations were about collecting the data and using statistics on quite a common level, but with older students it was possible to cover some more specific issues, for example national accounts. It is best to build the presentation according to the students – both the topic as well as the examples, which can vary, for example, ranging from families and the price of chocolate bars to beer prices and rent, depending on the age of students.

Usually the students are polite enough to give the visiting lecturer a chance, but of course if they are not interested at all, or the presentation is bad, they lose their interest quite soon. The lecturer can try to make the presentation more interesting by using materials that are well prepared, terms that are understandable and examples the students can relate to. Probably the best way to motivate the audience is to show how the information can be used.

Due to the COVID-19 pandemic, it has not been possible to meet students at schools or on our premises, but on the other hand we have learned to offer lectures everywhere in Finland via remote connections. Saving the time and trouble of travelling somewhere might make it possible to offer even more lectures – or for more students to listen to the same lecture – although meeting people virtually is never the same as meeting in person.

7. The e-Course for statistics on web

Since it is not possible to meet all the students everywhere, Statistics Finland has been offering free materials for schools for years. The idea is to have some basic topics very clearly explained: the materials were originally planned thinking about students at different ages, but of course they are available for anybody interested in the topics or needing to know some more about them.

In total, about 10 topics have been covered on the webpages, national accounts being one of them. For national accounts, the first version of the e-Course on Statistics was published in 2006. We have updated the material a little bit every now then, by editing the texts and by adding more pictures, figures, references, and exercises.

At the moment, the part on national accounts includes four issues, each of them including about 5 to 10 “lec-

tures”, where one lecture is about one page long and covers one subject, possibly with separate examples and exercises. The answers to the exercises are available, as well.

The existing material covers the production side of national accounts, which is only a very small part of the whole system and gives a very narrow picture of the economy. Especially the situation of households, which is seen as an important measurement of economic well-being of individuals, is not covered by production and consumption and for that, we need sector accounts. We have been planning to include some issues concerning sector accounts, but so far it has not been a priority.

The latest version of our “e-Courses on Statistics” (available in Finnish only) can be found at: www.tilastokeskus.fi – Tuotteet ja palvelut – Koulutus ja opiminen – Tilastokoulu – Kansantalouden tilinpito or directly: http://tilastokoulu.stat.fi/verkkokoulu_v2.xql?page_type=ketusivu&course_id=tkoulu_ktal.

8. University courses have been offered both in traditional ways and lately also as a massive open online course

Experts from Statistics Finland have been lecturing on courses at universities in Finland for a long time, mainly as “guest experts”, and mostly this has consisted of a few lectures from time to time. In the autumn in 2011 Statistics Finland organized a whole course on national accounts for the department of economics of the University of Helsinki. On the course Statistics Finland provided lectures as well as the exercises, and the university took care of the administrative details. Out of a total of 11 lectures, most were given by different experts, and the course included a set of exercises, out of which most were obligatory and some voluntary. There were three sessions where the answers to the exercises were discussed. In the final test the students could use all the course material, and there was a set of questions, from which they were able to choose six. Most of the questions in the final test were based on course exercises, and then there were some multiple-choice questions and a short essay. The same course was organized again in the autumn of 2014 with the University of Helsinki, and both courses received excellent feedback from participants for being taught by real (and rotating) experts and for describing the real sources, calculations and use of the results. About 30 students started both courses, and about half of them made it through the course: with the specific topics and obligatory exercises the course was not the easiest available at the university.

Based on our experience of the full university course at the University of Helsinki, we clearly saw a need for national accounts courses for different universities, but we had no way to organize the course all over the country. Therefore, we started to think about the possibility of a video course (this was before the COVID-19 crisis, so the idea of distance lecturing was not really an option at that time). First we realized that Statistics Finland had neither the knowledge nor the technology for making such a course, and secondly we learned that if the course was organized by Statistics Finland without a university connection, the participants would not be eligible for study credits, which are very important for the students. So, Statistics Finland again reached out to the department of economics at the University of Helsinki, asking for their interest in co-operation. The department said they were extremely interested, but they did not have video course production expertise, so they offered to include the Open University of Helsinki in the discussions. The courses offered by open universities in Finland are mainly subject to a charge, the exception being for the students of that university, so Statistics Finland was not too excited about the idea, since our goal was to offer the course equally for all students of all the universities, both science universities and universities of applied sciences. To our big relief the Open University of Helsinki offered to produce our course as a “massive open online course” (MOOC), which means that it would be free and open for anybody. The organizer, in this case the Open University of Helsinki, receives a fixed sum of money from the Finnish National Agency for Education for every passed test, but other than that, no money flows were involved. This idea sounded good from our point of view, and we started planning the course and the implementation immediately. Statistics Finland was responsible for the content – both lectures and exercises as well as the final test – and the Open University of Helsinki oversaw the technical execution as well as the course administration.

We had a technical contact person from the Open University of Helsinki, with whom we recorded the lecturers. Before we started recordings, we had a chance to visit a new recording studio at the university, to get an idea of the technical equipment and its possibilities and to practice a little. Quite some time was reserved for us at the studio, and the lecturers were able to choose the time (and some extra time, as well) that suited them best. The lecturers were recorded one by one, in sessions lasting about two hours – some of them were taped directly in one shot, but some lecturers wanted to take more shots or correct some parts.

Student attention does not last very long, and according to researchers it usually drops after 15 to 20 minutes of listening. The experienced staff from the open university advised us that with videos, the time the students can concentrate might be as short as 10 minutes. Based on the advice from the open university staff we divided the topics into shorter videos, and as a result there are from two to six parts for each of the lectures, and the total time for the lectures is about 12 hours. Our course includes an introductory lecture given by a university professor and 11 lectures on different parts of national accounts (the structure of the system, basic concepts, non-financial sector accounts, foreign trade and balance of payments, supply and use tables, price and volume measurement, short term statistics, financial accounts, government sector, productivity, measuring wellbeing) and a lecture about using statistics and statistical data bases.

The course also includes five sets of exercises based on the lectures. The exercises were obligatory for people wanting to pass the course, but voluntary for others. The final test of the course – for those who wanted to pass the course and get the study credits – was a virtual test based on the lectures, as well as the previously-mentioned obligatory exercises.

The National Accounts MOOC on was available for the first time via the Open University of Helsinki in 2020. The course was worth of 5 study credits for those actually carrying it out. The course was opened on February 4th 2020, and before that some “advertisements” were circulated via social media, on the web-pages of Statistics Finland and the Open University of Helsinki, and the course was also mentioned in the newsletter to all the Open Universities in Finland.

Course participants could commence and continue the course according to their own schedules. Originally the course was planned to be open for five months, but after the COVID-19 lockdown closed the universities, and the need for well-planned virtual courses grew, there were lots of interested participants for the course, as well. The course was extended to be open until the end of August. At this point that was the latest possible date, since according to the new accessibility directive the videos must be subtitled starting from September 2020, and there were no resources to make the subtitles for this course so quickly. Since some of the videos were taped already in the spring in 2019, we also agreed that the videos should be viewed and updated, if needed, before adding the subtitles.

During the first course 432 persons registered on the course. The videos were freely available to anybody

without registration, as well, and since some of the videos were watched over 600 times, most likely there were also non-registered watchers. Out of those 432 registered participants 126 also took the test, all of them passed it (some on the second attempt). Based on their e-mail addresses, the participants represented, for example, all the research universities in Finland, as well as some universities of applied sciences, ministries, banks, and research institutes. The course received excellent feedback on its content.

According to the original plan the course would be officially available – meaning that it would be possible to gain study credits – every second year. Quite a number of inquiries have already been received concerning the next official course, but it was agreed between the Open University of Helsinki and Statistics Finland that we will stick to the original plan, and the next course will be available in 2022, so that we have time to add the subtitles and fix some of the exercises, which were digitalized quite fast before the course started and suffered from some illogicality. Statistics Finland has stated that making the same course in English would be possible. The English version of the course could be available for the first time in 2023, and after that we could have the course alternately in Finnish and in English annually.

Statistics Finland has a right to use and to offer the MOOC materials, and so far, the course has been offered to the staff of Statistics Finland, while later it will be available for all people working under the general government. The lectures are also available as a playlist on Statistics Finland’s YouTube page.

The National Accounts MOOC gives anybody a change to learn the basic ideas about national accounts. The national accounts concepts are widely used in the discussion and decision-making as well as in the media. The course offers opportunities for learning regardless of time and space, and since it is free of charge, it is equally available to everybody who wants to participate, so it offers a possibility for lifelong learning, which has been stated as one of the goals in the report by the Ministry of Education and Culture [5].

9. Teaching national accounts in international courses in-house, abroad, and online

The idea of teaching national accounts on international courses a history in Finland. Originally there was a course organized purely by Statistics Finland, and soon after that it was added as a part of the TES-programme (Training for European Statisticians, run

by Eurostat) for a couple of years. When the TES programme was closed, a new system called the European Statistical Training Programme (ESTP) was established. Within the ESTP, Eurostat buys courses from different partners based on a competition round, and an agreement is usually written for four years at a time. One of the partners is a consortium of European statistical institutions, and Statistics Finland has been offering some courses as a part of that consortium. For the periods 2008–2011 and 2012–2015 the consortium – and Statistics Finland as a part of it – was chosen to deliver courses on national accounts. For the period 2016–2019, which was extended to 2020, due to the COVID-19 pandemic, another partner was chosen for courses on national accounts. For the first two periods, Statistics Finland was responsible for a 4-day introductory course on national accounts, and Statistics Netherlands was responsible for a longer advanced course. For the period 2021–2024 Statistics Finland – as a part of the consortium, again – offered both the shorter introductory course and a longer advanced course on national accounts and was chosen to deliver both of those courses. So far, we have been offering the course 11 times as in-house course, and in May 2021 it was arranged as an online course for the first time.

With the very first course we offered just lectures, and some discussion with them, and the participants were seated in lines and rows like in a classroom. The participants appreciated the course content, but in the feedback a lot of them mentioned that the possibility to do something yourself instead of just listening would be useful. On the second course we added sessions for exercises, and participants were sent to separate cabinets in small groups. That was definitely better than having no exercises at all, but not very efficient – if the group had a question to ask, they had to wait until the lecturer, who was circulating from room to room, was in their room again. The next year we arranged the seating in five groups, with five participants in each, at the main room and added small exercises in the middle of the lectures, which worked – and still works – perfectly. When all the participants are in the same room all the time, it is possible to work on exercises at any time during the lectures, and if one of the groups asks something from the lecturer, all the groups can hear the answer at the same time. The groups are also able to listen to the discussion of other groups, which is also perfectly fine. National accounts is after all about sharing knowledge and learning from each other, not keeping secrets. Listening to the small groups working together makes it possible for the lecturer to understand, how much – or

little – the participants have actually understood about the topic. The lecturer might feel that the topic was covered well, but the view of the participants might be very different.

The groups are divided in advance – both on in-house and online courses – so that we can look, for example, at the nationalities, and ensure that people from the same country will be in different groups; and gender, to make the groups as mixed as possible. The possibility to try out your new knowledge – to find out if you really understand the idea/topic/issue – is very useful, and it does not matter, if people answer “wrongly” because that provides a good learning opportunity, as well.

The two main points of our international course are firstly to offer view of the whole system of national accounts and secondly to offer the participants a chance to meet colleagues from different countries. In most countries there are only few people – sometimes even just one person – working on certain aspect of national accounts, so colleagues to talk to about certain specific issues might actually be in other countries. One way to learn and share knowledge is to collaborate and create networks [6]. Knowing colleagues from other countries makes life easier. For instance, when you have somebody to ask, for example, for a name of the colleague working on a certain topic; you get much more personalized, better, and faster service by contacting people you already know than sending an email to the common address of the organization.

With our international course, we are trying to give the participants a picture of the whole system of national accounts. Most of our participants have some experience of national accounts calculations, but none of them know the whole system and very few seem to know how their own calculations connect to the whole. We have spent a lot of time and effort determining the best possible order of lectures, so that participants would have the necessary information (at least they would have heard of it, if not totally understood it yet) before moving on to the next section.

Our course also offers a possibility for networking for the junior staff in the national accounts field, and the idea is to find and build helpful relationships and connections with other people. Nowadays it is quite common to think that quality knowledge is more the result of groups and networks than single persons and expertise can be seen more as a collective than a personalized quality [6]. Especially in statistics, international connections are extremely important: we need comparable statistics and to be able to produce them, we need to cooperate internationally. While in private

corporations' new inventions are kept secret as long as possible, in statistics we want to share everything as soon as possible, since we want everybody to do things the same way. If we have discovered a good way to do something, of course it is easier for us, if the others change their systems to be like ours and we do not need to change our systems to be like theirs. To produce high quality statistics, the inclusion of an international dimension is needed.

We have added some very famous and well-known social events to our courses. Participants, whose colleagues have been participating on our course, are already aware of them when they arrive. The social programme is an important part of our course, and on our in-house courses we have arranged the timetable so that coffee and lunch breaks are quite long, and then there is a little get-together-party after the first course day and a possibility to go to the sauna in the evening before the last day. We have offered the participants a chance to go to the sauna, if they want to, but it is not compulsory. It has always been clearly stated that they will get their certificates whether they go to the sauna or not.

On our first online course we had a short "virtual social meeting" after the first course day, with some group discussions on specific topics, such as weather and coffee, and some videos with a Finnish stand-up comedian Ismo Leikola, who has been awarded the title "Funniest Guy in the World" on American TV. We also offered the participants the opportunity to receive a small "tasty greetings from Finland" package, if they were willing to share their mailing addresses with us, but unfortunately most of them did not receive the package before the course started, since the traditional mail across Europe was slower than we expected. Luckily at least some of the participants were able to get the package during the course week (although the rest were still waiting for them at the end of the course).

For the international course, the lecturers and the administrative staff work closely together on timetables, materials, and exercises. As part of the process we have often held a training session with an outside expert, so that all the lecturers speak for about 10 to 15 minutes on their topic (in practice part of their own lecture), and other lecturers and expert comment. This has been found to be very useful. Before the first online course we also had quite a few training sessions, both internally and with our international lecturers, in which we were able to try different features of Teams, which was used for the course, as well as different version of exercises, small groups, activating participants etc. We will certainly be having similar sessions before the next

online course, as well. Activating the participants is much harder online, and the importance of lecturers' interaction has been brought up in many researches [7].

The content of our international course has been more or less the same for some years; we have just adjusted the timetable and the order of some of the lectures as well as added more exercises. We have also modified the exercises so that the same units and same figures are used in different exercises as much as possible, since that is the case in real life, too. In many of the exercises we have a fictional country ("Ever-Ever-land") and figures, which sum up to create a total economy as it should be according to the theory behind national accounts. In real life, the data sources are not perfect, we have missing, contradictory and incorrect information, and we try to bring this aspect up, as well.

The idea of small exercises or activating questions, like those in the online course, during the lectures has proven to be very fruitful, and it also stimulates the discussion and questions asked by the participants. Additionally, the chance to do something oneself instead of just listening usually helps – with good exercises it is much more likely to really learn the point. Our goal is to get the participants to think and use whatever they have just heard and to share their previous knowledge with their group.

Schaap, Baartman and de Bruijn pay attention to the fact that while the focus in formal education is more on learning processes, reflection, and theoretical insights, in workplaces the point is usually getting the real work done [8]. Our ESTP-course tries to be a link between these two worlds, focusing the theoretical points but also showing practical examples and giving the participants a chance to try themselves. In the statistical field, the goal is to obtain figures which are as comparable as possible, and whenever somebody finds a new way to do something, that knowledge will be circulated. A very important point is to share experiences and best practices.

According to different studies an efficient studying session lasts 20 to 50 minutes, and then a break of two to five minutes is needed. Especially with the in-house courses it might be enough to "break" the lecture with an exercises, so not all the breaks need to be physical, but with the online course – which means that course participants are staring the screen all the time – a real physical break is needed often enough. With our online course we have a break once every hour.

One of the best compliments to our course was given by the Director of Economic Statistics at DSTAT, the statistics office of Germany. When asked about their

internal training on national accounts he said: “We don’t have any, we send our new people on the Finnish course and that has proven to be an excellent system.”

Our course is very compact, and although lectures are given by many different experts on our premises, it has been possible to produce almost the same course in a slightly modified format with four lecturers. We have been offering the modified course for interested statistical offices, and for example Ireland and Estonia bought the course for their staff. The course has been held also once in Georgia for the staff of several eastern European countries: at that time, we had simultaneous interpretation and bilingual slides, which was a very exciting and new experience.

10. Feedback on the training

We have asked for feedback from the participants on our customer courses, university courses, ESTP courses and the MOOC. The in-house courses are usually evaluated by the participants both via a written evaluation form, which we ask them to fill, as well as oral feedback at the end of the course. With the online courses, a feedback form is sent after the course.

With feedback forms, there is an assumption that everybody understands the questions and options in the same way and can provide feedback. This assumption is questioned very rarely, and usually it is assumed that the questions can be understood in only one way, which might not be true. Especially with international participants, also the question of language skills is always present [9].

As a whole, especially the participants of the university courses and the international course have seemed to be very satisfied with our course. The exercises and genuine expert lecturers have been highly appreciated in the feedback. Of course, the comments are not totally comparable between years, since people are always comparing them to their own earlier experiences; there are no absolute measurements [10]. Especially when we talk about the quality of the teaching or lecturing, the students often evaluate also other things (such as the environment, other participants, their own knowledge, etc.), maybe noticing it [11]. With the in-house international course, we have received comments on elements such as good course organization, giving a good picture about the whole system of national accounts, and having an excellent the social programme (breaks, dinner, sauna evening). About our customer courses we usually get some overall feedback, mainly in scores, but sometimes some written comments, as well.

When planning on learning, we should always remember to ask “why”, “how” and “to whom”, and not only automatically continue the way we have done earlier [12]. The “old way” might still be a good one, so we do not need to change everything just for the sake of changing it. However, we need to reconsider the ways we are doing things, so that we do not automatically assume that this is still the only or the best way to do things, because this is the way we have been doing it earlier.

A very good motto is that “making mistakes is not stupid – it is stupid to make the same mistakes again”. If a person does not bear responsibility for mistakes, it is not possible to learn from them, but it is most likely that he or she will make the same mistakes again [13]. Learning to learn from both one’s own and others’ experiences is essential and the only way to do this is to recognize and acknowledge mistakes [14].

Collecting feedback makes sense only if the feedback is utilized. Feedback, evaluation, and quality assurance go hand-in hand with each other [15]. According to the Handbook for Practitioners, the main competences connected to quality assurance are the ability to produce accurate records, to contribute to the quality cycle and to reflect on and evaluate professional performance [16]. The ability to make changes based on feedback could also be added to the list of competences.

According to Alasoini, evaluation can create two types of learning: both programme learning, which refers to what happens “inside” the programme during implementation, and policy learning, which refers to making changes to the programme in the future [17]. In Statistics Finland our courses are mainly quite short, and the materials are prepared beforehand, so that there is not a lot of room for changes during implementation. Much more happens concerning policy learning, although even more could be done on this in Statistics Finland – we collect feedback on our courses, and the results are sent to the lecturers, but there is no systematic process of using the feedback. Some lecturers react to the feedback, some do not. Taking care of professional development requires not only the ability to analyse feedback and evaluation results but also to use that information to make the teaching and training better [16].

The quality of a lecturer depends on the behaviour, competency, beliefs, identity, and the mission of the lecturer as well as the environment and situation [2]. Even the “best speaker” might have moments when she or he is not at their best, but of course a very good lecturer can be good even on the worst day.

People are easily “blinded” by their own way of thinking and acting, and it is very useful to receive questions and proposals from others who see the situation from the “outside”. Taking care of both one’s own as well as the institution’s professional development requires not only the ability to analyse feedback and evaluation, but also the ability to use that information for improvements [16].

11. The future of training in national accounts

At the moment the future of our customer training is unclear – it might be that training of the basic concepts will be available mainly online, for example via the MOOC videos, and the actual customer courses will be arranged based on special order. We might also use the MOOC videos for internal training and concentrate on in-house training on specialties. For certain, we know that the first advanced international course in November 2021 will be online, but we hope to be able to go back to the in-house courses starting in 2022. The networking, which is a major part of the international courses, is much harder online, and it is also challenging to have participants in different time zones.

There will always be new possibilities available for learning. The challenge is to be able to offer them for students of different ages. Especially eLearning seems to be a very interesting possibility, both as a system for offering new opportunities for studying, as well as for personalising the studies [16]. The new generations are able to use digital services very easily and to be able to reach them teachers need to be able to use them as well, although the old methods might be just as good – or even better – in some situations. With all the new possibilities we should not forget the old advice “if it is not broken, don’t fix it”. People learn in different ways, and the new ways are not the best for everyone.

Additionally, the teaching has changed – knowing the details is not as important as knowing where to find the information. Since flexibility, individuality, as well as freedom to choose when and where to learn are nowadays the emphasis, it also requires new approaches from trainers. Since the amount of data is increasing all the time and the information becomes outdated quite fast, it will be more important to be able to look for information, understand it and consider it critically, than remembering things by heart. For a trainer, this is a big change – we need to help students to solve problems, to understand connections between things and to be critical [16].

12. Conclusions

Offering training is an important part of Statistics Finland’s functions. The ways the training is provided will most likely change, at least partly, but this does not make the role of training any smaller, rather the opposite is true, since we must learn new things. Communicating via new technology is different and requires different skills to be efficient.

New things are planned to be included in the System of National Accounts with the next update of the manual and this will mean that need for training will be growing in the future. We need to serve the public, but it is also good to remember that connections with colleagues, customers and data providers are very important for the development of a statistician, so with quality training we do not only serve others, but ourselves, as well.

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