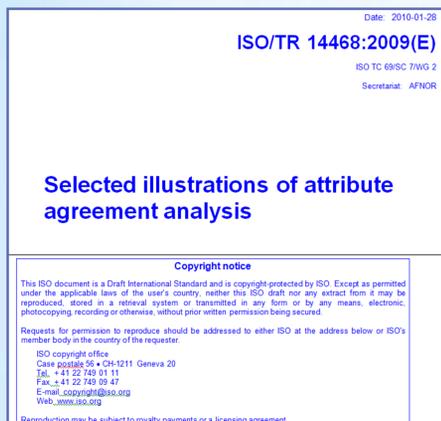


1. Why Standardize Statistics?

In today’s competitive and global industries, there is mounting external pressure to increase the transparency and validity of the methods used to demonstrate conformance of a product or service to specific contractual or legal requirements.



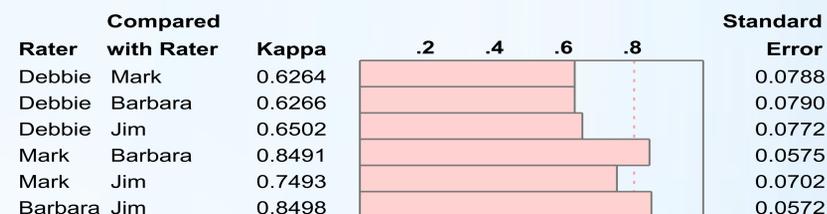
Statistical methods have become the subject of “standardization” since a producer of products or services can be audited on the good practice of its measurement system, the soundness of its sampling method, or the validity of its claim for reaching improvement targets or meeting obligations.

This pressure is creating a growing demand for national and international standards on statistical methods. This is the responsibility of the International Organization for Standardization (ISO) Technical Committee ISO/TC69, *Applications of Statistical Methods*.

5. Current Role of Software in Standardization of Statistics: Illustrations

- Several commercial software packages have supported recent ISO statistical standards documents by providing case study data and their software’s analytical results and output.
- JMP - via one of its experts - is a full member of the US technical team
- JMP recently provided a technical support call center full illustration for ISO’s Attribute Agreement Analysis document.

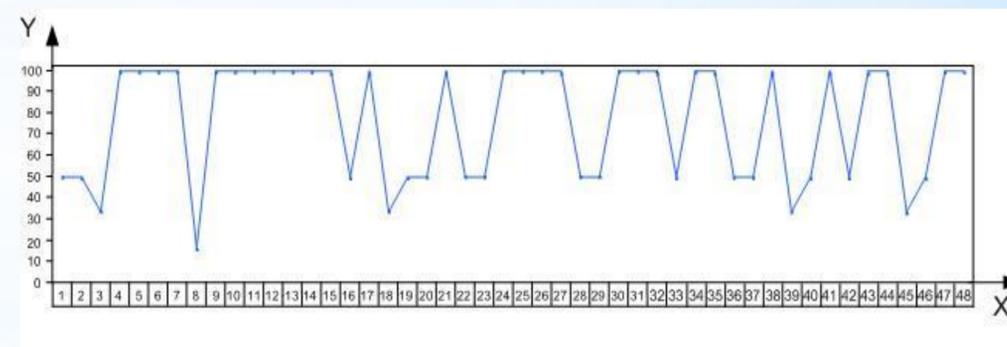
Kappa Statistics of each Rater against the Standard



2. Statistical International Standards

Examples on Statistical International Standards Topics		
Six Sigma	Measurement System	Others
Six Sigma DMAIC methodology (ISO DIS 13053-1)	Measurement Uncertainty (ISO GUM, ISO 21749)	Test of Normality (ISO 5479)
Six Sigma DMAIC tools (ISO DIS 13053-2)	Measurement Method Accuracy (ISO 5725 Series)	Control Charts (ISO 7870 Series, 3951 Series)
Gage R&R (ISO TR12888)	Calibration (ISO 11095)	Acceptance Sampling (ISO 2859 Series, 3951 Series)
Attribute Agreement Analysis (ISO TR14468)	Capability of Detection (ISO 11843 Series)	Process Capability (ISO 21747 Series)
Design for Experiments - Full Factorial Designs (ISO TR29901)	Conformity with Specified Requirements (ISO 10576)	Statistical Terminology (ISO 3534 Series)
Design for Experiments - Fractional Factorial Designs (ISO TR12845)	Proficiency Testing by Inter-Laboratory Comparisons (ISO 13528)	Statistical Interpretation of Data (ISO 3301 Series)

Percent Agreement for each Recorded Phone Call



3. Main Industries using TC69 Statistical Standards

- Government
- Laboratories and testing agencies
- Chemicals and Plastics
- Manufacturing
- Semi-conductor
- Certification and Auditing
- Seafood
- Pharmaceutical

4. Achieving Standardization in Statistics

Four main approaches

- i. Terminology, symbols, and vocabulary
- ii. Statistical procedures for collecting, analyzing, and reporting data
- iii. Software
- iv. Training

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6. The Future of Software in International Standards on Statistics: Ad Hoc Committee Recently Formed

Point of View	Benefits	Challenges
International Standards Users	<ul style="list-style-type: none"> They learn the software tools that are capable of calculating standards statistics so that they can find software for their needs. 	<ul style="list-style-type: none"> They must choose which software tool best fits their needs and budget. They need to train employees on the use of the software.
Commercial Software Vendors	<ul style="list-style-type: none"> They are able to keep up with the latest ISO standards and processes. They are able to contribute thoughts and ideas to the standardization process. 	<ul style="list-style-type: none"> They must keep software up to date on the latest standards.
National Standards Bodies	<ul style="list-style-type: none"> They are directly communicating with the software vendors who make the software related to their standards. They can contribute input and feedback on software content and usability. 	<ul style="list-style-type: none"> There are many different software vendors that make tools related to standards.

7. Reference

- ISOTR 13425 Statistical Methods for ISO
- JMP 8.0.2
- www.iso.org