

Consumer Encounters: Improving Idea Development and Concept Optimization

By Cathy M. Rings, Brian W. Barton¹ and Glenn H. Mazur²

Abstract

Getting better products faster to market is critical to a company. Traditional approaches to ideation and concept development and optimization begin with ideas developed internally and then validated through consumer screening and concept testing. The concepts developed internally can be improved by first going to consumers and understanding the issues in their lives they are trying to improve, leading to a better acceptance of concepts in the screening process, more accurate consumer testing, and better volumetric and profit forecasting.

At Rubbermaid, a Consumer Encounter Form was created to assist consumer investigation teams. This form was designed to facilitate a brief encounter, prioritize product categories and consumer needs based on the VOC, and lead to product ideas. This form flows directly into our Concept Testing Board for use in the consumer concept tests. This paper will introduce this systematic process and report on its successes.

Key words

Concept Optimization, Consumer Encounter, Idea Development, New Lanxester Strategy, QFD Maturity Model.

Introduction

The name of this paper is a play on words with the popular 1980s Steven Spielberg movie and an approach to gaining consumer/customer insight to help build breakthrough concepts. We recommend doing Consumer Encounters (CE) to help gain new insights regarding consumer/customer needs. While this approach is common in Japan, it might sound “alien” to many marketers in the U.S.; hence, the title of this paper.

This paper is written with both the QFD and Classical Marketing perspectives in mind. While these two disciplines share similar concepts, the language used to describe may sometimes be different. To clarify, when we speak about “satisfying unmet consumer needs” in Classical Marketing, we could just as easily be referring to “meeting customer requirements” in QFD parlance. Hopefully our switching back and forth between the two sets of terminology below will not be too confusing.

Concept Development: Consumer Encounter of the First Kind

¹ Rubbermaid Inc.

² Japan Business Consultants Ltd., QFD Institute, and University of Michigan College of Engineering

Concept testing is an important tool used in the new product development process by many packaged goods and services companies in the U.S. Many of these companies, in particular, rely heavily on concept testing as a screening and measurement tool in their quest of finding the next, big product idea.

There are many concept methodologies under the brand names BASES, CRI and Acupoll who conduct quantitative concept tests for these companies. They all report in their marketing literature that their processes have been validated with market tracking studies. But even with these resources, Cooper (1993) reports that 46% of product development resources are invested in product ideas that are either cancelled or fail to meet adequate financial returns.

Cooper identifies failure to understand consumer needs as a major reason for product development failure. Yet many companies, if asked, would say that they did the necessary consumer research before concept development and testing. So what could go wrong?

We believe that the heavy reliance on traditional consumer techniques such as focus groups or market surveys has a lot to do with creating me-too, undifferentiated concepts. There are two problems often encountered. One is most consumers' difficulty in expressing themselves in a focus group setting. The second problem is the issue of problem articulation. In this situation, they can tell you if they like or dislike something they have tried or are exposed to it, but they have much more difficulty telling you why. It's similar to the problem of taking a long car trip and then being asked later to describe different points along the way. Unless you were looking for them, you'll have difficulty recalling what you saw.

Somewhat opposite is the problem of describing a product response to a problem. Consumers might know that they have a problem or need but have difficulty describing a new product that would solve or satisfy their need. If this weren't case, then the minivan would have been invented much earlier to help transport kids from place to place. Instead, the station wagon was the accepted solution until Chrysler showed consumers a better solution in the form of the minivan.

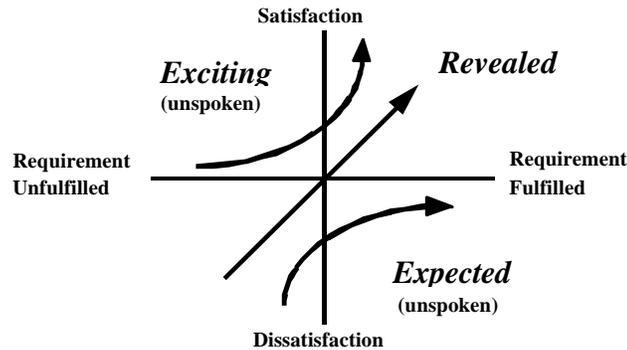
Kano: Consumer Encounter of the Second Kind

Defining levels of quality to identify hidden needs

In our view, the Kano model provides fresh insight into consumer needs that suggest a new approach for collecting consumer information. This model was developed in Japan and has been used by leading Japanese automobile and electronics companies to develop innovative new products. The Kano model describes customer satisfaction in terms of Expected, Revealed and Exciting needs as shown in Exhibit I. Each in turn is described below. The model was built from a survey that asked customers paired inverse questions to rate their degree of satisfaction (dissatisfaction) in accordance with the degree a product concept was fulfilled (unfulfilled).

In Kano's model Expected needs are the most basic yet are often unspoken by the customer. Meeting Expected needs, after a point, will not dramatically improve consumer satisfaction. However, failure to meet these requirements will cause significant customer dissatisfaction.

For example, when one flies from, say Chicago to New York, they expect their baggage to meet them at their final destination. Getting their baggage on time and in one piece is expected. That is why the Expected need curve flattens out at the point where consumers expectations that the bags will arrive is met and they no longer factor this in when they choosing an airline to fly. But if they had an experience where they had lost some baggage, then they may factor this when they book their next flight. That is why the curve drops sharply down and to the left caused by the dissatisfaction of having experienced lost baggage.



Adapted from "Attractive Quality and Must-be Quality" by Kano, Seraku, Takahashi, and Tsuji, *Hinshitsu*, Vol. 14, No. 2 (1984).

Exhibit I

At the next level are Revealed needs. Consumers can usually articulate these needs better. If an airline advertises that it has a high on-time arrival rate and consistently lives up to this promise, then it may have some success if this need is important to people (say, business travelers who need to be prompt for business meetings). This advantage, however may be short-lived as competition notices their competitor's success and matches this performance. If enough competitors consistently achieve this level of performance, then the Revealed need turns into an Expected need. Revealed needs are one-dimensional in that satisfaction increases (decreases) in direct proportion to the fulfillment of the need.

Finally, Exciting needs are the highest level that a consumer has yet to discover. They are unspoken so you cannot ask consumers to identify what they didn't know they needed in the first place. If you are first to identify and deliver on an Exciting need, then you have an innovative product. That is why the shape of the Exciting curve has a low level of dissatisfaction when the need is not fulfilled, but when the consumer realizes the need because they are presented with a product or service that addresses it, their overall satisfaction reaches new heights.

An example of an Exciting need might be providing a way for passengers to plug in their lap top computers into a power source while in flight. The benefit of this new service means that a business traveler could work more often or longer on a flight because there is no longer the need to rely on a battery that might go dead. Over time, Exciting needs become Expected needs as competition copies and advertises a similar service and consumers grow to expect it as a standard feature. This means that manufacturers need to continually create new and exciting products and services to maintain an advantage over their competitors.

Going to the GEMBA: Consumer Encounter of the Third Kind

Japanese companies are leaders in uncovering Exciting customer needs and consumer requirements. They do this by going to the *gemba* (Exhibit II). The literal definition is the place where truth is known. This means that the best insights come from going to the consumer (as opposed to having them come to you to meet in a focus group) and observing their behavior to uncover needs they had or that could be fulfilled.

現場

Exhibit II

The key output - concept boards

Recognizing the need to be more innovative, Rubbermaid has adopted the *GEMBA* technique of observational research to help develop more innovative concepts for quantitative consumer testing. At Rubbermaid, we call *GEMBA* a “Consumer Encounter (CE).” The following details what information we are collecting during CE and how go about collecting the data.

The Consumer Encounter Log

The Consumer Encounter Log is organized into six sections:

1. Profiles the consumer in the encounter, the product situation explored the date of the encounter and who did the interviewing
2. Collects the visual representation of the product usage situation
3. Captures the consumer problem or opportunity statement
4. Restates the problem(s) identified as a consumer benefit
5. Identifies product features
6. Frames the competitive point of reference

How the CE Form is completed is shown below in Exhibit III. For illustration, an example of the type of data collected on dish drainer usage is shown as part of this exhibit. Instructions for completing the Log are described below.

Instructions for completing a CE Log

1. Complete top of form

Complete the information requested at the top of the form before conduction the encounter. There should be one log kept for each situation covered (e.g., Clean-up in kitchen, Clean-up in garage, etc.). There is a place to note anything of particular interest about the consumer (e.g., hobbies) that may help explain behavior (e.g., needs extra storage for a doll collection).

2. Usage flow or description

Visually capture the usage situation where the consumer is using the product. It is sometimes helpful to draw diagrams, flowcharts or take pictures. Make note of the location in the house where and when the situation occurs.

3. Problem or opportunity statement

Describe what is spoken or unspoken problem created by the usage occasion. Typically can be described by what the current products don't do or don't do well. Look for “If only I could ...” statements. After all the problems have been identified, ask the consumer to rank, in order of importance, those that are most bothersome (size and/or frequency) to provide focus for concept development.

Encounter #		Consumer Encounter Log			Page ___ of ___
Consumer ID and interesting tidbits Mary Alexander		Date and city/state of interview 1/22/98; Cleveland, OH			
Product (situation) explored and ranking Kitchenware/cleaning		Names of interviewers LW & SB			
Usage flow or description (picture, diagram, note where and when etc.) <i>(Flows to product illustration or usage vignette)</i>	Problem or opportunity statement (complaints, wishes, desires, etc) Rank <i>(Flows to occasion/problem insight)</i>	Restate as consumer benefit (e.g., explanation of what product should do) <i>(Flows to differentiating benefits)</i>	Supporting product features (e.g., technical description of how it works) <i>(Flows to key product attributes in concepts)</i>	Current choices <i>(Flows to brand/product name)</i>	
 <p>Lower tray sits on top of sink lip so water can drain into sink. However, this also causes lip to slope upward leaving pool of water in tray. Foot grows mildew inside.</p>	Water doesn't drain out and causes mildew.	Dish rack stays clean and attractive. Rack remains odor free and fresh. My dishes remain clean and healthy.	Back end lifts tray high enough to let out all water drain into sink. Holes in feet allow water to drain out. Plastic is impregnated with antifungal material to kill mildew.	Rubbermaid	

Exhibit III

4. Restate as consumer benefit

Turn the problem around into a benefit concept by saying what a product concept should do (action verb) for the consumer. It is sometimes helpful to think of hiring a product to do a job and the job it does is the action verb (to clean, store, organize, keep fresh, etc.). Keep to singular ideas (avoid multiple benefits). Restate technical actions (e.g., keeps out air) into benefit actions (e.g., keeps food fresh).

Once all the benefits have been identified, ask the consumer to rank them in order of importance (1= most important). This ranking is used to prioritize which benefits to focus on in the concept study. While there are many ways to prioritize customer benefits, a simple rank order seemed the most efficient way to maximize our limited time in the consumer's home.

5. Product features

These are product or technical features that create or support the product benefit claim. Each benefit should have one or more features to describe it. Try to identify features that are unique in and of themselves or in combination with others.

Sometimes it is easier for the consumer to talk about features than benefits. Once the features have been recorded then the interviewer can ask "what benefit do you experience from feature "x" and use this response to create data under the benefit column.

6. Current choices

Clarifies the competitive frame or what products/categories are competing with each other to solve.

7. At the end of the interview

Review with the consumer all the problem situations and ask them to rank in terms of importance (1=most important). Do this by noting on log sheet within the box found in the top section of the log. This second ranking exercise was important when we were observing several product categories in the same visit. The ranking in step 4 was to understand key issues within a product category and the ranking in step 7 was to understand key product categories.

How to make the most out of an CE***Plan your encounter***

To plan your Consumer Encounter, you first need to establish your objective. A common one is to better understand problems consumers have with products or services. A typical CE can last from 2-3 hours depending on the number of situations that are under investigation. Consumer recruitment is usually done by a market research agency that has experience doing field research.

Consumers are recruited who have used a product to solve a problem (e.g., products that help them organize their garage.) and are willing to let you come to their home to observe products in use. We recommend telling consumers the name of the company doing the research after screening out prospects who might work for a competitor. We have found that keeping the company name anonymous during the recruitment process is counterproductive many people are hesitant to let strangers enter their house for an interview in this day and age of scams.

Two people are usually involved in an encounter. One, called the spokesperson, does the talking and the other listens, watches and records. Data is collected via the CE log sheet, camera snap shots and/or tape (video or sound) recordings. The spokesperson should prepare discussion topics in advance to help facilitate the encounter. Some common questions include probes about how a product is used, when is it used, why isn't it used, what homemade solutions have been invented to solve a problem, etc. Role playing with company employees or family is a good way to prepare for the team's first CE.

Finally, the best encounters are done by multi-level, multi-disciplinary teams. We have found that sometimes the best insights come from the interaction of people with different backgrounds, experiences, and perspectives. At Rubbermaid, we send out as many as 12 teams for consumer encounters. Care is taken to mix the teams up so that no team has members with the same background or possible biases.

Helpful interviewing hints

To begin an encounter, you should introduce yourselves, explain why you have come to their house and what you wish to achieve during the encounter. Explain to them that you will be asking them to show you different areas of your home and that you may ask them questions about how they use a product. Ask if it is okay if you take pictures and/or tape record the session.

A good ice breaker is to have them answer a simple questionnaire that provides some background information. The CE interviewer then asks to see a room in the house where they demonstrate how they use a product and are asked questions.

The purpose of asking to see products in use is to help identify unarticulated needs. How do they use the product? Was it difficult to use? Why don't they use it more often? What do they like/dislike about it?

Open-ended questions are the best to ask because they allow the consumer to express their needs in their own words. Avoid asking yes/no questions because the answers are not as revealing. A good interviewer will probe a response with a "why" question to uncover underlying needs. The job of the scribe is to record the information on the log sheet.

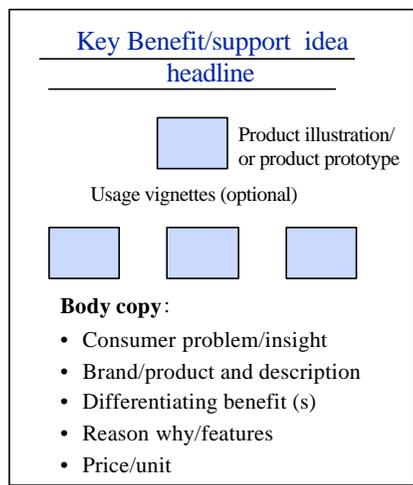
From CE to Concept Testing Boards

Following the encounter, the encounter team needs to take the input of the sheets and creates concepts for testing. A Concept Testing Board is created and usually includes the following elements:

- An illustration, typically in black in white, that communicates key product benefits, features or usage situations,
- A one-line benefit statement that describes the core concept idea,
- Body copy that supports the benefit claim, usually includes unique product features, and
- Price of the good or service.

When available, it may be useful to show a prototype of a product after showing consumers a concept board, to help explain the concept. However, there can be a danger in doing this if the execution of the prototype is poor. The pros and cons of when to show a prototype are beyond the scope of this paper.

Standardized Concept Board



Guidelines

- ◆ Headline should communicate the differentiating benefit
- ◆ A simple black and white illustration of the product is required
- ◆ Sometimes showing product usage helps get across the concept
- ◆ The body copy should explain the relevant problem and the unique way the brand/product will solve it
- ◆ All concepts will have a suggested retail price/unit

Exhibit IV

A typical concept format is shown in Exhibit IV. A key output of the CE, as discussed below, is a log sheet that systematically collects this information making the task of writing concepts much easier. The data is then transferred from the Log to the Concept Testing Board as shown in Exhibit V.

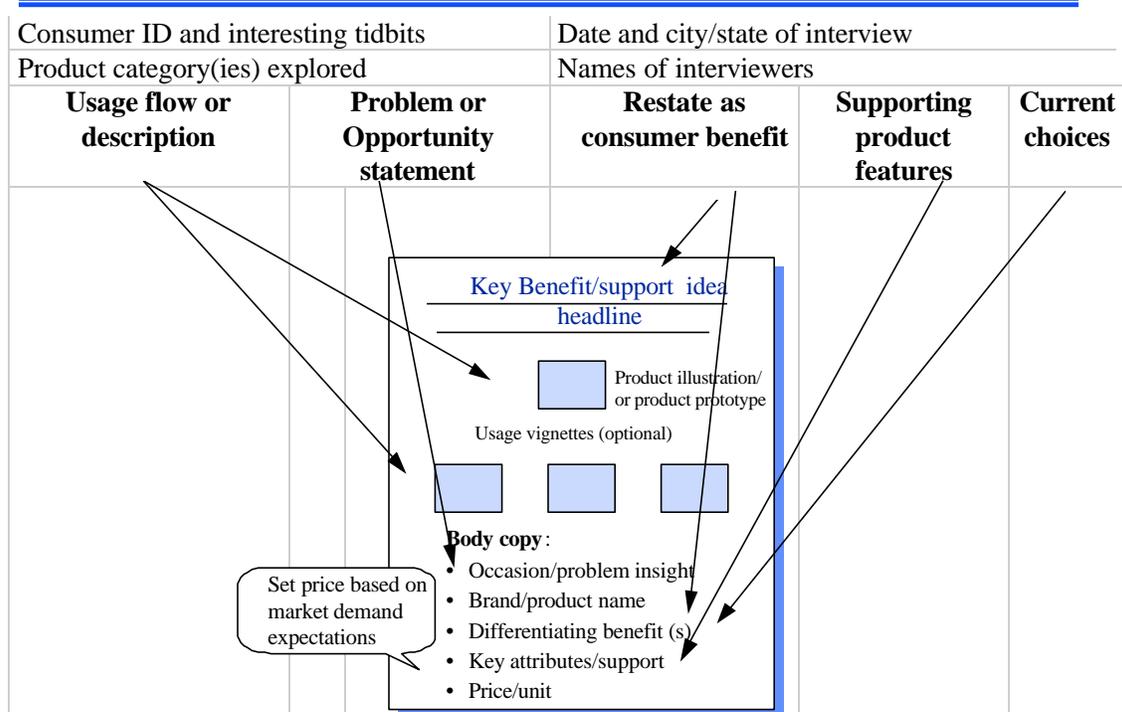


Exhibit V. From Consumer Encounter Log to Concept Testing Board

Writing breakthrough concepts requires having insight into the lives of your consumers. Breakthrough concepts tend to be unique and address an important consumer need or needs. CE is helpful in identifying unarticulated needs and identifying a unique product/feature solution. You know that you have a strong concept when it can pass the 3-D test:

1. Desirable: Consumers want it (e.g., benefits)
2. Different: There isn't anything else like it (e.g., features)
3. Deliverable: It is available at the right place, time and price

Once the concepts are developed, they are tested using one of the testing services introduced at the beginning of this paper. Concepts are typically rated on purchase intent, uniqueness, value, need fulfillment, etc, dimensions and these ratings are often compared to a database of norms or benchmarks developed from previous concept testing. See Dolan (1993) for a more detailed explanation of the concept testing process.

Volumetric modeling is often done after concept testing to determine market potential. Rubbermaid will volumetric test those concepts that either scored high on a concept test and/or have strategic significance.

Results to Date

It is perhaps a bit too early to say how successful the Consumer Encounter process has been at Rubbermaid's Home Products Division as the program was just implemented earlier this year. But early results indicate it will have a positive impact on our business.

Following the encounter groups, over 80 concepts have been quantitatively tested with consumers. Based on the results of this testing, the Home Products Division built into its 1999 operating plan an increase in new product sales of +50% versus 1998. These results were driven by fewer but more innovative product concepts.

These findings are directionally consistent with the findings of one of the authors who previously used the consumer encounter process at a major packaged goods company. Using a CE process, this company, over a two year time period, generated ten of the best new ideas that had been quantitatively tested over the past decade.

Was the use of consumer encounters the sole reason for this improvement? Of course not. But this new philosophy of looking for more unarticulated consumer needs played a role in improved performance. Did this turnaround happen in a short time? No, it took a lot of time and effort. Hopefully, we at Rubbermaid will build on this success and improve the process and, ultimately, our bottom line results will be of the right kind.

Additional benefits are anticipated by increasing speed to market as a result of creating bigger ideas sooner. We expect the entire concept development cycle time, from developing ideas, fielding an early concept screen, refinement and concept testing and volumetrics to be reduced significantly. The time savings will come from not having to go back to the drawing board and repeat the process because of poor concept results.

Future Plans

The product lines examined so far have been a search for innovative products for the home. Consumer Encounters should be applied across all product categories identified with Mazur’s QFD Methodology Maturity Model (Mazur 1998) shown in Exhibit VI. This would assure that not only were on-going product improvements in tune with changing consumer needs, but that future products would be built “ahead” of emerging consumer and lifestyle trends.

Exhibit VI

QFD Methodology Maturity Model	
Level 1:	Communicate design priorities to manufacturing
Level 2:	Model upgrade for improved performance or cost
Level 3:	New market driven design
Level 4:	New technology driven design
Level 5:	Never seen before products
Level 6:	Ancillary services

Staying ahead of consumer trends is consistent with staying ahead of competitors. One approach to identifying such competitive opportunities is known as the New Lanchester Strategy, a Japanese adaptation of the rules of modern warfare. Frederick William Lanchester (1868 – 1946) was a major contributor to the theory and practice of automobile engineering and aeronautical engineering. He also published works in radio, acoustics, relativity, music and poetry. Lanchester is honored by an annual award in his name by the Operations Research Society of America.

His equations of combat form the basis of the science of Military Operations Research. In Japan there have also been significant developments in marketing and sales strategy based on Lanchester's equations of combat. The Lanchester Strategy gives precise values for characterizing market structure

and segmenting markets. The strategy also offers valuable insights into the defense and attack of market share positions.

For example, Rubbermaid, as a major player in the home storage products market, must use its strength to defend itself against weaker competitors, particularly from overseas suppliers. The Lanchester Strategy indicates that defending a strong position requires three times the marketing and product strength of the opponents. One way to do this is to expand our product line through stochastic battles and matching operations against our competitors. When consumers are confronted with many competing products, they are likely to become confused. However, the probability is high that they will choose a strong brand on the basis of past experience, name recognition, and reliability.

Identifying which market segments to enter and with what products can be done with a combination of Classical Marketing activities and Consumer Encounters to then pinpoint the best product line opportunities. With CE, we will be able to identify the consumer's own value system for our products and then deliver superior performance on those benefits which matter most.

Quality Function Deployment (QFD) would then be used to then translate these key benefits into product features and deploy them down from design and manufacturing to distribution and service. This combination of Classical Marketing, Lanchester Strategy, Consumer Encounters, and QFD will assure the quality and successful implementation of critical stakeholder needs, from our shareholders to managers and associates to consumers.

About the Authors

Cathy Rings is currently V.P. Marketing for the Home Products Division, Rubbermaid Inc. Prior to joining Rubbermaid, she has 14 years of experience in brand management and general management at Procter & Gamble in hair care, health care and cosmetics. As part of her work there, she spent three years developing processes to improve innovation skills for both classic marketing and product development. She has a B.A. degree in English and B.S. in Business Management. from Miami of Ohio. She can be reached at 330-264-6464, x 2649 or by fax at 330-287-2248.

Brian Barton is currently working as a Director of Consumer Marketing for the Home Products Division, Rubbermaid Inc. and has 14 years of experience in package goods and housewares marketing. Prior to Rubbermaid, he has worked for Borden Inc. as Director of New Products and in Brand Management for Nestle and Procter & Gamble. At Nestle, he spent three years its International Training Centre, Vevey Switerland, as a member of its marketing faculty. He earned his M.S. degree in Agricultural Economics from Cornell University, Ithaca N.Y. and B.S. degrees in Agribusiness and Economics from Illinois State University. He can be reached at 330-264-6464, x 2409, by fax: 330-287-2248, or by E-mail: LBBarton@aol.com.

Glenn Mazur has been the "voice" of QFD since its early inception into the United States. He has worked extensively with the creators of the QFD methodology, Drs. Shigeru Mizuno and Yoji Akao, since that time. He currently holds the following positions: President of Japan Business Consultants, Ltd., Executive Director of the QFD Institute, Executive Director of the International Council for QFD, Chairman of the QFD Symposia, Adjunct Lecturer of TQM at the University of Michigan College of Engineering. He is also a 1998 recipient of the Akao Prize for Excellence in QFD. He can be reached at +1 734-995-0847, by fax at +1 734-995-3810, or by E-mail: glenn@mazur.com, and world wide web: <http://www.mazur.com>.

References

Cooper, Robert G. 1993. *Winning at New Products, 2nd Edition*. Reading, MA: Addison-Wesley.

Dolan, Robert J. 1993. *Managing the New Product Process*. Reading, MA: Addison-Wesley.

Kano, Noriaki, Nobuhiko Seraku, Fumio Takahashi, and Shinichi Tsuji. 1984. Attractive Quality and Must-Be Quality. *Hinshitsu* 14, no. 2. (February): 39-48.

Mazur, Glenn. 1998. *Comprehensive QFD v5.1*. Ann Arbor, MI: Japan Business Consultants, Ltd.

Mazur, Glenn. 1997. "Voice of Customer Analysis: A Modern System of Front-End QFD Tools with Case Studies." *AQC 1997*. Milwaukee, WI: American Society of Quality Control.

Yano, Shinichi. 1989. *New Lanchester Strategy: Sales and Marketing Strategy for the Strong. Volume 3*. Sunyvale, CA: Lanchester Press Incorporated.