ISLP Newsletter
Newsletter of the International Statistical Literacy Project
1 (13) August 2022

Time to roll up our sleeves

Reija Helenius* Elisa Falck **

Here in Finland, August is a time of preparation and planning. Schoolchildren get their backpacks and pens ready to start school again, and the calendars of grown-ups start to fill up with meetings for the upcoming season. Especially after a long time of exceptional circumstances, the preparation feels symbolic. We are all looking forward to the future with hope, and that we can have encounters with each other normally again.

The ISLP is also preparing for many exciting things ahead. The ICOTS11 conference will host an ISLP Hybrid Open Meeting, where all country coordinators are welcome, and we can regroup to discuss future initiatives. We can thank the coronavirus for one thing: it has taught us to communicate without having to be in the same physical space. In a project like ISLP this is paramount, as we operate in all continents.

The ISLP Poster Competition is currently ongoing. 23 countries have already signed up to the competition, and there is still time to register until the end of the year. Our other competition, the Best Cooperative Award, is about to begin as well. In the competition, we reward the best cooperative projects that promote statistical literacy. It is great that we can learn best practices from one another and everyone does not have to reinvent the wheel. This has been one of the leading principles of the ISLP Project from the beginning.

In this edition of the Newsletter, there are plenty of things to celebrate. We get an insight into the role statistics have had in the lives of Ada van Krimpen and Joachim Engel. Both of these people have had an incredible career in the field of statistics. Additionally, this year the ISLP has gotten to welcome many new country coordinators within a short time. Now the country coordinator assembly is 161 people strong. We would like to wish a warm welcome to all our new country coordinators.

All of us here in the ISLP feel excited to look ahead. However, it is not enough. We also need to take concrete action. Statistical literacy is needed now more than ever: we are all surrounded by data. The mission of the ISLP is to educate a larger and larger audience to learn and use statistics. Statistics are a civic skill. The ISLP is making concrete efforts to secure funding for the project so that we can have more impact, advance and grow. We wish for the support of everyone in this. Together we are more.

* ISLP Director
reija.helenius(at)stat.fi

** ISLP Coordinator
islp.coordination(at)gmail.com

ISLP Newsletter is the newsletter of the International Statistical Literacy Project of the IASE – the International Association for Statistical Education.
Editors: Reija Helenius (Finland) reija.helenius@stat.fi; Elisa Falck (Finland), Pedro Campos (Portugal) pcampos@fep.up.pt; Steve MacFeely (Ireland) steve.Macfeely@unctad.org; Adriana D'Amelio (Argentina) estat06@hotmail.com; visit us at: http://iase-web.org/islp/
Layout: Riikka Turunen (Statistics Finland)

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NETHERLAND

International Statistical Institute

Statistics in my life

Ada van Krimpen*
Director (2009–2022),
International Statistical Institute

When I was asked to contribute to the series of interviews with prominent statisticians in the ISLP newsletter, my first reaction was 'this is not for me; I am not a statistician by profession'. Nevertheless, the editors said my life with statistics would be of interest to readers and I accepted the invitation.

My first encounter with statisticians was at the Faculty of Economics of Erasmus University in Rotterdam. No, I did not study economics but got a job as secretary at the Office of the Economics Faculty in 1978. That marked the turning point in my life. I came into such an inspirational and extravagant environment. The professors were flamboyant persons with special attitudes. Shortly after my appointment, the head of the secretariat, my still dear friend Milou van der Kade and Professor Peter Klein, put a note on my desk: 'We have decided that you should do an academic study'. A few years later I would start my law studies at Erasmus University and move on to other positions at the Faculty: head of the secretariat, and later on, policy officer for research and international student exchange. I started the international student exchange on my own initiative, since due to a lack of structure, students wishing to study abroad lacked support. Together with the student members of the board and Prof. Jean Paelinck, we set up the student exchange. First with the London School of Economics, but soon after the European Erasmus programme was launched and we set up student exchange networks with universities across Europe. This was real pioneering as we developed English-language courses for foreign students, information programmes for our students who went abroad and mutual recognition of results. Above all, it meant a crash course in dealing with the cultures at universities in other countries. At Dutch universities, everything is informal, professors are often addressed as mister or even by their first name. But it is different in other countries, even our neighbouring country Belgium has a very different culture and is more hierarchical. I found the international work fascinating and realized that I wanted to do international work throughout my future career.

My good bye party from the Erasmus University Rotterdam. Three deans and a Rector Magnificus.Fltr: Prof. W.J. Slagter, Prof. A.P.J. Abrahamse, me, Prof. S. Cnossen and Prof. W.J. KLein.

The combination of a full time job and part time study was very demanding but also rewarding. At the end of my study, the dean of the Faculty was Ad Abrahamse, Professor of Statistics, who became the new Director General of CBS (Statistics Netherlands–SN). He pointed to a position at SN as policy advisor in international relations. SN made me an attractive offer: I would work

there and they gave me a month to finish my studies and write my thesis about SN and European law. My specialization was business law but I had taken as many courses in international law as possible. I found European law very refreshing. The offer was just what I wanted. I completed my thesis on 'Statistics Netherlands and Europe, a legal analysis' and in 1993 I obtained my Master's degree in Law.

My thesis was an excellent basis for me in representing SN in different TFs preparing the European Statistical Law and participating in the formal decision making in the European Council. The first Task Force was in 1993, chaired by Eurostat Director Alberto de Michalis, assisted by Christian Engelage (Legal Adviser in Eurostat on secondment from Destatis). Gunter Kopsch from Destatis, Gerry O'Hanlon[1] (CSO Ireland), Alwyn Pritchard (ONS UK), Per Samuelson and also Jean-Louis Bodin and Claude Cheruy of Belgium took part in various meetings. The output was the Commission proposal for the Statistical Law which was ultimately agreed at Council under the Irish Presidency in the second half of 1996 and formally adopted under the Dutch Presidency in early 1997[2].

After the completion of the first ' Statistical Law' the discussions continued on the decision-making processes for new statistical requirements, the funding of the European statistical demands and on whether Eurostat could act as an independent statistical office within the European Commission. In 2002/2003, the Statistical Programme Committee (SPC) established a new Task Force, under the Chairmanship of John Kidgell[3], who had just retired as Deputy Head of the ONS, to review the functioning of the Statistical Law. The TF reported to the SPC in 2003/2004 and recommended that the law be revised and that a Code of Practice be established to complement the law. It also introduced the concept of Professional Independence to replace the narrower concepts of Scientific or Statistical Independence. In 2004, Donal Garvey (CSO Ireland) as Chairman of the Partnership Group asked Donal Murphy to chair a new TF to draw up a new draft Regulation and also the first draft of a Code of Practice. Other members were Paul Jackson and Richard Laux from the UK, and Yolanda Gomez from Spain, Francois Ellissalt from France (Paul J Crowley served as Secretary). We had 2-3 meetings in Dublin and, driven by the usual impatience of Donal Murphy, both drafts were submitted to the SPC towards the end of 2004. The Greek crisis was unfolding around then and the draft Code of Practice was seized by Eurostat and the SPC and, following some tinkering around the edges, was formally adopted and promulgated in 2005 as a response to the Greek situation.

In 2005, the Task Force 'Legal and Institutional Framework'[4], co-chaired by Hervé Carré, Director General of Eurostat, and myself, drafted a revised statistical law and our proposal was supported by Eurostat, all 27 member states and the ECB. Our proposal ensured maximum involvement of member states in decision-making, a legal base for the Code of Practice on European Statistics, exchange of confidential data with the European System of Central Banks, access to micro data for scientific research etc. But to our despair, the draft legal act, when published, differed fundamentally on the most crucial points, owing to an intervention from the Commission's legal service. We then had the task of ensuring that the draft returned to its original form and that could only be done with a unanimous vote of the Council and European Parliament. Long story short: we made it and I was very proud when the statistical law was published[5]. We also managed to introduce an article[6] on European statistics in the European Constitution under the Maastricht Treaty.

Although I am not a statistician myself, I negotiated legislation on National Accounts, CPI, Labour Force Survey, Waste statistics, Transport Statistics, Classifications and every other possible area. The most important thing I learned is that you have to make alliances with other

1 I am deeply indebted to Gerry O'Hanlon for filling in the gaps in memory when it comes to the various Task Forces.

2 Council Regulation (EC) No 322/97 of 17 February 1997 on Community Statistics (OJ L 52 22.02.1997, p. 1.

3 In addition to some of us who had served on the first TF this TF also included, among others, Francois Elissalt (INSEE France) , Claudia Cingolani (ISTAT Italy). Unlike in the first TF, the Member States made the running on this occasion - Eurostat was represented by the legal people (Stratis Chatzidoukakis and Pierre Bischoff).

4 Members: Sabine Köhler (De), Paul J. Jackson (UK), Michel Isnard (Fr), Werner Hölzer (Au), Daiva Norkeviciene (Lt), Per Samuelson (Se), Hana Slegrova (Cz), Marina Gondolfo (It), Gerry O'Hanlon (Irl), Efstratios Chatzidoukakis (Estat). Observers: Caroline Willeke (ECB), Pedro Diaz Muñoz (Estat), Pierre Bischoff (Estat)

5 Regulation on 223/2009 of the European Parliament and the Council of 11 March 2009 on European Statistics, OJ L87/164.

6 Article 338 — (ex Article 285 TEC):
1. Without prejudice to Article 5 of the Protocol on the Statute of the European System of Central Banks and of the European Central Bank, the European Parliament and the Council, acting in accordance with the ordinary legislative procedure, shall adopt measures for the production of statistics where necessary for the performance of the activities of the Union.
2. The production of Union statistics shall conform to impartiality, reliability, objectivity, scientific independence, cost-effectiveness and statistical confidentiality; it shall not entail excessive burdens on economic operators.

Preparing the conference 'Work in Progress' in the Hague with Gosse van der Veen and Carina Fransen, January 2009.

countries to get a (qualified) majority in Council in order to get a decision you want. For that purpose, we had a very strong and pleasant network and we often met for dinner or a drink in Brussels the evening prior to our meeting.

Another aspect of my work in international relations has been contributing to the statistical capacity building in the candidate EU member states after the fall of the Berlin Wall. We received numerous delegations from Slovenia, Bulgaria, Romania and Poland for study visits at SN. This took place under the Phare programme. The Phare programme was not always very well coordinated. Visits were often one-off and it was not easy to assess effectiveness. Under the TACIS programme (Technical Assistance to the Commonwealth of Independent States), which was taking off in 1993, SN delivered a more coordinated programme to Central Asian Republics, the Caucasian states and Mongolia. Ronald Luttikhuizen, Max Booleman and Willem de Vries were at the core of these programmes. I was very fortunate to be part of missions to Azerbaijan, Armenia, Georgia, Mongolia, Uzbekistan and Turkmenistan.

It was an incredible experience and I was impressed by the enthusiasm and motivation of the statisticians in statistical offices in those countries, who continued their work even in the most deplorable conditions. During our first fact-finding missions to Georgia, Azerbaijan and Armenia people worked in offices without heating and warm drinks or food when the temperature in the office was 7 degrees Celsius. I could write a book about our experiences in those countries, and it made me look at our own work and the technical assistance we provided from a different perspective.

In addition, of course, there were the ISI sessions (now WSCs). My first ISI World Statistics Congress was in 1999 in Helsinki, Finland. The ISI events were like the Holy Grail, one felt privileged to go there on the SN budget. The Helsinki event was special, as any other WSC has been. Timo Relander was the charismatic DG of Statistics Finland, who even took the (male) participants to the sauna. Heli Jeskanen Sündstrom, was deputy DG and she really contributed to making the session a success. It marked also the beginning of our long lasting friendship. Many ISI sessions followed: in Seoul 2001, Berlin 2003, Sydney 2005 and Lisbon 2007. A WSC has always been a good place to launch new ideas and explore how fellow-statisticians vie them. I remember how SN started investigating administrative data as a source for data collection, and there was a very heated debate on this. Some delegates thought this could never replace a proper survey. How differently do we look at this nowadays.

Although I attended the ISI sessions and the ISI Permanent Office was located in the building of Statistics Netherlands, my interactions with the ISI were rather limited. Willem de Vries (my superior for international relations) and active at IAOS made me an IAOS member. At some point, I was elected IAOS Vice President, and organized the IAOS programme for the Seoul session. In 1995, I was elected an ISI member. I helped the then director Daniel Berze on a few occasions with advice

Factfinding mission to Statistical Office in Tbilisi, Georgia, and a photo with participants workshop 'Statistical Registers and Statistics' in Ashkhabad, Turkmenistan.

Preparatory meeting with for the ISI WSC 2019 in Kuala Lumpur with DOSM, Bank Negara Malaysia and ISM.

on minor statute changes and met Denise Lievesley (ISI President) occasionally and sometimes met some ISI staff members, Ank Lepping and Shabani Mehta, in the smoking room. After finishing my work on the EU statistical law, I felt it was time for something different and was accidently approached by the ISI interim director Wim Senden, about the position of ISI Director. I had a job interview with then President-elect Jef Teugels and Willem van Zwet and had several talks with Wim Senden. I decided to go for it and I officially started my work one week before the ISI Session in Durban, South Africa. It was completely different as a Director of the organizing organization! The number of events and gatherings was incredible and it meant diplomacy at all times.

ISI is an interesting organization with a long history and many traditions. Yet, there was a need for immediate action and change. There had been an attempt to revise the statutes, but it had failed because the then required two third majority positive votes was not obtained. I was convinced I could succeed (after having convinced 27 member states and the European Parliament to vote in favour of our Statistical law), but also felt that we needed a more thorough revision of the statutes. We formed an editorial group with Jef Teugels, Jae C Lee, Vijay Nair and Hallgrímur Snorrason, and drafted new statutes and by-laws. We set up a campaign to mobilize the members, informing them about the necessary changes and the importance of expressing their votes, and we succeeded! The new statutes and by-laws came into effect in November 2011.

Another pressing issue was the redesign of the ISI website. The information was very outdated and the design so 'eighties'. I set up a small group and a consultation group, and we had several consultations. The new website could then be developed very quickly and go live in 2011. Website redesign is not always easy, everybody considers themselves an expert and everyone who has ever developed a website considers it the best one ever. I am glad that we just delivered the third revised website by the end of 2021.

At the office, I have implemented a different way of working. All staff were used to doing their own thing rather than being be involved in the overall office operations. I introduced a weekly staff meeting (one hour max) and consultation of staff members when we were asked for advice. I am convinced that this creates more commitment then just passing on orders.

The WSCs (earlier Sessions) are a major part of our operations. Until 2020, the WSCs were always hosted by host countries, who offered their hospitality, their staff and resources to create an unforgettable experience. However, the international landscape is changing and it was not easy to find host countries willing to take on this challenging job. The EC decided to change this and organize the WSC 'in house', still with the support from the host country but with less reliance on their availability and budget. This was a major business model change for the WSC. The first one in new form would take place in The Hague in 2021. Unfortunately, COVID-19 made us switch to a virtual WSC, another major challenge for the organization. Our first test for an in-person congress according to the new model will now be in Ottawa, Canada in 2023.

The 59th WSC in Hong Kong with left Leslie Tang and right Mrs Lily Ou-yang, Commissioner HK Census and Statistics Department.

As ISI Director I was involved in Durban (2009), Dublin (2011), Hong Kong (2013), Rio de Janeiro (2015), Marrakech (2017), Kuala Lumpur (2019), virtual The Hague (2021) and the start of Ottawa (2023). In fact, nothing beats a WSC, where so many people from all over the world come together in an inspiring environment.

The opening ceremonies and cultural activities have made each of them unique experiences. I cannot express enough gratitude to all the heads of the NSOs and their dedicated teams who have made the WSCs a success. There were many challenges, but the events were always great to attend.

In addition to the WSCs, we introduced the regional statistics conferences in Kuala Lumpur and in Bali (2017). Regional conferences are a great tool to enhance the regional cooperation and networking. Due to COVID-19 and other reasons, no other RSCs were organized but they have great potential for the ISI. The ISI also attends the annual sessions of the United Nations Statistical Commission in New York, where heads of statistical offices, as well as all regional UN organizations and other organizations meet. ISI and the UN have a long history together (read the book by J. Nixon!). For ISI, the UNSC is a great occasion to meet with many of our institutional members and stakeholders.

At the occasion of the UN Statistical Commission in 2013, the ISI Delegation met Secretary-General Ban-ki Moon.

Statistical Capacity Building is a core task of the ISI. A grant from the World Bank Trust Fund for Statistical Capacity Building fallowed us to fund participants from developing countries to WSCs and other events, as well as organize eight High Level Management workshops for leaders from African Statistical Offices. Each workshop lasted 3 days with introductions and interactive sessions. The first one, in 2011, was organized with Hallgrímur Snorrason, and many others with Irena Krizman, the energetic past president of Statistics Slovenia and ISI Vice-President and later co-chair of the capacity building committee. Also worth writing a book about.

I hope to attend the 2023 WSC in Canada as a guest as I have retired in July this year. In answer to the question what statistics has brought into my life I'd like to say the following:

Great experiences and the pleasure of working with all those dedicated statisticians who are willing to contribute their time and skills to the ISI: the Presidents, Vice-Presidents, the Associations and committee members. The ISI couldn't exist and maintain its prominent place in the statistical arena without the dedication of

ISI President Jae C Lee, SG Ban-ki Moon, President-elect Vijay Nair and Ada van Krimpen

First ISI High Level Workshop ' Leadership in Modern Statistical System' in Addis Ababa in 2011. We organised more management workshops in Daejeon (Korea), Dakar (Senegal), Dar-es-Salaam (Tanzania), Yaoundé (Cameroon) and Tunis (Tunisia).

ISI Staff members during a virtual meeting: Ada van Krimpen, Katie Junasova, Liliana Happel, Nicoline de Kraa. Gerrit Stemerdink, Shabani Mehta, Margaret de Ruiter-Molloy, Sofia Kapnisi, Valentina Guran, Olivia van Dijck-Timbol. Our webmaster is not in the photo.

the Permanent Office staff. At the moment there are 10 staff members who take care of the membership administration, finances, WSC organization, website and communication, committees' and associations' support, webinars, capacity building etc. Thank you Shabani, Liliana, Katie, Nicoline, Margaret, Simon, Sofia, Olivia and Valentina. And don't forget our volunteers Anco Hundepool, Jelke Bethlehem and Gerrit Stemerdink, who has been a volunteer for more than 20 years.

I could fill many more pages telling about my experiences, and especially the people I've met … Thanks to everyone I have had the opportunity to meet and work with. But I am most thankful for my partner Ben and family who supported me throughout my career and missed me often due to my international travels.

Last but not least: if you are not an ISI member yet, don't wait any longer and join now!

See you all in Ottawa in July 2023.

* ISI Director 2009-2022
an.vankrimpen@cbs.n

GERMANY

Statistics in My Life:

From deep mathematics to popular statistics education through global cooperation

Joachim Engel*

When I finished high school with the German Abitur, I was a shy young man, grown up in a well-protected conservative environment, and I had many social-romantic ideas in my head. In school I was more of a dreamer than an ambitious student, but I was very good at math. That's why I started studying mathematics at the University of Bonn when I was 18. Right from the beginning, I was fascinated by the mathematics of uncertainty. When I graduated with a Diplom in mathematics five years later, I knew about stochastic control theory (the topic of my diplom thesis) and commutative algebra (my focus in pure mathematics), but I felt that I had no ideas and experiences about life outside the mathematical ivory tower. I couldn't even speak English properly because I had to study Latin and Greek for many years in school. I decided to become a teacher because I liked the social interaction with young people. In Germany, this requires a second subject, and to broaden my view of the world, I chose a subject that was as far away from mathematics as possible: Catholic theology. During my studies, I made friends with people who had traveled a lot and worked in other countries. One friend, a pacifist, had done his civil service, i.e. the alternative to military service, in a social institution in Israel, which impressed me very much. I also decided to work in a kibbutz in Israel for a while. I belong to the post-war generation in Germany who grew up under the motto "Never again war". Those were the years of the nuclear arms race between NATO and Warsaw Pact at its height with military overkill capabilities, i.e. enough nuclear weapons to annihilate the other side about 50 times over – nuclear overkill. We thought there had to be other ways of settling international conflicts than blowing up the world. When I came up to be drafted, I also opted for alternative service which I ended up doing – as part of an international peace and justice organization–in the United States. I worked for one year in Ohio as a youth counselor in a group home for delinquent teenagers and later with a politically very active community of people serving the homeless in Los Angeles. What a change from my well sheltered upbringing in rural Germany! After two years in LA time had come to move on.

I thought of becoming a school teacher in LA, but needed a recognition of my German degrees. When I contacted the University of Southern California to assess my German diplomas, they offered me a place in the PhD program at USC including financial support.

After several years away from Math, I felt that I had made up for my earlier lack of experience in the "real" world. I was ready to re-enter academic life, yet wanted to work in a field that had tangible impact on the world. Since there was no statistics major at USC, I chose Applied Mathematics. After passing the qualifying exam, I chose a statistician as my PhD advisor. Louis Gordon,

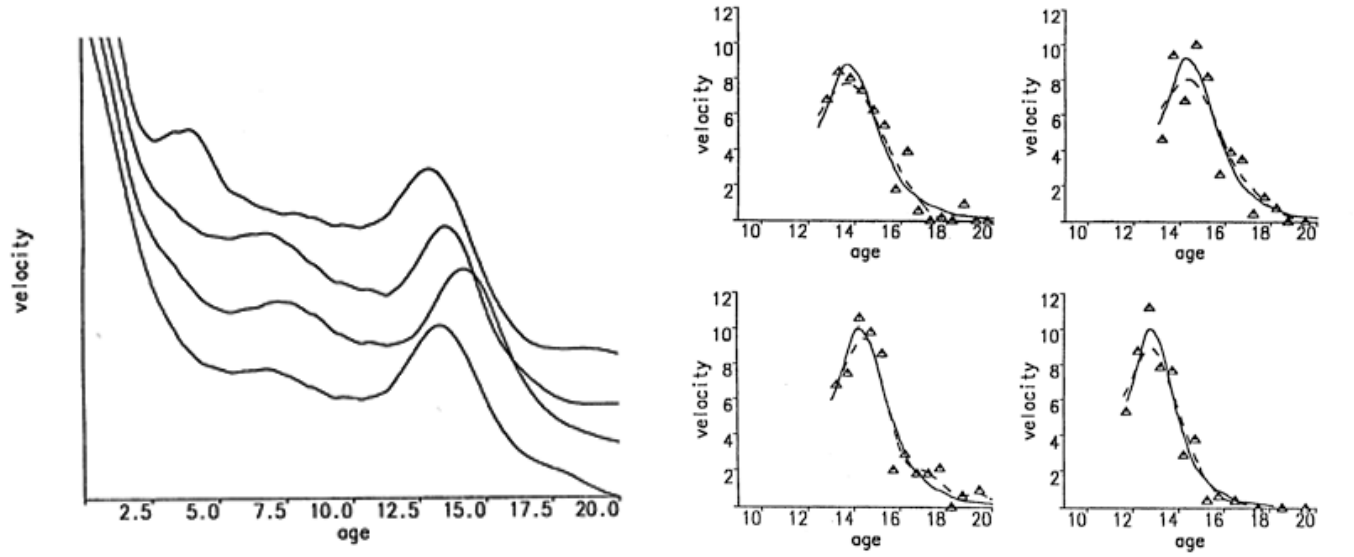


Fig 1: Left: Velocity curves for growth of four boys from Zurich growth study, estimated with nonparametric kernel estimators. Right: Comparison of two different estimates of the pubertal growth spurt (From: A.Kneip & J.Engel (1995), Model estimation in nonlinear regression under shape invariance, Ann Stat 23(2), 551-570)

himself a former student of Brad Efron, told me about the CART algorithm and handed me a book by Luc Devroye on L1 density estimation. He asked me to look for a connection between Haar series (the simplest form of wavelets) and histograms, and explore if there is a relation to the stepwise decision rule characterizing the CART algorithm. Thus, after having been away for several years from academia, I dove deep into mathematical statistics again. For my thesis, I was soon able to split the problem posed to me into a stochastic and a numeric part. The stochastic part could be solved with Devroye's book. For the numeric part, I buried myself in the library for a few days and discovered – what a lucky coincidence –that the numeric part more or less had been solved only two years earlier by a Polish mathematician. With my fresh PhD, I spent the academic year 1988/89 as visiting assistant professor at the University of Michigan in Ann Arbor where I taught various classes in applied statistics (sampling theory, stats for pre-med and for economic students). When the one-year assignment at U of M was over, I decided to return back home to Germany accepting a post-doc position at the University of Heidelberg. These were the early days of the S language and I started to learn about programming and statistical applications. In Heidelberg, I joined a research group led by Theo Gasser who had established his own school of nonparametric curve estimation. These were the last three years of a Sonderforschungsbereich – a special research program funded by the German government for a total of 15 years. The research group was cutting edge and was visited by world renowned mathematical statisticians such as Rudi Beran, Trevor Hastie, Jianqing Fan, Peter Hall and Matthew Wand. It took me quite some time to grasp and understand the theories and methods the group had developed the 12 years before I joined.

Major tangible results of our group's work applied to studies of human bodily growth. These were based on data from the Zurich longitudinal growth study which included detailed time series of body measurement of about 300 children, taken between 1954 to 1974. One concrete result was the discovery – by methods of nonparametric curve estimation – of the pre-puberty growth spurt at around age 8 found in all children of the study.

When the funding for the research project was over, I accepted another post-doc position at the economics department of the University of Bonn. In a research project lead by economist Werner Hildenbrand and statistician Alois Kneip I applied the statistical technology we had developed in Heidelberg to investigate empirically economic theories about household expenditures and market demand. Theories in this field go back to a Saxon economist named Ernst Engel (1821-1898), a namesake of mine. Thus, one of my contributions at that time was a paper on nonparametric estimation of Engel curves.

As a next step, because of my genuine preference for teaching and interacting with young people, I accepted teaching positions to prepare students to become school teachers at Hannover University and Ludwigsburg University of Education. Returning (remember, I started out as a teacher) to teacher education made me, in some sense, a "general practitioner" rather than a "heart surgeon" that had determined my path in Heidelberg and Bonn. On the one hand, my teaching in Ludwigsburg covered the preparation of prospective teacher ranging from elementary to upper secondary level and included mathematics from the didactics of algebra to geometry and applied math. On the other hand, the size of the faculty allowed me to focus on probability and statistics

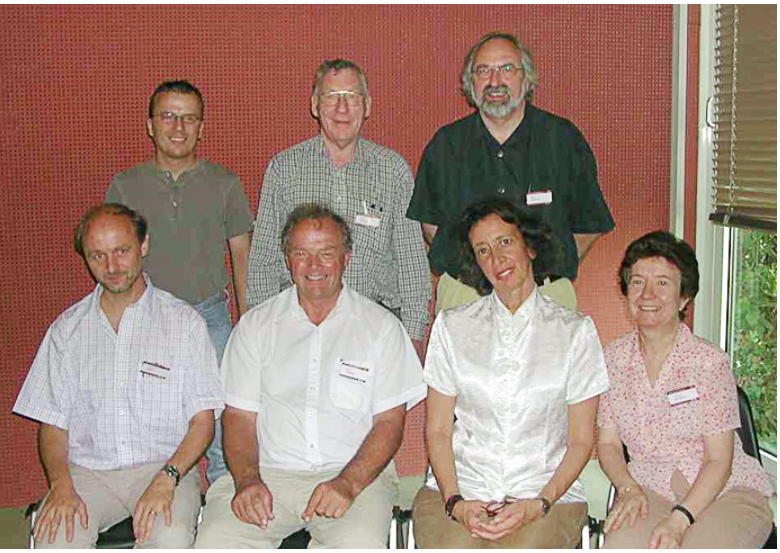


Fig. 2 Organizing Team IASE Satellite 2003 in Berlin. Back: Markus Vogel, Brian Phillips, Rolf Biehler. Front Joachim Engel, Larry Weldon, Laura Martignon, Carmen Batanero

Fig. 3: Satellite conference 2019 Kuala Lumpur

as the main domain of my work. In 1995, I joined the International Association for Statistical Education and was inspired by the growing contacts and network through attending conferences in Helsinki (WSC 1999) and Berlin (satellite and WSC 2003).

I joined the network of statistics educators in German speaking countries and started an extended cooperation with Rolf Biehler, Manfred Borovcnik and many others, nurtured by yearly conferences, lively exchange of ideas and editorial work for Stochastik in der Schule, a German language journal in the spirit of the international Teaching Statistics journal. Support from and cooperation with Carmen Batanero from the University of Granada helped my integration into an international network of statistics educators.

The focus of my teaching shifted from teaching the "orthodox" theory towards bridging human understanding and sense making. A curriculum change in Germany around 2005 gave much more emphasis to data and chance, so new courses had to be developed to prepare future teachers to teach these topics. When my friend Laura Martignon joined the faculty in Ludwigsburg, I gained new perspectives and inspiration for teaching probability and statistics. She, a mathematician by training, had worked with neuro- and cognitive scientists at Ulm University and the Max-Planck-Institute for Human Development for many years and initiated a broader and enlightened view towards learning about statistics by focusing on human reasoning and behavior in situations of risk and uncertainty. The cooperation with the Max-Planck-Institute and its director Gerd Gigerenzer not only allowed us to host several international conferences in Berlin (including the 2003 IASE satellite conference and the 2016 IASE Roundtable), but also inspired our overall approach to statistics education by embracing concepts and ideas from cognitive sciences.

At the 2013 joint IASE/ IAOS satellite conference in Macao, preceding the 2013 WSC, I listened to a keynote lecture by Jim Ridgway on challenges and threats to Official Statistics and Statistics Education and the potential for synergies in the area of high tech and big data. I myself gave a talk on Stats Ed and human rights monitoring. Jim and I met and we both felt that educating the public to better understand statistics about society is a burning issue where statistics education can make an important contribution to society: Empowering people to engage in informed decision making and participate in influencing public policy. The idea was born to launch an international project to develop tools to help the public to better understand data and statistics about society: ProCivicStat, funded with support of the Erasmus program of the European Community. We were fortunate to be joined by other dedicated statistics educators from Haifa, Porto, Paderborn and Szeged with their expertise under the umbrella of Erasmus: Iddo Gal, Pedro Campos, Rolf Biehler and Peter Kovacs and their respective teams.

ProCiviStat created a framework for understanding statistics about society and developed a comprehensive set of teaching resources available in several languages. Also, after formal funding had ended, the team wrote a comprehensive book entitled Statistics for Empowerment and Social Engagement. At last, my early involvement in social issues affecting the well-being of individuals and entire societies and my acquired knowledge and expertise in mathematics and statistics came to a point of convergence.

Equipping people with skills to make sense of our data-infused world and empowering them to make informed decisions based on data has far-reaching implications and reaches deeply into society. For democracy to function, citizens must have a critical understanding

Fig 4: ProCivicStat Team : Back: Pedro Campos, Achim Schiller, Rolf Biehler, Sonia Teixeira, Jim Ridgway, Joachim Engel, James Nicholson, Iddo Gal, Susanne Podworny; Front row: Dani Ben-Zvi, Peter Kovacs. (Missing: Daniel Frischemeier, Elena Grassler, Klara Kazar, Eva Kuruczleki, Laura Martignon, Rosie Ridgway, Anna Trostianitser)

Fig 5: Visiting Argentina in 2021 in preparation of ICOTS 11 included hiking around mount Fitz Roy

of quantitative evidence on key issues related to the social and economic well-being and human rights. This implies the capacity and knowledge to access data, critically evaluate the reliability of data, and to understand representations and analyses of data, e.g. as through innovative visualizations. However, there are major problems posed to social progress that stem from large gaps in public understanding. A great deal of the public inability to reason with evidence can be attributed to problems with education systems world-wide. This is where the International Statistical Literacy Project and the International Association for Statistical Education play an essential role with their worldwide educational program. From my experience as IASE President (2019–2021), I can say that collaboration across continents gives a great boost and encouragement to our mission and, not least, is a process of intercultural encounter that expands friendships across borders.

After my formal retirement in 2020 I still continue to teach some courses and do editorial work, with a focus on enhancing the public's understanding of statistics in the areas of health, environment and democratic values.

Mi intención para los próximos años es expandir mis actividades al mundo latino. En preparación para ICOTS 11, visité Argentina en noviembre de 2021, incluyendo algunas caminatas en la Patagonia.

*IASE President 2019-2021
engel_joachim@icloud.com

FINLAND

Statistical literacy – a civic skill in the 21th century

Marika Jokinen*

The main task of Statistics Finland is to compile statistics on socially significant issues and phenomena. To support the main task, we have also identified strengthening the statistical literacy of data users as one of our key responsibilities.

The word pair "statistical literacy" is well-established in everyday language. It refers to the skills needed to critically evaluate and identify reliable information that is generally comparable to civic skills in the 21st century. It is simply a matter of the user of the information knowing and knowing reliable sources of information and, on the other hand, being able to identify the characteristics of false information or misinformation resembling information. Once basic skills are in place, all kinds of web surfing are safer.

Statistics Finland promotes statistical literacy

The world around us is changing all the time, and it forces also us to continually update services and products to be able to serve the user up-to-date and interesting content in a modern format. Statistics Finland's education services were transferred to the online environment during the first year of the corona year, 2020. In accordance with the strategy, more user-friendly and impressive services were planned to replace the courses previously organized as classroom teaching. In addition, it was decided to start updating the online statistics courses in the field of statistics (Statistics School), which had become almost impossible to update due to outdated technology and whose contents had become partially obsolete over the years.

This is how the idea of the Learn from Statistics (only in Finnish) website was born, where we started compiling statistical content using various formats. The aim was to arouse interest in statistics among different target groups and especially among those who do not necessarily constantly monitor the production of statistics or use statistical data in their everyday working lives, such as young people, students, and novice researchers not to forget ordinary citizens. At the same time, it was an important step to complement Statistics Finland's range of product and services on the web environment.

Besides, it also proved natural to place the home of the statistical competitions on the same site. Such a strong co-operation between educational institutions, which Statistics Finland implements quite extensively, gained the visibility it needed on the new website.

In two years, the site has been enriched with a wide range of content that explores the world of statistics unprejudiced. The material is available for anyone, and it can be accessed by reading, listening, and watching as well as on computer, mobile device, and smartphone.

The most significant product that strengthens the literacy of statistics on the site are the statistical guides. They provide learning materials for independent study for anyone interested in statistics and researched data as well as liable sources of information.

Statistical guides strengthen statistical literacy and source criticality

A Statistical Guide – what is it actually and how does it support our goal? If you are interested in developing your literacy skills, grab it! A statistical guide is a web-based publication for self-study that moves quickly to the world of statistics theme by theme. It is a so-called general presentation and is intended to provide both new learners and old repeaters with meaningful content on the nature, meaning and use of statistical information. It is also visually modern and tempting, graphs and figures are largely Statistics Finland's own production, and the structure of the guide supports learning process as much as possible.

A guide is in the form of a compact, concise presentation from which anyone can easily and effortlessly review things and recall already forgotten doctrines. Key statistical concepts, issues and phenomena are brought close to the reader, one thing at a time. For example, there are dozens or even hundreds of basic and widely used concepts in statistics that should be adopted to understand what statistical figures and graphs all are about. Knowledge of the concepts facilitates interpretation and guides learner in source criticality.

The manual nature is particularly evident in the fact that individual things are easy to check with the help of a table of contents. At the end of almost each section is a glossary that brings together the concepts discussed above in one place. Whatever the definition of median or random variation, when should we talk about percentages and not percentage units, or whatever gross domestic product or employment meant. Numerous examples and reflection tasks illustrate even difficult things in a practical way for the learner.

A Statistical Guide is also a great handbook for anyone who needs basic information about the nature, use and reliable sources of statistics. For example, it introduces the identification of untrue information by telling what questions the user of the information must find an answer for the claim to be credible and substantiated, and where to find liable statistical sources both on national and international level. Today, it is essential to ask–how to differentiate facts from lies if you are not familiarized yourself with background information concerning the information? First step is to check the source of information.

In general, every guide is focused on one statistical topic, e.g., statistical concepts, information retrieval, statistical literacy, and presentation of statistics (bars, pies etc.) which is covered closely and pragmatically with numerous illustrative examples and reflections. In addition, some topics of the statistical phenomena are covered in more detail such as economy, well-being and population which are also familiar topics in the media due to their social relevance. In every guide learning is reinforced with plenty of examples and activating tasks.

Statistics Finland has until now published 9 guides in three categories: statistical literacy, research and learning, and information retrieval. One guide which is especially for researchers is also available in English. We are currently working on 3 new guides that are supposed to be published by the end of this year.

Defending liable information every day

The speed and amount of false information and disinformation in all its forms on the web challenges users constantly to critically assess their own statistical literacy skills. Our responsibility as a statistical authority is to ensure that we defend the researched data in all situations, we share the data as much as possible, and we always provide users with up-to-date and accurate information. Presence in social media, sharing statistically high valued and high-quality data, and correcting tirelessly misconceptions are inevitable tasks on daily basis.

Generally, an effective way to remind people of all kinds of media criticism is to campaign regularly. It is hardly ever possible to remind people of the importance of overly reliable information and the deception of false information. It does matter what kind of worldview we care about as a public actor. That is why we need to be visible and heard all the time and share our values and visions for the general public.

The last marketing campaign for 6 months ago significantly increased the number of users of the guides, and they received a lot of visits and visibility as planned. It was again an important action in the unreserved defence of reliable information.

* Head of Training, Statistics Finland
marika.jokinen@stat.fi

USA

Statistical Literacy News from the US

Milo Schield*

Statistical Literacy conference: Statistical Literacy will be a focus of the 2022 annual conference of the National Numeracy Network (NNN): Oct 21-23. The NNN mission is "to support numeracy: reasoning from data in everyday life." This conference will feature Math 1300 (Statistical Literacy) offered by the University of New Mexico (UNM). This new course is designed for consumers of statistics: students in non-quantitative majors. This statistical literacy course is different: less than a 30% overlap with traditional statistics courses. More focus on observational studies than experiments, more focus on confounding than on randomness, more focus on ordinary English than Algebra, more focus on how statistical significance can be influenced by what is taken into account than on hypothesis tests or p-values. This conference, held in Albuquerque at UNM, will be hybrid: face-to-face and online. The call for papers has been issued. [2] International submissions and international participation are welcome.

Three new statistical literacy publications by US ISLP Representative: Milo Schield:

"Statistical Literacy: Seven Simple Questions for Policymakers" was published by the Statistical Journal of the International Association for Official Statistics (SJIAOS). [3] The seven questions are (1) How big, (2) Compared to what? (3) Why not a rate? (4) Per what? The diabolical denominator (5) How were things defined, counted or measured? (6) What was taken into account (controlled for)? (7) What could and should have been taken into account? Examines an association based on data from the UK National Health Service showing that "Vaccinated cases were MORE likely to die of Covid than were unvaccinated cases." But after taking into account age (use a simple graphical weighted average), this crude association is reversed: "Vaccinated cases were LESS likely to die of Covid than were unvaccinated cases."

"Introducing Statistical Literacy: A Lesson Plan" was presented as an activity at the US Electronic Conference on Teaching Statistics. [4] The goals of this activity: Students will be able to: (1). distinguish statistics from numbers by giving examples. (2) state why statistics are different from numbers. (3) describe (by giving examples) how statistics can be influenced by (3a) Confounding (how a related factor can influence a connection or comparison), (3b) Assembly or assumptions (how things are defined, counted, measured, summarized, presented). (3c) Randomness (the Sports Illustrated Jinx), (3d) Error/bias (examples of subject/response bias, measurement/researcher bias and sampling bias). (4). explain why "Take care" is good advice in dealing with statistics. (5) Connect the four letters in CARE with the four kinds of influence on a statistic.

"Statistical Literacy: Critical Thinking about Confounding" was presented at the 42nd Conference on Critical Thinking. [5] Confounding is not listed in the index of most introductory statistics textbooks. Few — if any — textbooks show students how to work problems that take into account (control for) the influence of a confounder. This paper illustrates how to take into account (control for) the influence of a confounder without using computer software. The influence of a measured binary confounder is taken into account using a simple weighted-average graph. Applies this technique to summary data from the UK National Health Service showing that "Vaccinated cases were MORE likely to die of Covid than were unvaccinated cases." But after taking into account age, this crude association is reversed: "Vaccinated cases were LESS likely to die of Covid than were unvaccinated cases." Students have never seen anything like this in their 12 years of mathematics or in their AP statistics class. Students recognize how many comparisons or averages, rates and percentages are really crude comparisons: comparisons that do not take anything relevant into account. They recognize the need for hypothetical thinking: thinking about what could and should have been taken into account. An auxiliary paper, "Statistical Literacy: Critical Thinking about Statistics," was also presented at this conference. [6] Videos are available for both presentations.

Papers:

[1] www.NNN-US.org
[2] http://www.nnn-us.org/resources/Documents/Meetings/2022/Call%20for%20Presentation%20Proposals.pdf
[3] www.StatLit.org/pdf/2022-Schield-SJIAOS.pdf
[4] www.statlit.org/pdf/2022-Schield-ECOTS-Lesson-Plan.pdf
[5] www.statlit.org/pdf/2022-Schield-CCT.pdf Paper, slides and video
[6] www.statlit.org/pdf/2022-Schield-CCT2.pdf Paper, slides and video

* Statistical Literacy Coordinator and Adjunct, The University of New Mexico
schieldmilo@unm.edu

INDONESIA

Comic for statistical literacy

Maulana Faris*

Post truth society is one of the main problems that occur in the world with the rapid development of the internet. News continues to arrive on people's smartphone devices without any more filters that are able to distinguish between hoax news and accurate news. In the Post Truth Society, people prefer to believe fake news that can move their feelings compared to news with real data. This has brought a lot of chaos in society, especially in the era of the Covid-19 pandemic.

One way to fight the post truth society is to increase statistical literacy in the community. The National Statistical Office (NSO) has an important role in building statistical literacy in the community. What is the best way to build statistical literacy in society? There is no best way to do this because society has many different characteristics that require us to take various approaches according to the characteristics of the community. In science communication, the type of communication is divided into inreach, namely communication between experts and experts, and outreach, namely communication between experts and non-experts. In inreach communication usually use scientific journals, scientific conferences, and other scientific discussions. In the outreach, various approaches were taken, such as podcasts, animations, infographics, and comics.

Comic is one of the popular communication tools among children, teenagers, and even the general public. Comic is not only entertainment but can also be used as education. Science comics are growing rapidly in society as well as in the world of statistical education. Larry Gonick and Woollcott Smith made a comic about basic statistics entitled 'The Cartoon Guide to Statistics' which was published in 1993. Japanese society also saw comics as a good educational tool, so they created a statistical manga (Japanese comic) entitled 'The Manga Guide to Statistics' by Shin Takahasi in 2008. In Japan, Statistical Comics then continued to evolve into deeper statistics such as Regression Analysis, Linear Algebra, and many more. Not only statistics, Big Data has also become an interesting science comic theme for the people of South Korea which later gave birth to an educational comic entitled 'Why? Big Data' in 2017 by Papyrus and Heeseok YOO and 'Special Job? Big Data Pro' by Jeong Yong-seok and Hur Jae-ho.

In Statistics of Indonesia (BPS) itself, various comics have been made to build statistical literacy in society. We made comics about Inflation, Seasonal Adjustment, SDGs, even the latest one is Big Data comics. Statistical comics get great enthusiasm in the community because we post them on easy-to-reach social media. Big Data's first comic reached 17,495 accounts in its first twenty days of publication, while on Instagram it managed to reach 44,497 accounts. Public response to big data comics is quite high. Several accounts commented that they couldn't wait to read the next series. The big data comic series will continue at least until the eighth series. After that, it will be discussed again whether to continue big data as a theme or move to another theme. Creating science-themed stories as well as big data takes more time than making regular comics. We must really understand the context of big data and translate it into easy-to-understand language. We need to think hard to avoid being misleading. Even so, discussions with a team that are experts on big data will make the process of making story scripts easier to complete. While comic-based scientific storytelling received a very good response, the most important thing is to have a group of professionals take care of the work and make the most of the characteristics of the story (Igarashi et al, 2020). In the future, we will make statistical comics and big data into English so that it can be used by other ISLP coordinators in their respective countries.

* Statistician, Data Scientist at BPS Indonesia
ISLP Country Coordinator for Indonesia
maulana_faris27@yahoo.com

Statistical literacy papers 2021 from Indonesia ISLP coordinator

Maulana Faris*

We, the Indonesian team, presented several papers at the UNECE 2022 Communication and Dissemination expert meeting. The 2021 Workshop on Statistical Data Dissemination and Communication was held online on 11-14 October 2021. The themes we raised were mostly about how we improve statistical literacy in the community in the era of the COVID-19 pandemic. The following is an abstract summary of the papers we presented:

1. Statistic in Illustration Art-Statistics Dissemination for Young People

(Maulana Faris, Baby Tamara Alderosa Marpaung)

Statistical anxiety is common among teenagers and children. The stigma that statistics are complicated makes teenagers and children reluctant to study statistics. In fact, instilling knowledge and concern for statistics to children is important to build a data driven society. The National Statistical Office needs to take an approach to increase awareness of statistical data among young people. One of them is by combining illustration art with statistics. Teenagers have an interest in art that can relate to their taste. Relevant and interesting impression is an important key in making statistical dissemination for teenagers and children. Statistics Indonesia takes various approaches through fun illustration art in making statistical dissemination targeted to teenagers and children. This article proposes about the experience of statistics Indonesia in carrying out an illustration art approach to build statistical literacy among adolescents and children.

2. Building Big Data Communication Strategies to Non-Expert Audiences

(Maulana Faris, Setia Pramana)

Big Data is one of the solutions in gathering information about the socio-economic changes of society in the era of the COVID-19 pandemic without having to go to the field. However, the term Big Data is still not yet familiar to most of public in Indonesia. To gain people's trust in Big Data, we have to start by introducing Big Data to the society. However, introducing the term new data to the general public is not easy, especially during the pandemic. The National Statistical Office (NSO) which is responsible for building Big Data literacy in the community must have a special approach in communicating about Big Data to the community. The Big Data Team of Statistics Indonesia creates a variety of big data literacy contents that is light and easy for public to understand, such as creating podcasts, animations, videos, infographics, to comics. Every literacy content created uses interesting story telling using simple language that is commonly used in daily communication. Furthermore, the team utilizes social media as an effective communication tool to the public.

3. Statistical Infographic Publication-Embracing the General Public

(Dwi Afrizal, Aulia Fadyati Amini, Oo Suharto, Maulana Faris)

In the current era of the Covid-19 pandemic, statistical data is an important compass for the public to see the direction of socio-economic changes that are occurring. But statistics are still considered something complicated by common people. This creates a huge wall for the public to use statistical data as a guide. As a result, a post-truth society develops easily in a society that causes a variety of information chaos. Local Statistical Office Pulang Pisau Regency, Central Kalimantan Province, Indonesia, made an innovation in publishing statistical information to the public, namely the creation of book publications containing statistical information made in infographics. Each page of the statistical discussion is designed with interesting infographics and easy to understand even for ordinary readers. Infographic publication can be downloaded via the website and promoted through social media. This infographic publication is expected to reach more ordinary people in increasing public awareness of statistics.

4. Engaging People's Enthusiasm in 2020 Population Census by Scrapping Social Media

(Oka Widhyartha Putra, Nurmitra Sari Purba, Fachruddin Mansyur, Meindra Sabri, Setia Pramana, Maulana Faris)

The successfulness of Population Census lies on people participation. Hence, the biggest challenges is how to attract the people to take part actively in the census. BPS-Statistics Indonesia has implemented several strategies on increasing the people's enthusiasm to participate the census. To monitor if these strategies are effective, information from several social media sources such as YouTube, Instagram and Twitter are gathered and analyzed. In collecting data from Instagram, API search post, comment, profile user, and location provided by Instagram were used. The API then got accessed by using Python with package request. Data from Twitter were collected using the tools called Twint package in Python. YouTube video data of 2020 population census were collected through web scrapping by Selenium of Python. From YouTube, there are 883 videos related to 2020 Population Census from 2014 – 2019. The accumulated total view is 732.030, 36.274 likes, and 2.441 comments. In the last three months of 2019, the total video increased quite drastically compared to previous months, showing that socialization attempt was intensified. As for Instagram web scrapping result from August 1st – December 15th 2019, the accumulated total users whom posted is 5.162 users, with total like 665.560 likes, and 22.232 comments. It was also known that the most posting was made in September 2019, which was also National Statistics day. From Twitter web scrapping, 3 694 tweets from 1,737 accounts were accumulated. Therefore, the year 2019 becomes the year with the most tweets about 2020 population census. From these results, we can see which socialization method that was done effectively in order to get people's attention as part of evaluation object. For the future, this is going to be used in all statistics activities in term of engaging users and investing in statistics.

5. Building Statistical Literacy through Youtube

(Nauval Tama Pratikto, Eko Oesman, Maulana Faris)

Indonesia and several other developed countries are still data-blind (data illiterate) and drown in authoritarian-verbal culture despite marginalized the measurable pattern of communication. Building society's awareness on how important statistic data has become big challenge for every National Statistical Office (NSO). BPS as Indonesia's NSO must provide simple data for ordinary people to understand. Not only being presented simply, but also reachable by all people. In order to answer that challenge, BPS has continually innovating using various communication tools, in which, one of them is social media.

BPS created Youtube account in November 11th 2015. By now, the total of BPS Statistics' official subscribers have reached more than twenty two thousand users. There are various approach videos done by BPS in doing variety of statistical activity socializations to people through Youtube; for instance, Vlog, Indonesian statistics videography publication, and many other video informations. The videos in BPS' Youtube are uploaded routinely to increase people's enthusiasm in enjoying variety of statistical informations and activities. Videography content that is wrapped interestingly e socialization as enjoyable show that can easily be accepted by people. By using Youtube social media, all information about statistics can be reached by everyone. The BPS Videos can also be watched whenever and wherever, thus Youtube becomes effective communication tools in investing statistical knowledge to common people.

Most of the videos on the BPS Youtube channel are produced by the Public Relations (PR) Team or the dissemination directorate at BPS. Each type of video content has different stages in the creation process. For live videos, the PR team must prepare at least two hours before the live. Some of the crucial things that must be prepared include preparing the camera, audio, and network. For broadcast materials must be prepared at least one day before the event. Sometimes if needed, we also use a green screen for the virtual background. For other content such as promotional videos for statistical activities, PR usually produces videos in collaboration with the subject matter. In addition, there are also podcasts that are made in a casual interview format.

Link of all the full papers :

https://statswiki.unece.org/pages/viewpage.action?pageId=320995812

* Statistician, Data Scientist at BPS Indonesia
ISLP Country Coordinator for Indonesia
maulana_faris27@yahoo.com

MONGOLIA

Administrative data and digitalization

Khuslen Zorigt*

Even before the pandemic, the Government of Mongolia was already leveraging administrative sources for collecting employment-related data. The Ministry of Labour and Social Protection (MLSP) compiles data on registered unemployed, foreign workers with labor contract, employees working abroad on a contractual basis, and collective labor dispute. The General Agency for Specialized Inspection registers data on occupational accident while the Civil Service Council records data on government employees.

The National Statistics Office of Mongolia (NSOM) oversees the dissemination of the registered unemployment statistics compiled by the MLSP. However, this practice was halted at the beginning of pandemic in April 2021 because of the ongoing enhancement of the registration system. Although the other administrative data collection activities of other government entities were not impacted by the pandemic.

The Government of Mongolia uses a Labor Market Information System, which creates labor market database by registering and mediating information from employers or establishments and job seekers and unemployed people. The MLSP is preparing to integrate the LMIS with other government databases and introduce the E-job electronic platform in 2022, making it more accessible to the public. The use of an electronic labour market platform has improved access to services for citizens and establishment and reduced the burden on public services.

As of 2022, there are 140 services in the sector, of which 53 services have been transferred to electronic form. Here are some of them:

- Social insurance
  - Issuance of social insurance book
  - Issuance of pension book
  - Voluntary social insurance
  - Insurance and premiums for health insurance
  - Set and pay fees related to rehabilitation
  - Establishment and payment of temporary disability benefits
  - Establish and provide maternity benefits
  - Establishment and payment of survivor's pension
  - Obtain a certificate from the employer on the payment of social insurance premiums
  - Obtain a certificate from the insured on the payment of social insurance premiums
  - View information on the cost of pensions and benefits provided by the Social Insurance Fund
  - Third party verification of social insurance payment statements
  - Determining and granting old age pensions
  - Check personal account information
  - Check that the years of service and the years of service have been reimbursed in accordance with the Law on Reimbursement of Pension Insurance Premiums.

  - Check that the period for reimbursement of pension insurance premiums of herders and self-employed is guaranteed in accordance with the Law on Reimbursement of Pension Insurance Premiums.

- Social welfare pension
  - Elderly (60 and above for men, 55 and above for women, adult dwarf aged 16, adult persons with disabilities who lost up to 50 percent of ability, orphans up to 18 age, single mother/father who has 4 and more children)

- Social welfare benefits–Care allowance
  - Citizen who adopted full supported orphan, citizen who care/look after victims by domestic violence, citizen who look after elderly and persons/children with disabilities who do not have children or caregiver,

- Emergency and livelihood benefits
  - Household who lost their home/house by natural disaster, accident etc. children who lost their parents, homeless released from prison, children up to 16 ages who need long term medical care,

- Maternity benefit
  - Benefits for pregnant and maternity , mother or father who have twins, mother who have children, up to 3 years, single mother/father who have triplet
  - Child benefit
  - Benefits for old ages
  - Employment
  - License to mediate Mongolian citizens for employment abroad
  - LABOR PERMIT OF Overseas Labor Recruitment Services
  - Job seeker registration
  - Employer registration (employer looking for an employee)
  - Career guidance services

The General Office for Labor and Welfare Services under the MLSP also employs various administrative data sources in assessing the beneficiaries of Food Stamp Program (FSP). The FSP database, Integrated Household Database, National Insurance Database as well as the Household Socio-Economic Surveys provide information on the characteristics of the beneficiaries. The assessment resulted to removal of several FSP beneficiaries, which decreases inclusion errors, and thus increases the program budget (ADB 2022). The NSOM and selected government institutions of Mongolia has also reached an agreement to come up with an integrated database, which include a) the state registration data, i.e., civil and corporate data, of the General Authority for State Registration; social insurance data of the General Authority for Social Insurance; social welfare data of the General Authority for Labor and Social Welfare; education data of the Ministry of Education and Science; tax data of Mongolian Tax Authority; trade data of Customs General Authority; price data of Information Technology Center of Custom, Taxation, and Finance; and COVID-19 data of National Center for Communicable Diseases.

* Head, Foreign Cooperation Division, Ministry of Labour and Social Protection, Mongolia
ISLP Country Coordinator for Mongolia
khuslen@mlsp.gov.mn

PORTUGAL

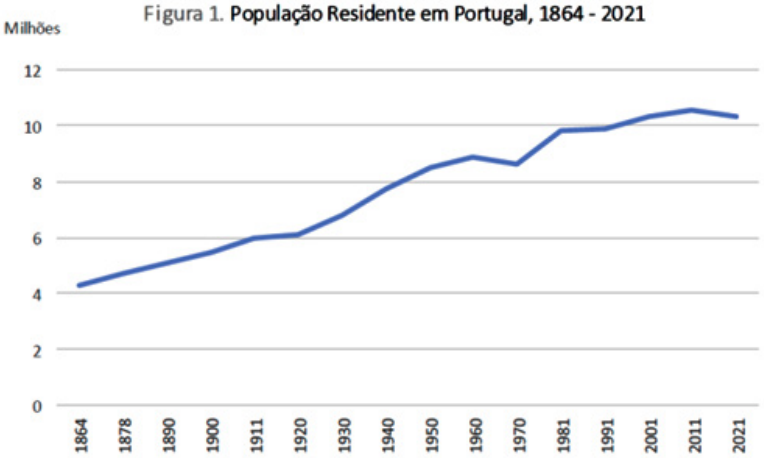
INSTITUTO NACIONAL DE ESTATÍSTICA
STATISTICS PORTUGAL

CENSOS 2021

Census 2021 in Portugal

Pedro Campos*

Figura 1. **População Residente em Portugal, 1864 - 2021**



Fonte: INE, Recenseamentos da População e da Habitação

According to the provisional results of the 2021 Census in Portugal, the resident population in Portugal was 10 344 802 people. In the last decade, the country recorded a population decrease of 2.1% and the imbalances in the distribution of population across the territory have increased, with a greater concentration of the population on the coast and near the capital. The phenomenon of population aging has also worsened, with a significant increase in the elderly population and a decrease in the young population: in 2021 there will be 182 elderly persons for every 100 young persons. The foreign population living in Portugal grew by about 40% compared to 2011, settling at 555,299 people.

The level of schooling of the population has increased significantly in the last 10 years, with the reinforcement of the population with higher education and with secondary and post-secondary education. The number of people living alone also increased in comparison to 2011, while the average size of private households decreased. Regarding the housing stock, Portugal recorded a slight growth in the number of buildings and dwellings for habitation, although at a much slower pace than in previous decades.

The weight of first homes increased slightly to the detriment of secondary residences. In 2021, 70% of dwellings are owner-occupied, although this percentage has been falling in recent decades. In turn, rented dwellings registered an increase of 16% compared to 2011.

Available on the INE portal and accessible from the Census 2021 Dissemination Platform, the Provisional Results of the Census 2021 provide 17 statistical indicators at the geographic parish level, at censos.ine.pt

* Doctor of Business Administration.
INE.Universidad de Porto

Os Censos 2021 em Portugal

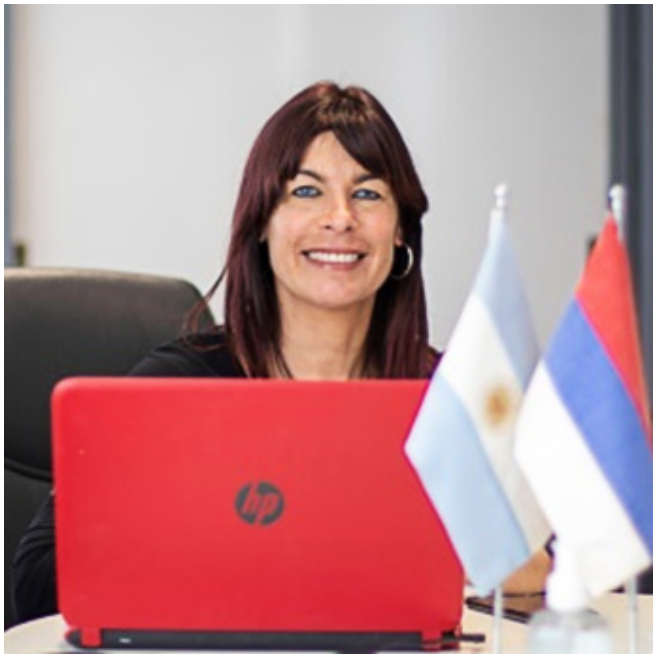
De acordo com os resultados provisórios dos Censos 2021 em Portugal, a população residente em Portugal era de 10 344 802 pessoas. Na última década, o país registou um decréscimo populacional de 2,1% e acentuaram-se os desequilíbrios na distribuição da população pelo território, com uma maior concentração da população no litoral e junto à capital. Agravou-se também o fenómeno de envelhecimento da população, com o aumento expressivo da população idosa e a diminuição da população jovem: em 2021 existem 182 idosos por cada 100 jovens. A população estrangeira residente em Portugal cresceu cerca de 40% face a 2011, fixando-se em 555 299 pessoas.

O nível de escolarização da população aumentou de forma significativa nos últimos 10 anos, com o reforço da população com ensino superior e com o ensino secundário e pós secundário. Aumentou ainda, face a 2011, o número de pessoas que vivem sozinhas e diminuiu a dimensão média dos agregados domésticos privados. No que respeita ao parque habitacional, Portugal registou um ligeiro crescimento do número de edifícios e de alojamentos destinados à habitação, embora num ritmo bastante inferior ao verificado em décadas anteriores.

Reforçou-se ligeiramente o peso da primeira habitação em detrimento das residências secundárias. Em 2021, 70% dos alojamentos são ocupados pelo proprietário, embora esta percentagem tenha vindo a decrescer nas últimas décadas. Por sua vez, os alojamentos arrendados registaram um aumento de 16% face a 2011.

Disponíveis no portal do INE e acessíveis a partir da Plataforma de Divulgação dos Censos 2021, os Resultados Provisórios dos Censos 2021 disponibilizam 17 indicadores estatísticos ao nível geográfico de freguesia, em censos.ine.pt.

ARGENTINA



¿Cómo fue el Censo 2022 en Argentina?

Cdora. Silvana Dea Labat*

El Censo Nacional de Población, Hogares y Viviendas 2022, que se realizó en Argentina el 18 de mayo, fue el undécimo censo de población y fue realizado por el Instituto Nacional de Estadística y Censos (INDEC).

El Censo enumera a todas las personas que viven habitualmente en el territorio nacional. En esta ocasión se respondió de dos maneras: en forma anticipada a través de un cuestionario en línea (Censo digital) o mediante la entrevista presencial en la vivienda durante el Día del Censo.

A diferencia de los censos anteriores, se habilitó por primera vez una página web para que las personas que lo prefieran pudieran completar el cuestionario en línea desde sus hogares. Más allá de esta opción, los censistas recorrieron todas las viviendas del país el 18 de mayo para solicitar los comprobantes censales a quienes hayan elegido la modalidad digital o realizar la entrevista tradicional a quienes no hayan completado el cuestionario.[1]

El miércoles 18 de mayo de 2022 fue el Día del Censo, decretado feriado nacional. Participaron más de 600 mil personas en todo el país, entre censistas urbanos y rurales, coordinadores nacionales y provinciales y otros puestos que integran la estructura censal.[1]

Los organismos internacionales y la legislación vigente prevén que los censos se realicen cada 10 años. Debía realizarse en 2020 pero a consecuencia de la pandemia de COVID-19, no pudo realizarse ese año.[2]En 2021 se pospuso debido a la pandemia y las elecciones legislativas.

Según los primeros resultados provisorios entregados por el INDEC el 19 de mayo, la población argentina es de 47.327.407 habitantes.[3]

El Instituto Nacional de Estadística y Censos (INDEC) pone a disposición de la población los resultados provisorios del Censo Nacional de Población, Hogares y Viviendas 2022.

Estos datos deben interpretarse como tendencia del operativo de campo a los cuales, posteriormente, se aplicarán procesos poscensales de consistencias y validaciones una vez completada la etapa de recuperación prevista en la metodología del Censo.

Porcentaje de población por sexo*:
Varones / Masculino: **47,05%**
Mujeres / Femenino: **52,83%**
X / Ninguno de los anteriores: **0,12%**
* Porcentaje de población elaborado en base a cálculos del Censo digital.

Población censada mediante Censo digital: 23.813.723

Porcentaje de completamiento del Censo digital: 50,32%, en base a la tendencia porcentual del operativo de campo.

Censo Nacional de Población, Hogares y Viviendas 2022 en la provincia de Misiones. Reflexiones.

Quienes nos dedicamos al mundo de la estadística y sobre todo en la gestión pública, sabemos que el operativo estadístico más grande e importante es un censo de población y particularmente, este censo 2022, atravesado y demorado por una pandemia y en su implementación bimodal, nos presentó el gran desafío de adaptar a la realidad provincial la incorporación de la tecnología en diferentes procesos: el registro de la estructura censal, la capacitación y el relevamiento.

Se debieron diseñar estrategias particulares en las distintas etapas, en función de garantizar la correcta realización de tareas fundamentales del operativo.

En relación a la capacitación de toda la estructura, que se desarrollaba de manera virtual, con la incorporación de un Taller de Refuerzo al final, previsto para dictarse en 2 horas, se debió ampliar a una jornada completa, ya que en ese tiempo no se llegaban a repasar todos los contenidos, ni responder a las inquietudes que surgían luego de la realización de la capacitación virtual.

Además, se optó por descargar del Campus Virtual, todos los contenidos (módulos, placas, videos) y enviar tanto por mail como por whatsapp a toda la estructura censal.

En algunas jurisdicciones, se llevaron adelante más de un Taller de Refuerzo por rol y también se realizaron reuniones mediante plataformas virtuales (Zoom o Meet). En este sentido, afirmamos que para este tipo de operativos ,es necesario implementar la vieja estructura de capacitación de los censos anteriores, en su modalidad taller presencial, con evaluaciones y técnicas de dramatización, ya que los censistas no sabían cómo presentarse en muchos casos y tampoco sabían cómo manejar el cuestionario censal en papel. Ni hablar de la interpretación del plano de su segmento, cosa fundamental para asegurar la cobertura territorial del área asignada.

Por otro lado respecto a la utilización de la App CensAr y el Tablero de Gestión, notamos que el tiempo transcurrido entre la presentación de la app y el tablero de gestión a la estructura y su utilización no fue suficiente para que la estructura censal se familiarizara con el uso de estas herramientas, por ello se decidió reforzar la metodología tradicional del operativo, mediante la utilización de planillas, especialmente en áreas rurales.

El Censo. ¿Positivo o negativo?

En términos generales, en la provincia de Misiones se registró una mayor respuesta al Censo Digital, de la esperada. Si bien para realizar un mejor análisis, se debe esperar la publicación de la información desagregada, lo que se puede decir, en base a consultas y solicitudes de distintos municipios, es que la participación en la modalidad digital fue más alta en aquellas jurisdicciones donde la estructura municipal y educativa la promovieron, por ejemplo, mediante la instalación de Puntos Digitales en lugares estratégicos, como delegaciones municipales, Ferias francas, espacios Markers de la Escuela de Robótica en los 77 municipios y delegaciones de oficinas provinciales , como es el caso del Ministerio de Trabajo, que con la ayuda de un facilitador del censo, acercaban el operativo a las familias y los asistían en el completamiento del formulario virtual.

Como es de prever, las mayores limitaciones para responder el Censo Digital, se encontraron en áreas en las cuales no existe o es deficiente- el servicio de internet, en áreas rurales y de frontera, especialmente, donde el apoyo y compromiso de la fuerzas de seguridad nacionales y provinciales fue clave, ya que Misiones, hasta el censo 2010, conservaba 30%de población rural.

¿Qué aprendimos?

Fundamentalmente la necesidad del respeto de los tiempos de planificación que requiere un Censo, la importancia de la participación en todas las etapas, de los equipos de trabajo con experiencia-tanto del INDEC como de las DPE-, la consideración de las recomendaciones de especialistas, académicos y técnicos de todo el país y la implementación de un plan de difusión en cada jurisdicción provincial, acorde a las realidades locales, con una anticipación de 3 años como mínimo, como lo fue nuestra experiencia exitosa en el 2010.

* Directora ejecutiva del Instituto Provincial de Estadística y Censos de Misiones, Argentina
sdealabat@indec.gob.ar

BELGIUM

Coordinator for Belgium

Wendy Schelfaut*

Wendy Schelfaut is the spokesperson and head of communication and dissemination of Statistics Belgium. Working in different areas of communication, on topics as migration, classical music and printing, she was introduced into the world of official statistics in 2016.

Soon after, she adopted a new, unofficial role as statistical literacy ambassador within Statistics Belgium. New projects were born: the website Statbel Junior for children aged 8-12, the participation in the European Statistics Competition, statisticians on school visits… and many more to come.

Not being a statistician herself, Wendy Schelfaut continues to emphasize the importance of working on statistical literacy. “We cannot expect every citizen to understand our statistical publications after a first reading. Being aware of the level of statistical literacy within the target group for communication, is a starting point for better publications, good data visualizations and the use of clear language.”

* Press Officer & head of dissemination/communication, Statistics Belgium
ISLP Country Coordinator for Belgium
Wendy.Schelfaut@economie.fgov.be

CHINA

New Coordinator from China

Youming Liu*

Youming "Yume" Liu has graduated from Washington University in St. Louis with a Bachelor honor degree in Mathematics. Passionate about providing equal resources to students interested in mathematics and statistics, he initiated a series of on-campus seminars and activities as the President of WashU Math Club during his undergraduate study and donated a need-based scholarship, The Family of Youming Liu Scholarship, to WashU immediately after his graduation. He then joined Chongqing BI Academy as a Math Teacher. During his time at Chongqing BI Academy, he launched multiple student life enrichment projects including the TEDxChongqing BI Academy event, Artificial Intelligence Lab, Women in Math Club, a Student-Managed Investment Fund focusing on statistical analysis of stocks and algorithm trading, etc., to encourage students applying their knowledge to tackle real-life problems. In addition, he has witnessed students' successes in winning Global Gold Medal in American Mathematics Competition (AMC12), Outstanding and Honorable Mention awards in Middle Mathematical Contest in Modeling (MidMCM) and High School Mathematical Contest in Modeling (HiMCM), and 2nd Place in Chinese Classic Text OCR Challenge as a coach. Under his influence, the school cheers a 70% increase in students matriculated to Statistics or Data Science major at prestigious universities including the University of Chicago, Cornell University, Vanderbilt University, and Washington University in St. Louis. For his excellence in teaching and coaching, he was awarded "Best Teacher" for multiple times and promoted to be the Principal's Assistant.

Mission Statement:
China is a country with a considerable population and consequently, a large amount of data generated alongside with daily behaviors in education, business, health care, and other areas of public administration. However, the effort to promote statistical literacy is rather limited compared to the large scale of population and complexity of data, be it personal data or big data. More specifically, citizens and professionals are not prepared enough yet to harness the power of statistics and use data responsibly. Five major problems have been identified according to a survey conducted by Youming Liu at Chongqing BI Academy:

- Insufficient Educational Resources for a Career as Data Scientists
- Inefficient Integration of Statistical Solutions in Teaching and School Management
- Unclear Disclosure of Statistical Reports by Government
- Underdeveloped Public Literacy of Statistics
- Unethical Usage of Personal Data in Business

Therefore, I pledge to promote statistical literacy by motions below:

- Encourage students' interests in statistics by organizing poster competitions, coaching more statistics-related contests, and coordinating with other ISLP endeavors
- Create more job opportunities for math teachers and ideally statistics teachers for high school statistics course and Advanced Placement (AP) Statistics
- Increase public awareness of the importance of data by holding open seminars and talks
- Promote accessibility to educational resources by setting up more scholarships

* Math Teacher & Principal's Assistant, Chongqing BI Academy
ISLP Country Coordinator for China
youmingliu@wustl.edu

COLOMBIA

ISLP Country Coordinator for Colombia

Leonardo Trujillo*

Leonardo Trujillo (PhD in Social Statistics, University of Southampton, UK) is an Associate Professor in the Department of Statistics at the National University of Colombia (NUC). He has more than twenty-five years of experience teaching undergraduate, Master and PhD students in Bogota and he has been a Visiting Professor at the University of Valparaiso, Chile; the University Anton de Kom in Paramaribo, Suriname and Queens University of Belfast in Northern Ireland. His research interests cover the areas of design of surveys, survey sampling, machine learning methods, time series analysis. He has been twice the Curriculum Director of the Department of Statistics (2010-2012 and 2018-2020), Editor of the Colombian Journal of Statistics (Revista Colombiana de Estadística, 2012-2015) and the Academic Director of the National University of Colombia in Valledupar (2021-2022). He has been a recipient of the Exceptional Teaching distinction at NUC in 2017 and a link between the NUC with DANE (Colombian NSO) through the certification of all national statistical operations according to international quality guidelines for official statistics (2010-2020). He has taught from basic undergraduate courses in Probability and Inference to advanced courses in Survey Design, Statistical Consulting, Survey Sampling, Generalized Linear Models, Causalty Analysis, Machine Learning for Undergraduate and Postgraduate students and is looking forward to encouraging all students related with the Statistical Sciences in Colombia to participate in the International Statistical Literacy Poster competition and promoting participation in ISLP activities together with the Colombian Statistical Society in order to improve statistical literacy in Latin America.

* Associate Professor in Statistics, NUC

INDIA

New Coordinator for India

Rituparna Sen*

Rituparna Sen is an associate professor in the Applied Statistics Unit at the Indian Statistical Institute (ISI), Bangalore. Previously she worked as assistant professor at the University of California, Davis. Dr Sen earned her B.Stat and M.Stat from ISI and PhD in statistics from the University of Chicago. Her research area is the applications of statistical theory and methods in finance. She has numerous publications in peer reviewed scientific journals. She has delivered many invited presentations at international conferences and industry special events. She organizes workshops and training programs regularly for capacity building in statistics and machine learning. Dr Sen is the editor of the journal Applied Stochastic Models in Business and Industry (ASMBI) and associate editor of several other journals. She is an elected member of the International Statistical Institute and a council member of the International Society for Business and Industrial Statistics (ISBIS). She has been awarded the young statistical scientist award by the International Indian Statistical Association (IISA), best student paper award by the American Statistical Association (ASA) and women in mathematical sciences award by Technical University of Munich.

On why I would like to promote statistical literacy in my country.

The need for trained statisticians has grown very rapidly in the past few years due to availability, easy storage and sharing of data as well as rapid progress in computational power. It is therefore necessary to build a large body of individuals trained in statistics. Since the development is quite recent, there is a dearth of teachers who can carry out this task, particularly at the school level. The subject of statistics was not so popular a couple of decades ago. The few trained persons are highly sought for jobs in industry and higher academia, leaving a large gap in school teaching. Thus statistics is mostly taught by computer science and mathematics teachers who lack an understanding of data handling and statistical inference. This incomplete knowledge and understanding is leading to large scale misuse and abuse of the subject. As a person trained in statistics from undergraduate level and currently teaching at a premier institution of statistics, I am eager to share my expertise at the grassroots level. Being the country coordinator of ISLP will give me a platform for carrying this out.

* Associate professor, Indian Statistical Institute
ISLP Country Coordinator for India
ritupar.sen@gmail.com

MEXICO

New Coordinator for México

Javier Alonso Trujillo*

Hello, dear ISLP Friends,

It is a great pleasure for me to meet people who, like me, are interested in promoting and disseminating statistical literacy in our communities.

I'm going to tell you a little about myself.
I am a Biologist, with a doctorate in Education and have been a professor for 15 years of Quantitative Methods applied to scientific research at the National Autonomous University of Mexico, specifically in Nursing career.

However, for several years now, I have observed that there are flaws in the preparation, management, mastery and interpretation of statistical graphs in nursing students. I have set myself the goal of promoting the use of statistics among my students because I know that it is an indispensable tool for the professional development of nurses. I think that nurses, like any other professional in the health area, should know and manage statistics, not only to increase their personal culture but also to improve the quality of their professional performance, especially when carrying out some type of scientific research.

We Mexicans struggle every day to improve our quality of life and become citizens with an acceptable statistical culture. Every year there are more and more professionals who try to build a better Mexico.

I am very grateful to be able to participate and collaborate in the ISLP in Mexico.

Thank you very much,
sincerely,
Javier Alonso Trujillo

* Professor, Statistical and Methodological advisor, National Autonomous University of Mexico
ISLP Country Coordinator for Mexico
alonsot1212@yahoo.com.mx

SRI LANKA

New Coordinator for Sri Lanka

Rajitha M. Silva*

Rajitha M. Silva is senior lecturer in the Department of Statistics at the University of Sri Jayewardenepura, Sri Lanka. He earned his PhD from Simon Fraser University, Canada in 2017. His research interest lies on the field of Sports Analytics which is rapidly emerging multidisciplinary field in the present world. It provides specialized methodology for collecting and analyzing sports data in order to make decisions for successful planning and implementation of new strategies. His PhD thesis title is "Sports Analytics". He has actively engaged in promoting this new field of Statistics in Sri Lanka. He is the coordinator of the "Statistics in Sports Research Group" which is the first ever research group in Sri Lanka formed to conduct research, dedicated to sports analytics. It was originally launched with the aim of supporting university students who are interested in engaging in research that applies statistics to solve various research problems related to sports.

He is a member of American Statistical Association (ASA) and lifetime member of Institute of Applied Statistics Sri Lanka (IASSL) which is the only professional body in Sri Lanka that can recognize Statisticians as a group of professionals. Since 2021, he served as the chair of the Statistical Popularization Committee of the IASSL. He would like to serve as the country coordinator of International Statistical Literacy Project (ISLP) in order to disseminate statistical literacy among Sri Lankan community.

* Senior Lecturer in Statistics, University of Sri Jayewardenepura, Sri Lanka
ISLP Country Coordinator for Sri Lanka
rsilva@sjp.ac.lk

The ISLP Advisory Board has been renewed

The new members are:

Chair:

Steve MacFeely, Ireland, IASE and IAOS representative

Members:

Reija Helenius, Finland, Director ISLP, ISI, IASE and IAOS representative
David Stern, United Kingdom, IASE representative
Peter Howley, Australia, IASE representative
Saleha Naghmi Habibullah, Pakistan, ISI and IASE representative
Sibel Kazak, Turkey, IASE representative
Teresita Teran Argentina, IASE representative
Fritz Pierre, Canada, WSC2023 representative

In this series, all the members of the ISLP Advisory Board will introduce themselves in turn.

First, it is the turn of **Sibel Kazak.**

TURKEY

New Advisory Board member

Sibel Kazak*

Sibel Kazak works as an Associate Professor in Mathematics Education at the Department of Mathematics and Science Education, Pamukkale University in Turkey. She has been teaching mathematics education courses as well as statistics and probability courses for pre-service mathematics teachers. She was a Marie Curie Research Fellow at the University of Exeter, UK, with a project called STATSTALK (Studying the Development of Young Students' Conceptual Understanding in Statistics through Mediation by Technological Tools and Talk) in 2012-14. She was also one of the three lead researchers within the Strategic Partnership for Innovation in Data Analytics in Schools (SPIDAS) Project funded by ERASMUS+ Programme to promote teaching of data analytics in schools with project partners from the UK, Spain and Turkey (2017-20). She is currently a member of the IASE Executive Committee.

* Associate Professor in Mathematics Education,
Pamukkale University
Member of the ISLP Advisory Board
skazak@pau.edu.tr

Project News

Elisa Falck*

The ICOTS11 conference is held in Rosario, Argentina & online between the 11th and 16th of August, 2022. The ISLP will be holding an Open Meeting as a part of the conference.

The International Poster Competition 2022-2023 has begun on the 5th of January, 2022. We warmly welcome everyone to participate! More information is in the ISLP website: https://iase-web.org/islp/Poster_Competition_2022-2023.php

Submissions to the Best Cooperative Project are welcome. The Best Cooperative Project Award in Statistical Literacy is awarded every two years, in recognition of outstanding, innovative, and influential statistical literacy projects that affect a broad segment of the general public and are fruit of the cooperation of different types of institutions (national statistical offices, schools, statistical societies, media, libraries etc.) For more information, reach out to islp.coordination(at)gmail.com.

The ISLP has started a collaboration with The United Nations Institute for Training and Research (UNITAR), and their task force GIST. Together we gather different statistical literacy resources from around the world. Thank you for our country coordinators who have already shared some of their resources with us. If your country has some online materials that could be shared, please reach out to islp.coordination@gmail.com.

* ISLP Project Coordinator
islp.coordination (at) gmail.com

In this series, we introduce the sponsors of the ISLP

This time we introduce the Olvi Foundation, who have sponsored the International Statistical Literacy Project with a grant in 2021.
Thank you!

This text is original content from the Foundation's website, and then translated and slightly modified for the article's purposes.

The Olvi Foundation is a founded in 1955 for the purposes of the common good. Yearly, the Foundation gives away around 3 million euros in grants, bursaries, contributions and prizes. According to its terms and conditions, the Olvi Foundation supports activities that benefit children and the aged, as well as activities that improve the opportunities for higher education. The Olvi Foundation also supports home region work and promotes the development of the use of natural resources and food economy, of which the development of fishing and agriculture forms an integral part. The Foundation carries out its goals by granting bursaries, grants, benefits and prizes. The long-term CEO and principal owner, industrial councellor E.W. Åberg founded the Olvi Foundation with his spouse, Mrs. Hedwig Åberg in 1955. For its initial capital, E.W. Åberg gave away the majority of the stocks of Olvi that he had in his ownership. These days, these stocks for Olvi PLC that Åberg gave away are the basis of the Foundation's funds.

The idea of the founders was to, in addition to securing the company's continuity, support the aspirations that they found important and valuable.

Statistics, Visualization, Data Analysis and Modeling

JMP® is a powerful, visual, easy-to-use desktop statistical software from SAS. It's a tool of choice for engineers, scientists and other data explorers across the world.

ISLP students and teachers have free access to JMP Student Subscription. For details and access, please contact, academic@jmp.com

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jmp STATISTICAL DISCOVERY FROM SAS

International Statistical Poster Competition 2022

The Poster Competition has started in January 2022. Lower, upper secondary, and bachelor-level university students around the world are invited to create statistical posters in teams. Great prizes included! For more information visit the ISLP website.

The Best Cooperative Project Award

The award in recognition of outstanding, innovative, and influential statistical literacy projects is on. The winning project will receive 1000 euros! For more information visit the ISLP website.

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