The Institute for Perception
7629 Hull Street Road
Richmond, VA 23235

The Institute for Perception

Spring Course

March 15-19, 2010

NEW! Sensory Product and Concept Testing:
Analyses, Applications and Computer Workshop

IFPress® Newsletter

Unfolding Liking Using Landscape Segmentation Analysis® and Internal Preference Mapping

What You Will Learn!!

This course is taught in the dynamic context of a consumer products company. The story engages participants as critical management decisions are made concerning product development and product quality issues.

Participants will develop an understanding of commonly used discrimination and rating methods within this practical industrial framework. Through case studies, you will learn how to:

- Relate difference testing results to each other to determine relative power
- Select a suitable discrimination method based on the objectives of your project
- Set up a sensory evaluation program based on risk management principles
- Establish action standards for product quality and improvement
- Better understand the effects of adaptation, sequence, memory and retasting on discrimination test results
- Learn how to set up product tests to support advertising claims

Exercises using the IFPrograms™ Software

Hands-on experience with leaders in the development of advanced tools for product research

We initially introduce commonly occurring product testing objectives to support product development and product quality management decisions. We outline difficulties that arise in developing timely and cost effective recommendations when the background to product testing methods is not understood. We explain the need for a comprehensive framework for sensory methods in which method results can be linked to each other and we provide this framework. This leads to the development of action standards that can be applied across methodologies in an effective sensory evaluation program. Our invited speaker, Frank Rossi, Associate Director, Applied Quantitative Sciences at Kraft Foods, explains how these ideas have been useful in setting decision standards. He also explains how the new metrics are incorporated into a risk management program for both product improvements and cost reductions.

A discussion of the requirements for product testing in advertising claims support, including the ASTM Claims Guide, is followed by a presentation by our second invited speaker, David Mallen, Assistant Director of the National Advertising Division (NAD). David discusses advertising cases that come before the NAD.

How to scale rating, ranking, first choice and first-last data is explained. The course ends with a one day workshop where the ideas of the course are brought together and used on team projects.

Monday - March 15 (8am - 4pm)

Topics

- Difference testing methods: *m*-AFC, triangle, duo-trio
- Thurstonian theory underlying all sensory evaluation methods
- Estimating a measure of sensory difference, *d′* and its variance from discrimination tests
- Proportion of discriminators in the population
- The method of tetrads
- Same-different and degree of difference methods

Cases

- *Product differences using m-AFC tests*
- *Ingredient supplier change: Texture using 2-AFC, duo-trio, and triangle; The issue of power*
- *2-AFC and 2-AC on carbonated water*

Tuesday - March 16 (8am - 4pm)

Topics

- Power and sample sizes for discrimination methods
- Risk management in product testing
- Setting action standards
- Replicative testing: How to increase power and reduce costs using the beta-binomial model
- New model for replicated same-different
- Torgerson's method of triads: Comparison of more than two products

Cases

- *Replicated testing using fragrance preferences*
- *Action standards for product improvement and cost reduction*
- *Multiple comparisons of cookies manufactured using different processes and formulations*

Sensory Product and Concept Testing: Analyses, Applications and Computer Workshop

Wednesday - March 17 (8am - 4pm)

Topics

- Advanced concepts and applications: Retasting, memory and sequence effects
- Measuring the effect of training
- Review of the ASTM Claims Guide
- Testing for Equivalence: FDA recommendations, the TOST, improved methods for binary and normally distributed data
- Testing to support ratio and multiplicative claims, "Up to" claims
- Disposition of no difference/preference votes in claims testing
- National Advertising Division

Cases

- *Memory and sequence effects in tests involving orange and apple beverages*
- *Improving discrimination by allowing retasting: A case study using a sports beverage*
- *Relating trained panel and consumer sensitivies using vanilla ice cream*
- *Advertising claim for product equivalence*
- *Malodor multiplicative claims*
- *Review of some cases before the NAD*

Thursday - March 18 (8am - 12 noon)

Topics

- How to get *d′* values from intensity ratings data
- Rating means and scale means
- Ranking
- First choice (discrete choice): Logit and normal assumptions and why they differ
- First-last (maxdiff or best-worst) data and how to analyze the data

Cases

- *Generating a dose response relationship using ranking and rating*
- *Scaling first-last data on file server features*
- *Application of a first choice model to salt taste data*
- *Ingredient change: Getting d′ values from descriptive analysis*

Thursday - March 18 (1pm - 4pm) & Friday - March 19 (8am - 12 noon)
IFPrograms™ Workshop

Participants will be given a detailed review of the capabilities of IFPrograms™. This includes the organization of the software, types of suitable data, importing data, exporting graphics and use of the report window and interpretation of outputs. Working in teams on projects, participants will use the software to solve practical problems involving the design of difference tests, risk assessment in choosing methods and sample sizes, and the scaling of difference tests, ranks and ratings data. The teams will then prepare presentations and present their findings to the group. In the process of working on the projects, the teams will gain experience in the following areas:

- Difference testing methods: *2-AFC, multiple 2-AFC, 3-AFC, triangle, duo-trio, same-different, degree of difference, dual pair, A-Not-A, Torgerson's method of triads, specified and unspecified methods of tetrads, first-last (MaxDiff) and first choice (discrete choice)*
- Experimental design and risk issues: *Simulation of results from discrimination methods, selecting methods based on power, determining sample sizes to meet risk requirements, generating and using psychometric functions and power curves for different methods*
- Developing action standards: *Compare and combine results from different methods and establish criteria for product quality management decision*
- Replicated testing: *Apply the beta-binomial model to reduce cost and identify sources of heterogeneity in materials and among panelists*
- Ranking and rating methods: *Scale rank data, simulate ratings data from scales with different numbers of categories and use a Thurstonian model for ratings to interrelate methodologies*

Meet the Instructors

Dr. Daniel M. Ennis is the President of The Institute for Perception. Danny has more than 30 years of experience working on product testing theory and applications for consumer products. He has doctorates in both Food Science and Mathematical Psychology and has published extensively on mathematical models for sensory discrimination, preferential choice, identification, similarity, and multidimensional scaling. Danny has also published molecular models for taste and smell with applications to sweet taste and was the first to show that humans possess a transducer in chemical sensing. For published papers and technical reports, visit www.ifpress.com. Danny consults widely within the US and internationally.

Dr. Benoît Rousseau is Vice President of Technical Operations at The Institute for Perception. Benoît is a Food Engineer, holds a Ph.D. in Sensory Science and Psychophysics, and has conducted extensive experimental research on probabilistic models. Benoît has published numerous research articles in peer-reviewed journals as well as several book chapters. Benoît consults with US and international companies and manages projects for clients. He is actively involved in our short courses where his effective and user-friendly skills to introducing new ideas are valued.

Dr. John M. Ennis is a Research Consultant at The Institute for Perception. John has training in both mathematics and psychology. He received his Ph.D. in mathematics from the University of California at Santa Barbara and conducted post-doctoral studies in the UCSB psychology department. The winner of the 2003-2004 UCSB outstanding educator award, John has published in prominent journals in market research, statistics, mathematics and psychology and has co-authored a book chapter on neuroanatomy. John consults with US clients on segmentation and portfolio optimization.

Invited Lecturers

David Mallen, Esq. is the National Advertising Divisons' Assistant Director for Legal Affairs, where he reviews advertising and claim substantiation for a variety of products. Before joining the NAD, David practiced law at Kensington & Ressler L.L.C., specializing in litigation and representation of a wide range of businesses, including manufacturers of food and consumer products. David graduated from Cornell University and received his JD degree from Albany Law School of Union University.

Frank Rossi is Associate Director, Applied Quantitative Sciences, Kraft Foods in Glenview, Illinois, where he supports product development efforts for Kraft's divisions and consults internally with the Operations, Quality and Marketing Research Organizations. Frank has also held statistical consulting positions with General Foods Corporation and Campbell Soup Company. He has authored publications on the statistical aspects of product testing. He obtained a BS in Mathematics and an MA in Statistics from The Pennsylvania State University.

Course Information

Sensory Product and Concept Testing:
Analyses, Applications and Computer Workshop
March 15-19, 2010 $2,350
Without Workshop
March 15-18, 2010 $1,850

Location: These courses will be held at The Williamsburg Lodge in historic Williamsburg, Virginia. Reserve early to secure a room rate of $159.
Hotel Reservations: Participants must make their own hotel reservations; the cost of hotel accommodation is not included in the course fee. Reservations can be made by phoning the Lodge, (800) 447-8679, or at www.colonialwilliamsburgresort.com
Who Should Attend? These courses have been developed for technical and supervisory personnel in sensory evaluation, market research, product development, process development, quality assurance, marketing, legal, and general management currently working in consumer product companies. As a result of new research, our courses continually evolve to include new material, so previous attendees will also benefit from participation.
The Institute for Perception Award: A complimentary invitation will be extended to the winner of this year's award. Presentation of the award will take place on the evening of March 15th.

The Institute for Perception
www.ifpress.com
(804) 675-2980 (804) 675-2983 (fax)

- Fees include continental breakfast, breaks, lunches, manuals, tables, a book of technical reports, two group dinners and a trial version of IFPrograms™.
- Enrollment is limited, so register early. You may hold a place by phoning (804) 675-2980. You can also register on our website, www.ifpress.com.
- Registrants who have not cancelled two working days prior to the course will be charged the entire fee. Substitutions are allowed for any reason.