

Voices Of The Crowd

For Work-in Progress Special Track on the Methodological Research Approach of IMP

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Abstract

The basic network methodology employed by the IMP group has focused on the interaction between companies (Ford et al., 2003). In this regard, this line of research has been ahead of its time in recognizing the importance of networking in general and network strategies in particular in achieving business success. With the development of the internet for business purposes, the term networking has taken on a broader meaning. This research extends the network concept of obtaining information gleaned from networks by investigating the value to firms of using networks of business consumers, such as linkedin.com, for New Product Development (NPD). In this research, this network methodology will be compared to other methodologies for obtaining business customer information such as one-on-one interviews and customer site visits.

Recent changes in technology have made it easier for firms to tap into communities of users online for New Product Development (NPD) idea generation on the front end. The broader term for these efforts is “crowdsourcing,” which refers to taking ideas for new product innovations from outside the firm, with sources being not only user communities but also other firms and entrepreneurial ventures that wish to share in the profits of the new venture (Brabham, 2008). Additional terms for these efforts include online user communities and virtual customer communities (VCC). This research will focus on comparing different methods of obtaining customer input into the NPD process via these communities.

Prior research in this area has been primarily case studies of specific instances that have contained anecdotal information on how to manage the process of obtaining the input of online communities of customers more effectively. This particular research intends to examine three research methods, one-to-one interviews, customer visits and online communities and examine the differences to determine the quantity, perceived quality, novelty and usefulness of the comments obtained these three methods of obtaining customer feedback in the front end of NPD in business-to-business markets. The results should be of interest to academics and also useful to managers struggling as to how to make the best use of online community feedback. Some preliminary results are discussed here and more results will be available at the conference.

Keywords: Crowdsourcing, Virtual Customer Communities, networks, NPD, methodology

INTRODUCTION AND MOTIVATION

Recent changes in technology have made it easier for firms to tap into communities of users online for New Product Development (NPD) idea generation on the front end. The broader term for these efforts is “Crowdsourcing,” which refers to taking ideas for new product innovations from outside the firm, with sources being not only user communities but also other firms and entrepreneurial ventures which wish to share in the profits of the new venture (Surowiecki 2005). Additional terms for these efforts include online user communities and virtual customer communities (VCC). This research will focus on comparing different methods of obtaining customer input into the NPD process and will use the terms online user communities and VCC interchangeably throughout.

Organizations are faced with a dynamic and turbulent environment that requires flexibility to changing business needs. As a contributor to organizational growth, new products represent on average 35% of business-to-business firms’ annual sales (Griffin 1997). New product development (NPD) continues to garner managerial attention worldwide and is of keen interest to both practitioners and academic researchers. However, failure rates remain high, averaging 40% (Griffin 1997; Schilling & Hill 1998). Therefore, organizations continue to search for ways to improve their NPD proficiency to ensure continued survival and growth.

One of the ways to increase NPD success is to improve idea generation in the Fuzzy-Front End (FFE) of the development cycle. Improvements in this early stage have been estimated to contribute to about 7% of total company profits in NPD. Companies have long sought to incorporate customer insights into the front end of NPD, using techniques such as the Lead User Method (Herstatt & Hippel 1992), one-on-one interviews, traditional market research and other techniques such as conjoint analysis (Green & Srinivasan 1990) to incorporate customer input into the beginning of the NPD process.

Recently, companies have examined less structured methods, such as online user communities, to better obtain ideas for the front-end of the development process (Näkki & Virtanen 2007). These efforts to incorporate customer feedback have referred most frequently to the terms VCC (Virtual Customer Communities), Online Customer Communities and Crowdsourcing Nambisan (2002), although the latter refers more generally to obtaining ideas from outside the firm and may include feedback from other firms as well as customers. The idea is that the collective wisdom of the crowd or community exceeds what the company can generate on its own.

Examples of online customer input to new product ideas include Nike’s online customer community, where dedicated users design their own basketball shoes, blog and comment about the experience and share design ideas. In at least one case, a community member obtained a design job with Nike as a result of efforts on the site! (Füller et al. 2007, Ramaswamy 2008). The company Threadless.com is one of several firms that provides financial incentives to customers to submit new product designs. Customers submit designs for new T-shirts to be sold by the company and receive financial rewards in return. (Piller 2008).

Prior research in this area has been primarily case studies of specific instances that have contained anecdotal information on how to manage the process of obtaining the inputs from online communities of customers more effectively. Examples include how to use online communities, how to manage and control the technology involved, and how to incent and reward responders. This particular research intends to examine three research methods, one-

to-one interviews, focus groups (online and offline) and online communities and examine the differences between the types of method to determine the quantity, perceived quality, novelty and usefulness of the three methods of obtaining customer feedback in the front end of NPD.

LITERATURE REVIEW AND HYPOTHESES

Because integrating online community input into NPD is a relatively new phenomenon, a number of research opportunities exist in this area. In part, the ability to obtain detailed customer feedback has been fueled by advancements in internet technology, particularly in social media. However, it is fair to say that research in the area is in the beginning stages and for the most-part is case-based and anecdotal. Case studies have focused on how to use online technology tools to interface with customers and facilitate their input, how to manage the process more effectively, how to incent those who are participating and the psychological make-up of participants (Nambisan & Baron 2009, Füller et al. 2008, Füller et al. 2007).

There have also been a number of thought pieces and attempts at developing theoretical frameworks by which to understand the integration of online community feedback in to the NPD process (Hemetsberger & Godula 2007). One of the primary theories used to explain the phenomenon of online communities in NPD is the Porter Value-Creation model, where the customer enters into creating firm value all along the processes of the value chain and is ultimately a resource, co-creator and consumer. Another explanatory theory is social exchange theory, which focuses on the premise that customers and the firm engage in a mutually beneficial relationship through the exchange of information about the firm. For example, Nambisan and Baron (2009) cast customer payoffs as a combination of cognitive, social, personal and hedonic benefits to create a model to understand customer participation in value creation. Another possible candidate for a theoretical framework for understanding virtual community feedback is the Resource-Based View of the firm, extending to the customer the role as valuable resource leading to competitive advantage (Barney 1991).

Pillar has posited a model in which unstructured creation-based customer communities can contribute in the front end of NPD but only in the circumstances where the task is highly creative. Where the task is less creative and predefined, a more structured customer interface, such as a discussion group, is more appropriate. Where there is need for creative input on an individual basis, customer contests to incent the individual are most appropriate. Where the task requires low creativity, individual customers can be used for tasks such as idea screening (Piller & Ihl 2009).

As Table 1 indicates, unstructured feedback from a virtual customer community has a number of challenges as well as benefits. While the sample is not a known, random sample as is used in traditional market research and marketers have little control over the topic, and a decreased ability to guide the conversation, community members tend to be high in expertise and quite knowledgeable about the product. In addition, community feedback tends to be lower cost compared to traditional methods such as one-to-one interviews or focus groups.

Online communities also differ in terms of the level of expertise and the demographic characteristics of the user, often making it difficult to integrate community feedback effectively into the NPD process. Some groups such as those for scientific or technical applications such as IBM's Developerworks community are composed entirely of experts, while other communities target a specific demographic such as "Café Mom's" or teenage wearers of basketball shoes. Still other groups are more general in nature and its participants cannot be characterized by a particular level of expertise or demographic.

The question for companies seeking customer input in the FFE is whether to use traditional market research methods such as focus groups and one-on-one interviews, which are typically outsourced to a market research firm, versus in-house, available customer feedback in terms of online communities, message boards and other unstructured feedback or to use some combination of the two approaches. The original Voice of the Customer research determined that approximately 20 one-on-one interviews could be more cost and time efficient than focus groups and could obtain about 95% of customer wants and needs in the front end of development (Griffin & Hauser 1993). We seek to develop a similar metric for evaluating community feedback contribution in the early-stage of NPD.

However, there is currently a gap in the literature regarding the quality and reliability of customer feedback obtained in virtual communities vis a vis other methods. Firms appear to be leaping into this activity without understanding if there is a systematic bias in this type of information versus more traditional market feedback. In fact, there are some companies, informally dubbed “Freedom Fighters” who are setting barriers such as making product modification difficult and creating legal obstacles to user input (Braun & Herstatt, 2008).

Few studies have focused on the value of virtual community feedback and fewer still have focused on business marketing applications. Poetz and Schrier (2009) conducted a study in which company experts evaluated online community feedback. This study indicated that on average user ideas scored higher in novelty and customer benefit but lower on feasibility of implementation. These ideas may have been highly creative, but they were also more difficult to implement from the company perspective. However, Füller et al. (2004) studied 200 companies and found that as many as 15% of ideas generated by online communities were completely new to R&D and marketing, indicating that such feedback might indeed have value to firms.

This experimental research will have several hypotheses. We expect to confirm that the one-on-one interviews will capture 95% of customer wants and needs as obtained from the focus groups. Since online community participants tend to be high in expertise, we also expect that the online community feedback will differ from that of traditional market research in terms of being more specific and more creative. We would not expect the online community feedback to capture as high a percentage of wants and needs as traditional methods because online community feedback is less directive and uses a purposive sample, but we would expect the overall quality assessment to be higher for VCC feedback and for the percentage of innovative ideas to be higher than traditional methods.

METHOD

To answer these research questions, we have designed a multi-method project. Prior to the summer of 2010, a qualitative study of consisting of twenty one-on-one interviews with marketing directors, managers and vice-presidents who are using virtual techniques of gathering community input, including company-sponsored online customer communities, across a variety of business marketing industries will be conducted. The objective will be to determine managers’ perceptions of quality, systematic bias, speed of obtaining information and ‘nugget’ density from these community sources. These interviews will also reveal the nature of the information, incremental or radical, compared to other methods. This research methodology will be the Voice of the Customer method, which has indicated that 20 interviews were sufficient to gather 95% of the information needed in this type of context (Griffin & Hauser 1993).

These executives will be asked open-ended questions as to how they are gathering customer feedback from these community methods, how useful the information is, how they sift through and select methods of obtaining feedback from customers and how they rate customer contributions. The qualitative instrument is included in Appendix 1. One output of this phase will be a qualitative understanding of the process of using online user communities in the front-end of the NPD process and the information managers seek to obtain from this method. Another result of this phase will be deciding which company/industry to focus upon for Phase II of the project where multiple research methods in the FFE will be compared. We are currently conducting these depth interviews at a large software company across multiple product groups that are using multiple technologies to obtain feedback from both the customer and internal user communities. We are using 'snowballing' techniques within the company as well as social network sites themselves to obtain the names of additional individuals to interview. The results of this preliminary Phase will be reported at the Fall 2010 IMP Conference.

The next Phase will be a field experiment focused on a company in one particular industry, comparing online user communities to one-to-one interviews and online and offline focus groups around a particular NPD topic. This research will examine whether online customer communities have the same ability to effectively gather customer wants and needs and how much information is needed to gather those wants and needs. We hope to complete this stage over the summer of 2010 and report preliminary results at the IMP Conference.

In this Phase, a particular product, industry and company within that industry will be selected and customer feedback across industries will be analyzed. Four online and four offline focus groups will be conducted and twenty in-depth interviews will also be conducted around the same market research question for that firm's early stage NPD question. The feedback from online communities will also be analyzed around that same NPD question over a prior six-month period.

ANALYSIS

For the qualitative interviews, the interviews will be analyzed by two separate raters and responses coded by frequency of mention to develop underlying patterns in the responses. For the second Phase, the number, type and nature of the wants and needs will be collected and coded and compared across various methods. In addition, company experts will rate the value of the wants and needs expressed to the company. Comparison will then be made across the four methods to determine not only the type but quality of the information gathered across methods. Content and quality ratings of customer inputs will be combined with a weighting process and results will be evaluated across methods.

CONTRIBUTION AND RESULTS

This research is a continuation of prior research that has been conducted on Information Use in New Product Development (Zahay, et al. 2004). Prior studies have looked how information is used in the stages of New Product Development in detail and at what stage of the process. This particular study combines the area of information use in New Product Development with interactive marketing, particularly online communities. While there has been some exploration of the quality and type of feedback from online communities, no study has attempted to compare the results of virtual customer community

feedback with that obtained from traditional marketing research methods. The results should be of interest to academics and also quite useful to managers struggling as to how to make the best use of online community feedback.

The first step in this research has been to conduct depth interviews with managers as to the use traditional feedback methods versus ‘crowdsourced’ methods. In fact, a preliminary analysis of the depth interviews conducted so far revealed some interesting insights. The first three interviews were conducted at a large B2B software manufacturer. The respondents at this company were all responsible for managing and developing internal communities or community–building tools in the organization. The company seemed to prefer using its own internal social media tools rather than to use tools developed commercially. The advantages to the company of using internal tools were to have exclusive access to its own information about company products and suggested innovations and have more control over who participated in the community.

This large international organization did not have trouble generating new product development ideas. NPD ideas came from a multitude of sources, not only internally but through public as well as company-sponsored social media tools. For the fuzzy-front end of NPD, by far the most prevalent tools the company used were traditional ones such as account team feedback, one on one interviews, user experience groups, usability tests on prototypes, mock-ups and testing on the full product with users under contract with the company to do Alpha and Beta testing.

However, using these traditional tools did not preclude, the use of internal communities and social media tools to garner new product feedback. The respondents viewed communities as a way to listen and observe, and the VCC process added another dimension to NPD efforts. The community can propose functions, vote and comment on these functions, link to ideas that are similar and give the company an idea of which features and functions are most likely to succeed. These communities were administered not only to garner feedback from end users but also business partners, such as resellers and distributors. So in this business-to-business example there were actually three to four communities to consider: end users, internal users and business partners (as well as academics).

Managers in the organization were therefore constantly seeking ways to determine the integrity, or data quality, of this multitude of online responses. Community contributions might first be tagged for their authority, influence and sentiment and then analyzed for their worth in the NPD process. In fact, where a ‘crowdsourced’ or community idea takes place and then can be vetted and tested in that community as well, the New Product Development lifecycle at this firm has the potential to be significantly decreased in length. The company gave an example of using ten percent of its employee base to help develop and test a product by downloading an early version of the product, an office communication tool. This internal community feedback helped the company to release the product about a year ahead of schedule.

The company already had a review process in place whereby team members have to attest to the success of a particular research tools or programs in terms of the NPD successes that could be attributed to the program. However, the managers interviewed were somewhat

frustrated by the inability to properly measure and evaluate the results from innovations garnered from community feedback, even if the feedback consisted of a substantial portion of the changes that are made to existing products.

In addition, managers tended to rely on the self-policing efforts of the communities to endorse new ideas or completely shut them down, meaning that not all ideas may reach marketing managers even in such an open forum. It is also not clear that communities are the best way to garner new to the world product ideas in this setting. One manager said that social tools are in an elementary stage in their ability to filter good content from noise and said that “You have to work pretty hard to figure out the insightful ideas and when someone is making a lot of noise.” That particular manager also said the problem of evaluating why users make certain comments is exacerbated in social media and preferred working with a key customer whose feedback was known and trusted. At the same time, that manager also saw the value of social media in developing new relationships with users who could become trusted users.

As stated above, one way for business-to-business firms to ensure quality of VCC feedback is to use company-sponsored communities, rather than public communities. Even so, the budgeting process often prevents customer-generated ideas from reaching test phase. The managers interviewed at this firm could not keep ideas ‘alive’ long enough to be considered in the annual budgeting cycle. So the real-time feedback from the crowd was often frustrated by the organization’s less than nimble response to funding its NPD plans.

As stated above, we plan a full research agenda to explore the relative value of community and ‘crowdsourced’ feedback to traditional methods of research and garnering feedback for NPD. However, it appears that the preliminary results from these qualitative interviews alone should be a rich source of information for academics and practitioners alike and we hope to have the full set of qualitative interviews to report on in the fall. The next phase of this project, comparing the incremental value of each type of research technique should ease the difficulties for managers in deciding how and when to best incorporate community feedback into the NPD process.

Table 1: Comparison of Research Methods

	Focus Group	1-on-1 Interviews	Lead Users	Communities
Sample	Known Random	Known Random	Known Purposive	Unknown Purposive
Level of Expertise	Low-Med	Low-Med	Very High	High
Guided	Moderately	Moderate-High	Low	Low
Sustainable	Less			More so
Control of Topic	Some	Moderate	High	Low
Type of Product	Incremental	All	NTW	All
Cost	Moderate	Moderate	High	Low

APPENDIX 1: VOICE OF THE CUSTOMER INSTRUMENT

1. What is your firm's presence on the web and social media?
2. Where does the information about customer needs used in developing a new product primarily come from? What kinds of market research are done before and during new product development?
3. Do you have a "stage-gate" or other New Product Development (NPD) Process?
4. What formal roles do social networking and community sites play in that process?
5. When you develop a new product, what roles does information from online community sources play? What type of sources? After open-ended, then prompt with each of these specific probes:
 - Online communities you have set up
 - Not-for-profit communities your customers have set up
 - Online communities for competitor products
 - Online commercial social media sites (Facebook, Myspace)
 - Second life
 - Blogs and bloggers
 - Twitter
6. Think back to the last time information from an online source or community was used in molding a new product idea or concept, or in changing one that was already under development. Tell me the story of what happened and how it came to be incorporated.
7. How do the functional departments share information that comes from community sources?
8. How do you know you are getting the right information from community sources regarding NPD? How do you make sure one customer's voice does not dominate?
9. How do you know you have been successful in incorporating social networking and community feedback into your NPD process?
10. What is the strongest impediment to successfully incorporating social networking and community feedback into your NPD process?
11. If you could change one thing about the current process for incorporating social media and community feedback into your NPD process, what would it be?
12. Does your company plan to spend more on NPD in the coming year? If so, by what %?
13. How is NPD funded? % of revenue, Fixed number related to costs for NPD
14. Do you differentiate NPD vs. line extension?
15. What is the typical time frame for NPD – From idea conception to going to market?

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