Statistics education initiatives by Japanese Official Statistics

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1. Introduction

- **Statistics education** is an important key to promote **official statistics** as public goods.
1. Introduction

- **The Statistics Bureau of Japan (SBJ),**
  Ministry of Internal Affairs and Communications (MIC)
and **the National Statistics Center**
  (**NSTAC**, an SBJ’s affiliate agency)
disseminate official statistics into the real world of youth,
in collaboration with
**the Ministry of Education, Culture, Sports, Science and Technology (MEXT),**
academic societies
  (**the Japan Statistics Society (JSS),**
  **the Japan Society of Quality Control (JSQC),** etc.),
school teachers, etc.
1. Introduction

- The Statistics Act (enacted in 2009)

*Article 1*

"... Official statistics are critical information infrastructure for the citizens in reasonable decision making ..."
1. Introduction

The Master Plan Concerning the Development of Official Statistics for 2009-13 (Cabinet decision, 2009)

- It is important to have the public rightly understand that official statistics are critical information infrastructure for reasonable decision-making...
  To that end,...**it is necessary to expand statistics education** that emphasizes statistical literacy and statistical ethics in each stage of education, from elementary school education to higher education.

- **For teachers, the provision of educational materials** will be appropriately carried out, so that teachers can appropriately educate pupils and students on the usefulness of statistics and on the importance of cooperating in statistical surveys.

- **For university students and adults, activities such as information provision and lectures** will be carried out to deepen their understanding and interest in statistics.
1. Introduction

- Three initiatives by Japanese Official Statistics organizations
  - Statistics poster competition
  - Statistics websites for students
  - Anonymised microdata for research and education
2. Statistics poster competition

- Conducted annually since 1953

- Purpose
  - To raise statistics awareness
  - To improve statistical knowledge and graphical presentation skill in general public.

- Two-stage Competition
  - Prefectural competitions
    - organized by prefectural stats divisions under the auspices of the prefectural education boards, etc.
  - The national competition
    - organized by a private foundation (SINFONICA) under the auspices of MIC, MEXT, academic societies, etc.

- Some schools request their students to draw statistics posters as one of summer vacation homework.
2. Statistics poster competition

Schedule of the competition

- **June**
  - A national training session for statistical graph instructors
  - Prefectural training sessions for local government staff, school teachers, etc.

- **July-August (school summer vacation)**
  - Statistical poster workshops for pupils and students

- **September**
  - Deadline for the submission
  - The prefectural competitions

- **October**
  - The national competition
2. Statistics poster competition

- The number of submissions to prefectural competition: 24,000 works (national total) (in the year of 2012)

- Prefectural award winners:
  - 800+ works (national total)
  - **Governor's awards**, etc. are selected by prefectural stats division staff, professors and other experts for each of six categories (defined according to school grade year).

- The winners of the prefectural competitions are forwarded to the national competition.
2. Statistics poster competition

- National awards winners:
  - Staff of SBJ and NSTAC select national award works (approx. around 180)
  - Senior staff from MIC and MEXT and professors select a first award and nine excellence awards for each of six categories (In total, approx. 60 works)
  - Among the 6 first award works of all the categories, the Minister for Internal affairs and Comm. award, the Minister for Education award, and the JSS President award are selected as the best works.
  - Among the 60 first awards and excellence awards works, the JSQC President award is selected which has excellence in problem solving.
2. Statistics poster competition

- The National competition awards ceremony is taken place at National Statistics Convention.
2. Statistics poster competition

- Prize winners’ works are
  - exhibited in event spaces of prefectures;
  - published in a booklet and disseminated to prefectural stats div., schools, public libraries, etc.; (see Appendix 1)
  - printed in a calendar as a small gift for the respondents of some statistics surveys. (see Appendix 2)

- Some of those satisfying conditions are submitted to the ISLP Poster Competition.
3. Stats website for students

Naruhodo Toukei Gakuen
(Eureka Stats Academy)

- SBJ manages the site to supply statistical information to students.
- A site design plan was developed by a taskforce of professors and school teachers with the MEXT's School Inspector, and young SBJ and NSTAC staff mobilized on a voluntary basis.
- Building the site was contracted out to a professional web designer.
3. Stats website for students

Collect/use/present
National and regional data of various themes from Official Statistics, and the explanation of statistical graphs

Study/learn
History, official statistics, terminology

Enjoy
Statistical episodes and trivia

Play
Quiz and game

After school
Inside the Eureka Stats Academy
3. Stats website for students

- Stats is one of the popular material for students to work on summer/winter vacation homework.

The number of access to *Naruhodo Toukei Gakuen*
3. Stats website for students

- SBJ held *Naruhodo-Toukei-Gakuen* boot camp on "MIC Open-House days."

Photos in 7-8 Aug. 2013
3. Annex: Stats website for teachers

**Lesson plans**

Collection of lesson plans of school teachers that use official statistics data.

**Supplementary material**

Material prepared by SBJ, including documents and past entrance exams, etc. citing official statistics.

**Reference**

Excerpts of the National Guideline of School Education (of math, geography, etc.) relating to statistics.

**Links**

Resources useful for statistics education.
4. Microdata for research and education

- Institutionalized in 2009 by the Statistics Act
  - The service provision is entrusted to NSTAC.
- To promote the usage of the microdata, NSTAC
  - **publicizes** the anonymised microdata service
    at academic society conventions;
  - organizes workshops and lectures
    for researchers and graduate students;
  - **forms partnerships with academic institutes**
    to increase user contact points;
  - **develops synthetic microdata**
    to supply more easily accessible microdata.
5. Concluding remarks

- **Statistics education** is an important key to promote **official statistics as public goods**.

- Initiatives described in this presentation provide educational material and information of official statistics which influence the youth, thanks to sustained efforts and continuous collaboration among national statistics offices and partners.
Thank you for your attention!

- **Reference**
  - The Statistical Act & The Master Plan Concerning the Development of Official Statistics (English translation)
  - National Statistics Poster Contest (in Japanese)
    - [http://www.sinfonica.or.jp/tokei/graph/index.html](http://www.sinfonica.or.jp/tokei/graph/index.html)
  - *Naruhodo Toukei Gakuen* (Eureka Stats Academy) (in Japanese)
  - Anonymised Microdata service by NSTAC (in Japanese)
    - [http://www.nstac.go.jp/services/anonymity.html](http://www.nstac.go.jp/services/anonymity.html)
Appendix 1

- The booklet of the statistics poster competition

Front cover

the list of awardees
Appendix 1 (cont.)

- The booklet of the statistics poster competition

Overview and commentary

The booklet includes tips on drawing statistical graphs and the regulations of the competition.
Appendix 2

- A calendar as a small gift for the respondents of the Family Income and Expenditure Survey conducted by SBJ