

Targeted Focus Groups in Product Development

James A. Leahy • University at Buffalo, SUNY

Center on Knowledge Translation for Technology Transfer
100 Sylvan Parkway • Suite 400 • Amherst, NY 14228
(Phone) 716-204-8606 • (Fax) 716-204-8610 • jimleahy@buffalo.edu

ABSTRACT

The use of targeted focus groups employing purposive sampling, rigorous primary and secondary recruitment screens, and state of the art product and feature demonstrations early in the design process allow new product developers to obtain specific design functions and features for the product being developed directly from the product's targeted end users. Farther on in the product development process these same targeted, educated, end users are reconvened to review functional prototypes of the new product prior to its initial production run. This paper will present a method that has been repeatedly successfully employed in developing new mainstream consumer products in conjunction with a University based partner organization.

BACKGROUND

In the past, manufacturers of consumer products have made product design decisions without factoring in the needs, wants, and expectations of the full range of end consumers. This process leads to ineffective products in the marketplace, new product failures, and product abandonment. Failure rates for new product introductions vary by industry but range from 30% to 90% [1]. In many cases, the primary cause of these failures can be traced back to a point early in the product design process where significant consumer or device user information failed to be collected and analyzed prior to the initial fabrication of the device [2, 3, 4].

In some cases companies perform primary market research in the form of surveys or interviews with consumers regarding their device's initial

concept [4, 5, 6] neglecting a critical step where consumers can add significant value to the product development process.

METHODOLOGY

Steps Prior to the Focus Groups

Step 1: Identification of product target area - have you identified an unmet need in the consumer marketplace [7] and wish to develop a product to fill that need or are you seeking to identify needed product improvements for a product you currently have in the marketplace?

Step 2: Identification of focus group participants and the use of Purposive Sampling. With Purposive Sampling you are seeking a predefined group of consumers not a random selection of the general population. [8, 9] For example, if the product being developed is a new home based printing system for digital pictures, you would seek to recruit both advanced amateur photographers and professional photographers, both users of digital camera technology.

Step 3: Use of general media outlets (newspaper, television or radio ads, targeted placement of recruitment flyers) to recruit potential focus group participants.

Step 4: Rigorous primary and secondary screens administered to potential focus group participants. Following the above example of a home based printing system being developed you may be targeting a demographic that was primarily female,

age 20 - 50 years old, and an avid digital camera user. Primary screening questions would include current ownership and use of a digital camera, age, sex, family income levels, to secondary screen questions such as do you download pictures from your camera to your home computer for editing prior to printing [9]? Or how do you process your digital images from your camera? Do you use any outside service for processing?



Focus Group Process

Step 5: Decision point – If this is a product refinement focus group, does the group have to be educated on the current state of the science through information or product demonstrations prior to the focus group so that the participants are not just identifying design functions and features of products currently available in the marketplace? If yes, see Step 6. If not, skip to Step 7.

Step 6: Prepare state of the art product demonstrations that will be performed prior to the start of the actual focus group [4]. Or prepare a listing of the state of the art features currently available in products in the marketplace and discuss them with participants prior to the focus groups.

Step 7: Run the Alpha Focus Groups which involve consumers in defining product requirements and setting priorities for product design [10, 11]. Four or five Alpha focus groups, each consisting of twelve to

fifteen participants, are necessary to identify product requirements. These groups use mixed rather than uniform samples, so that all participants are exposed to various relevant perspectives [12]. The parameters of using at least fifty participants, using mixed samples, running four focus groups, meets minimum industry standards for validity and reliability.

Alpha or Concept Definition Focus Groups, provide a manufacturer with primary market research [4]. Participants in these groups are asked to participate in an open forum discussion led by an experienced focus group moderator. The three primary topic areas include: (1) the current status of the technology area being discussed from the participants' perspective. In other words, how do consumers currently address the need being discussed; (2) the description of what their ideal product to perform that function would be; and (3) an evaluation of product concept designs. To determine the current status and consumer satisfaction levels with their product function techniques and devices, the participants will be asked to provide background information on a variety of topics involving the product. On the topic of ideal product, participants in the focus groups will be asked to provide the attributes of what they perceive to be the ideal device to perform the function [13].

The focus group participants will undertake an evaluation of static product concept models prepared in advance for the groups. Lastly, purchase intent and price point questions will be asked of the participants for both the Conceptualized Ideal Product and for the concept models shown. Upon completion of the groups, the data acquired is analyzed and centers on providing a listing of specific product design and functional features to the manufacturer [10]. The manufacturer, to the best of their ability, incorporates these features into their Beta prototype.

Step 8: Beta focus groups primarily allow the refinement of a product's appearance by the manufacturer through a critique of key design features of a prototype. They provide an opportunity to rank a product's function and design features previously identified in concept definition focus groups. Beta focus group participants are a representative sample of the Alpha focus group participants [14]. Two Beta groups of twelve participants each are usually sufficient.

Beta groups provide the ability to obtain quantitative data on the previously collected qualitative information and allows that data to be applied to the prototype being evaluated. Basically they answer the question as to whether or not a prototype addresses the top function and design features a product must have to be deemed desirable by the consumer [13]. Beta groups provide the ability to score how well a prototype meets consumer expectations and gauge consumer interest in the product along with their desire or intent to purchase the product. Beta group participants rank, in order of importance, the previously identified function and design features of the product concept, provide an evaluation of how the viewed prototype met those required function and design features, provide a ranking of consumer preference on any additional product models shown, a ranking of consumer preference on specific design features, and provide comments regarding their usage of the beta prototype [15].

The Beta group activity is captured, analyzed, and relayed to the manufacturing company for possible product changes prior to the initial manufacturing production run [16].

PRELIMINARY FINDINGS

New consumer products developed using this process seem to enjoy initial market success [4] as the product manufacturers have broadened the consumer market for their new products by identifying key expected features along with significant product differentiators, which makes their product stand out from the competition. We are currently tracking product sales and dominance in the marketplace for these products.



FIRST-CRUSH™
AUTOMATICALLY TURNS PILLS TO POWDER™

Tupperware® Children's Healthy Eating System (CHES)



FUTURE WORK

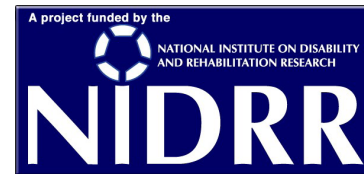
We are extending our product development trials into areas composed of niche markets where historically there has been a large failure rate for new product introductions. By being successful even in small niche market areas, we hope to be able to classify the above process as a product development 'Best Practice'.

ACKNOWLEDGMENT

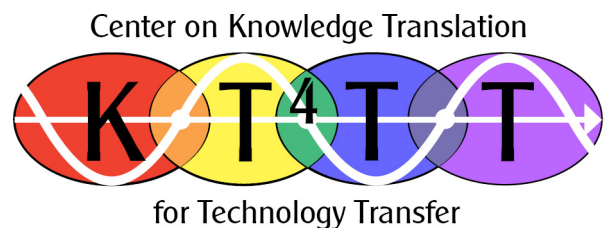
This paper is a publication of the Center on KT4TT, which is funded by the National Institute on Disability and Rehabilitation Research of the Department of Education under grant number H133A080050. The opinions contained in this publication are those of the grantee, and do not necessarily reflect those of the Department of Education.

REFERENCES

- [1] Peter, J.P. (2002). *Preface to Marketing Management*. New York: McGraw-Hill/Irwin.
- [2] Whyte, W.F. (1991). *Participatory Action Research*. Newbury Park: Sage Publications.
- [3] Mokhari, M. & Feki, M.A. (2007). User Needs and Usage Analysis in a Smart Environment for People Requiring Assistance. *Topics in Geriatric Rehabilitation*, 23(1), 52-59.
- [4] Moenaert, R. K. & Souder, W. E. (1990). An Information Transfer Model for Integrating Marketing and R&D Personnel in New Product Development Projects. *Journal of Product Innovation Management*, 7(2), 91-107.
- [5] Blaszyk, R.L. (2000). *Imagining Consumers*. Baltimore, MD: The Johns Hopkins University Press.
- [6] Morgan, D.L. (1997). *Focus Groups as Qualitative Research*. California: Sage Publications.
- [7] Silvester, K.J., Durgee, J.F., McDermott, C.M., & Veryzer, R.W. (2002). Perspective: Integrated Market-Immersion Approach To Teaching New Product Development in Technologically-Oriented Teams. *Journal of Product Innovation Management*, 19(1), 18-31.
- [8] Robinson, N. (1998). The Use of Focus Group Methodology – with Selected Examples from Sexual Health Research. *Journal of Advanced Nursing*, 29(4), 905-913.
- [9] Stewart, D.W., Shamdasani, P. N., & Rook, D.W. (2007). *Focus Groups: Theory and Practice*. California: Sage Publications.
- [10] Nijssen, E.J., & Lieshout, K.F.M. (1995). Awareness, Use and Effectiveness of Models and Methods for New Product Development. *European Journal of Marketing*, 29(10), 27.
- [11] Kitzinger, J. (1994). The Methodology of Focus Groups: The Importance of Interaction Between Research Participants. *Sociology of Health & Illness*, 16(1), 104-121.
- [12] Ozer, M. (1999). A Survey of New Product Evaluation Models. *Journal of Product Innovation Management*, 16, 77-94.
- [13] Wu, C. & Wu, S.I. (1999). A Proposed Method for the Design of Consumer Products. *Journal of International Marketing and Marketing Research*, 24(1), 23-33.
- [14] Dolan, RJ & Matthews, JM. (1993). Maximizing the utility of customer product testing: Beta test design and management. *Journal of Product Innovation Management*, 10, 318-330.
- [15] Millson, M.R. & Wilemon, D. (2006). Innovation in Heavy Construction Equipment Manufacturing: An Exploratory Study. *International Journal of Innovation Management*, 10(2), 127-161.
- [16] Mital, A., & Desai, A. (2007). Enhancing the Product Development Process Through a Sequential Approach Part III: Manufacturing. *International Journal of Product Development*, 4(1/2), 7-7.



National Institute on Disability and
Rehabilitation Research



University at Buffalo
The State University of New York