BUILDING A HOUSE OF QUALITY IN THE MARKETING CLASSROOM:  
A New Look at the Product Development Process

Linda J. Morris, John S. Morris, Steven Pharr  
College of Business & Economics  
University of Idaho, Moscow, Idaho 83844-3178  
(208) 885-7159

ABSTRACT

Today’s leading product-oriented firms are employing Quality Function Deployment (QFD) techniques in the design and development of new products. QFD techniques advocate use of cross-functional teams to plan, implement, and assess the product development process. As firms implement these innovative approaches to product design and development, it is important to examine how the product development process is being taught in business schools. The purpose of this session is to present a pedagogical model for demonstrating the House of Quality method, and to illustrate the changing role of the marketing function in this process.

INTRODUCTION

Quality Function Deployment (QFD) is changing the way that products are designed, produced, and marketed. Product development firms have adopted QFD techniques to reduce time-to-market, reduce costs of design and manufacture, and improve product quality (King, 1987). One particular QFD technique that is being widely followed is the House of Quality (HOQ) model by Hauser and Clausing (1988). Simply stated, the HOQ model uses four “houses” to present data in the product design process.

The initial step in building a House of Quality is to listen to the “voice of the customer,” and this is where marketing efforts play a crucial role (Griffin and Hauser, 1992). Customer needs are usually detailed and contained in lengthy statements. Translating these statements into specific customer needs and prioritizing them for engineering design is not a simple process. As found in some QFD studies, discussions with customers usually reveal 200-400 customer needs for a single product (Lillrand and Kano, 1989).

PEDAGOGICAL DEMONSTRATION

As QFD techniques and in particular, the House of Quality model is used in industry, it is ever more important that we begin now to incorporate these tools in the marketing curriculum. Marketing’s role from the initial design phase to the product launch phase has changed, but little has been changed in the pedagogical approach to the new product development process. From a content analysis of the leading texts, in marketing research, product management, and principles of marketing textbooks, only a few even mention the House of Quality approach in product design.

In this session, a House of Quality will be constructed in the redesign of a writing pen. The specific objectives of the teaching module are to: (1) acquaint students to the QFD techniques in contrast to standard product development model and (2) to construct a House of Quality using the appropriate tools in a cross-functional effort between marketing, engineering, and manufacturing. The software used to the design the product is QFD/Capture ® developed by International TecheGroup, Inc. Some of the key marketing principles used in the redesign of the writing pen include:

1) comparison of rating and ranking measurement scales,
2) design using the total product view,
3) demonstration and use of focus group research,
4) developing a product positioning strategy
5) benchmarking competitive products, and
6) integration of design and product attributes.