

INTERNATIONAL STATISTICAL LITERACY PROJECT PAST AND NOW

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The International Statistical Literacy Project (ISLP) has a history of over 30 years. The project's main idea is ever more topical today in the so-called post-truth era. The importance of reliable and essential information gets more weight all the time, and utilisation of information is an important skill for citizens. The ISLP started off from promoting the statistical skills of young people, now topical is similarly the promotion of statistical thinking and skills of citizens and other actors in society. How to put the global ISLP network into the best possible use? How to share good practices and models for the use of other countries? These questions and the project's lifecycle, the past and the future, are discussed in the presentation.

BACKGROUND

The International Statistical Literacy Project (ISLP) was set up over 30 years ago with the aim of promoting statistical literacy all over the world. That goal is still more than topical. There is a mandate for the activity of the ISLP as we live in a world awash with data. We are daily confronted with an uncontrollable flood of information whether we want it or not. This stream of information contains simultaneously statistical information, fake news and so called 'alternative truths'.

The ISLP advocates for and promotes the correct use of statistics. The ability to critically analyse and evaluate statistical information is an essential civic skill. In today's data driven world, the ability to separate and discern reliable from unreliable information, is not optional but necessary. The same can be said about the ability to compile and disseminate correct information properly.

HISTORY OF THE ISLP

An ISI committee was established in 1994 to stimulate the spread of quantitative skills all around the world. The background to this was an increased interest in statistics and a recognition for the need for using quantitative, especially statistical data. The committee was known as the World Numeracy Program (WNP) Advisory Committee and was chaired by Professor Luigi Biggeri (Italy).



Figure 1. Professor Luigi Biggeri

Under the lead from Biggeri, a group of action proposals intended to support the project was compiled. The first step was to raise funds, especially from UNESCO. Getting funding turned out to be challenging and consequently only part of the plan could be advanced. [See About ISLP (<https://iase-web.org/islp/About.php>)] This situation has continued throughout the history of the ISLP. Thanks only to the efforts of volunteers, different matters can have been promoted. Since Biggeri's term, improving the awareness of the importance of statistical literacy has been a key part

of ISLP activities. It has been promoted, amongst other things, through different seminars, sessions and publications.

In 2000, the ISI President invited this programme to come under the umbrella of the International Association of Statistical Education (IASE). Professor Carol Joyce Blumberg (USA), one of the Vice Presidents of IASE, took over as chair in 2001 and continued until 2006. She was also the chair of the Advisory Board. The sole activity of the ISLP during this period was the building up and maintenance of the ISLP website. A new search engine was also developed and activated. In addition, a list of people interested in the ISLP was created. In 2006, there were approximately 200 people on that list. A survey of national statistics offices was designed and formed the basis for the webpages dedicated to training programs/learning materials from national statistics offices and national/international projects. The honour for the technical maintenance of the ISLP website belongs especially to John Shanks (New Zealand).

Figure 2. The present ISLP website <https://iase-web.org/islp/>, for which Professor Carol Blumberg laid the foundation

In the ISLP meeting at ICOTS-6 in 2006, the decision was made to change the title of the person responsible for managing the ISLP to Director of the ISLP. Professor Juana Sanchez (USA) was appointed as new Director of the ISLP for the term 2007 to 2010. [See About ISLP (<https://iase-web.org/islp/About.php>).] Sanchez continued Blumberg's work in developing the ISLP network with volunteers. Both wanted to bring national statistical offices more actively into the work of the ISLP. The statistical literacy competition for young people was launched. In 2007, a pilot competition was organised in Portugal and in 2008 to 2009, a global competition that reached its climax in the international final during the ISI Biennial Session in Durban, South Africa. The second competition, the Best Cooperative Project Award was also launched. Sanchez also started publishing the ISLP Newsletter.



Figure 3. ISLP Director and Director General Pali Lehola with the first statistical literacy competition age group winners at the 57th WSC (Forbes et al., 2013). Juan Suarez started the statistical literacy competition for young people.

In 2010, the structure of the ISLP was changed by establishing an Executive team and an advisory board to direct and manage actions. The first Executive team in 2010-2013 was formed by Head of Development Reija Helenius (Finland), Professor Sharleen Forbes (2010-2013) (New Zealand) and Pedro Campos (Portugal). Dr. Steve MacFeely (Ireland) has complemented the Executive since 2014. The team was strengthened in 2018 with Professor Adriana D’Amelio (Argentina) joining with the aim of improving links with Spanish-speaking countries. The chairs of the advisory board have been Helen MacGillivray (2010-2011), John Harraway (2012-2013), Iddo Gal (2014-2015), James Nicholson, John Harraway (2016-2017) and James Nicholson (2018-).

In 2010, the statistical literacy competition was changed into a biennial poster competition and today the fifth competition is underway. The competition is increasing in popularity all the time. The first poster competition had fewer than 5 000 participants. The 2016 - 2017 competition had almost 12 000 youths participating. The current 2018 - 2019 competition has a new class for undergraduate university students. Vocational school students can participate in the same class as high school students. Upper secondary school students have a class of their own.

From the conventions created by Sanchez, the ISLP Newsletter and the Best Cooperative Award have become permanent practices. Since 2010 a country coordinator network has also been established, and currently it covers 93 countries and 175 coordinators.

The ISLP has tried to increase its visibility by organising sessions at both the ISI’s and IASE’s conferences and presenting at other national and international events. Funding has been sought actively, especially from Finland. Some funding has been raised to, amongst other things, cover competition prizes. In 2018 to 2019, JMP SAS is the main sponsor of the poster competition.

Table 1. ISLP Network

Africa	Coord.	Asia	Coord.	Europe	Coord.	North America	Coord.	Oceania	Coord.
Algeria	1	Bangladesh	1	Armenia	1	Canada	2	Australia	1
Angola/		Bhutan	2	Austria	1	Costa Rica	1	New Zealand	2
Cape Verde	1	India	3	Czech Republic	1	Haiti	1		
Benin	2	Indonesia	1	Estonia	1	Mexico	2		
Botswana	2	Iran	2	Finland	3	Panama	1		
Burkina Faso	2	Japan	1	France	1	Trinidad and			
Burundi	1	Kazakhstan	1	Georgia	1	Tobago	1		
Cameroon	2	Kuwait	1	Germany	1	USA	2		
Chad	1	Malaysia	1	Hungary	1				
Congo	1	Nepal	2	Ireland	2				
Egypt	2	Pakistan	3	Italy	2				
Ethiopia	2	Palestine	1	Malta	2				
Ghana	3	Philippines	1	Norway	1				
Ivory Coast	1	Russia	10	Poland	1				
Kenya	3	Saudi Arabia	1	Portugal	1				

Lesotho	2	South Korea	2	Romania	1				
Malawi	2	Sri Lanka	1	Russia	16				
Mali	1			Serbia	1				
Morocco	1			Slovakia	1				
Mozambique	1			Slovenia	1				
Nigeria	6			Spain	3				
Niger Republic	1			Sweden	1				
Rwanda	1			Turkey	3				
Senegal	2			UK	2				
Sierra Leone	1			Ukraine	2	South America	Coord.		
Somalia	1					Argentina	3		
South Africa	5					Bolivia	1		
Swaziland	1					Brazil	4		
Tanzania	5					Chile	2		
Gambia	1					Colombia	2		
Togo	2					Ecuador	1		
Uganda	2					Peru	1		
Zambia	1					Uruguay	1		
Zimbabwe	1					Venezuela	1		
34	61	17	34	25	51	16	26	2	3

93 Countries, 175 Country coordinators

CHALLENGES TO BE MET

The biggest strength of the ISLP project lies in its extensive group of volunteers, combined by the shared desire to promote the matter considered important by them: statistical literacy. However, activities differ in various countries due to each country's infrastructure, living standards and economic situation (Helenius, Campos and MacFeely, 2017). Activities also vary across developed countries. The cooperation network with universities, statistical societies and national statistical institutes is one of the most important factors in being able to promote statistical literacy on a national level. If promoting the use of statistics is integrated into organisations' existing strategies, it is easy to continue developing the activity on that basis (Sanchez et. al, 2011; Macfeely, Campos and Helenius, 2017).

During 2016 - 2017, a survey was carried out on the activities of country coordinators and the challenges they had faced in their work. The responses were published in the ISLP newsletter. This inquiry will be repeated in spring 2018. According to the survey results, the main challenge has been that teachers have insufficient knowledge or methods for statistical education. An additional challenge is country's general educational level and poor gender equality. For this reason, many country coordinators have personally organised courses and workshops for teachers. [See ISLP Newsletter

(<https://iase-web.org/islp/documents/Newsletters/ISLP%20Newsletter%20Vol%209.1%20March%202017.pdf>)] A problem for developed countries is that statistics are not unequivocally part of the school curriculum. However, interest in using statistics in teaching has increased in Finland, for example, along with the use of phenomenon-based teaching and project learning at schools.

Language also presents challenges. The project's language is English, which prevents many countries from utilising existing materials and participating in the project. Nevertheless, sharing of best practices is more than advisable and it should be striven for. In Europe, the Digicom project, run by Eurostat, has been underway since 2016 and it aims to reutilise already created good practices (e.g. the Statistics Olympics started by Spain) and produce new good practices using grant funding. Grant funding requires that it can be applied or utilised by others. There are plenty of good examples. Some of the best among them are the winners of the Best Cooperative Project Award, which are named every second year by the ISLP project. One individual example is the first book in the Persian language about statistical literacy produced by the Iranian country coordinator Afsin Ashofteh and published in 2016 (see Figure 2). This was accompanied with the launch of the

Persian website dedicated to statistical literacy and the founding of the House of Statistics in the scientific city of Isfahan (Ashofteh, 2017).

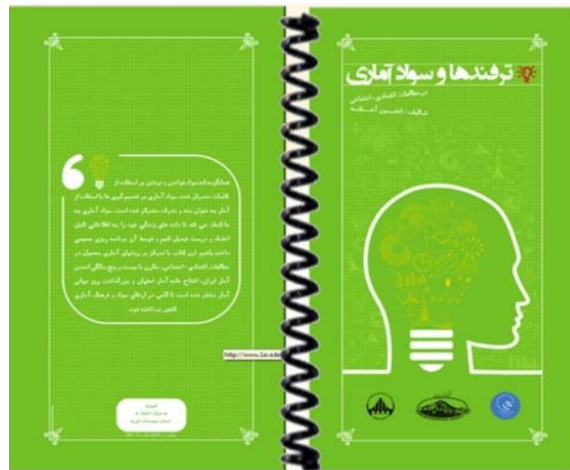


Figure 4. The first book about statistical literacy in the Persian language

STRATEGIC DEVELOPMENT OF THE ISLP

Strategy development

The ISLP Strategy Project from 2012 to 2013 resulted in various suggestions on improving statistical literacy. Some suggestions included utilising the internet and social media. For example blogs, Facebook and Twitter could be used in promoting statistical literacy. There could also be a forum in the ISLP webpage for teachers and other users of statistics. Different competitions were also suggested. The competition had various forms: poster competitions, video making competitions and problem solving competitions. Competitions were seen as a good way to promote student cooperation and critical thinking.

There were also suggestions about improving teaching of statistics. There could be presentations for citizens and young people as well as scientific programmes and conferences. For decision makers there could be a guide for using statistics and an “Everyday Statistics” course for everyone needing statistics. National statistical offices’ role in publishing statistics in an understandable way was also emphasised. Libraries should reinforce their communication and share activities on statistical literacy between them. Collaborating with existing instances working with statistical literacy and supporting ISLP coordinators in developing countries were also seen important.

All the strategy proposals for 2012 - 2013 are still relevant and work will continue within the constraint of existing resources. The strategy is will be updated in 2018.

Conditions for the development of activity

The prerequisites for the development of activity are safeguarding of funding, strengthening of the cooperation network and utilisation of technology.

Adequate funding would make it possible to plan ahead and advance concrete undertakings, and especially to support the activity of developing countries. Apart from funding of competition prizes (Nokia, the Technology Industries of Finland Centennial Foundation, The Wakimoto Memorial Fund, JMP SAS), the activity has received no actual funding. Statistics Finland has enabled the work of the ISLP Director since 2010. However, this is not a supportable solution with regard to the continuation of the project. Resourcing is required for running the network of 175 country coordinators, publishing the newsletter, maintaining the website, arranging the competitions and events. However, volunteer work has achieved much in different countries and for the organisation of the project as well. From the perspective of development of the cooperation network, it is important to tighten collaboration between different actors inside each country. Such actors are national statistical institutes, statistical societies, universities and educational institutions. Collaboration with the media and the library network is also important.

This year, the ISLP Executive team was fortified by Adriana D'Amelio to support Spanish-speaking regions. With respect to the future, supporting large language groups is one of the main tasks. For instance, China has no country coordinators at the moment. The most spoken languages in the world are Mandarin, Spanish, English, Hindi and Arabic. [See Statista (<https://www.statista.com/chart/12868/the-worlds-most-spoken-languages/>.)]

Another challenge for the project is more efficient exploitation of technology. Arranging training and sharing information no longer requires physical presence and large masses can be reached through information networks. Technology also enables new methods for producing learning materials and an encouraging way to teach about statistics and statistical science. This is particularly important to inspire young people.

CONCLUSION

The ISLP has many challenges to overcome but the strong cooperation network affords many possibilities for meeting them. Funding would make it possible to promote new openings and activity more efficiently than at present. We should also constantly invest in looking for funding channels. I now go back to a thought I put forth in 2008. Learning from one another forms one of the cornerstones of the activity regardless of funding.

"Learning from one another and utilising solutions already found by colleagues in other offices should be more effective than at present. All offices battle with decreasing resources, and it makes no sense to re-invent the wheel. Many exercises and learning materials can, with some finetuning and translation work, serve educational institutions in different countries (Helenius, 2008).

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