

Understanding customer need during new product development

The application of ethnography

Light **Minds**

Delivering Customer Insight

Understanding customer need during new product development

The application of ethnography

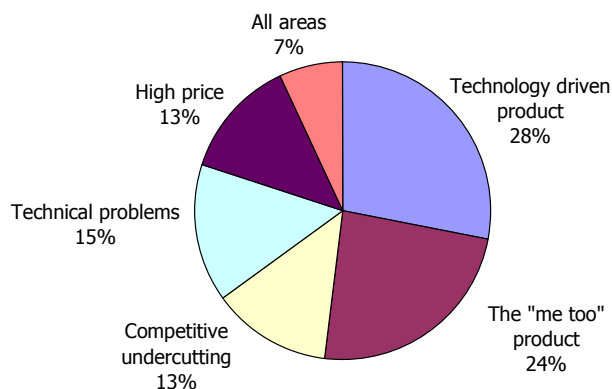
.....

Introduction

Statistics on the success rates of new products show that for every four new products that enter development, only one becomes a commercial success. In the UK, at least 50% of new products fail within their launch year.

Research by Calantone and Cooper shows that the number one reason for a new product to fail is the lack of attention paid to the real needs and wants of the marketplace. They also noted that this most common type of failure (28%) typically described a technology driven product. The second most common type of failure (24%) was the “me too” product. In this case the new product copied an already successful competitive product. As a result, customers saw no reason to switch.

Reasons for product failure



Reference from Calantone and Cooper

Other studies show that the major discriminating factor between comparable successful and unsuccessful products is the understanding of customers' needs.

In spite of these findings, research by Cooper on new product projects by 114 companies showed that 78% of people's time was spent on technical and/or production activities, and only 16% on marketing and customer activities (and most of this was spent during the launch).

Meeting a customer need

There are three key elements to meeting a customer's need when developing new products or services.

- **Desirability:** the new product or service must be desirable, i.e. a person wants to use it
- **Purpose:** the new product or service must have a useful purpose, i.e. a person will use it
- **User Experience:** the new product or service must provide customer satisfaction, i.e. a person is happy using it.

When creating and designing a new product or service it is important to consider the use of the product (what does the product do), the level of usability of the product (how does it work, can it be used comfortably) and the meaning that the product conveys. Meaning refers to its aesthetics, cultural messages, inherent symbolism and the metaphors it incorporates.

Well-designed products consider both function (use and usability) and meaning as both affect a person's total perception of the product. "Often the product's meaning is most influential in the customer's purchase decision and in the creation of a positive ownership and use experience", (Sara Beckman & Johannes Hoeh, Harvard Business Review, 2000). The reason that the product's meaning is so important is that people want to buy and use a product or service that matches their beliefs, values and desires, not purely for fulfilling a purpose. Examples could be a Mercedes Car, an Apple Computer, a Nokia mobile phone, a Yorkie chocolate bar, having a coffee at Starbucks, shopping at Ikea or smoking a Marlboro cigarette.

However, every product that is created should also have a consistency with regard use, usability and meaning covering product development, design, manufacturing, marketing, branding, advertising, packaging, etc. You cannot create a meaning of quality and elegance through design, packaging and advertising if the product's use and usability are not of equal quality and elegance. As Michael Barry (an inventor of many successful products) puts it, "a successful product is the physical embodiment of a strategy that aligns users, technology and culture".

Understanding customer need during new product development

The application of ethnography

.....

Discovering unmet customer needs

If the understanding of customers' needs is so important, the next challenge is to find out how to discover these needs when developing new products and services. This can be a difficult task, as quite often, customers cannot tell you what they want. And if they can, that still might not lead to the creation of a successful new product. Research by Professor Clayton Christensen from the Harvard Business School finds that leading companies who have followed what their customers say have lost out to new innovations from other companies. This he has called "The Innovators Dilemma".

If this is true then maybe the traditional way of conducting market research is not adequate in the quest for discovering unmet customer needs and creating new disruptive product opportunities. What people say they want (and do) should not be the only deciding factor in creating new disruptive product innovations.

So what are the alternatives?

A new approach starting to become more widespread in industry is to conduct in-depth customer research and to treat potential customers as participants in the new product development process. In simplest terms the approach involves *listening* to what existing or potential customers have to say, *observing* what they currently do and *observing* what they currently use. In formal terms, this approach of in-depth customer research is known as ethnographic research.

Ethnography

Ethnography is defined as "the description and study of human culture". An alternative definition is the "rigorous study of people's everyday lives".

Ethnography originates from anthropology where anthropologists spend significant periods of time with people from a specific cultural group and make detailed observations of their practices. Cultural groups could be tribes in the Amazon rainforest, teenagers, drug dealers, organizations and so on.



In relation to new product development, ethnography is used to understand the behaviours, beliefs and values of existing or potential customers in their normal environment, for example, at home, in offices, hospitals and shops, i.e. where people live and work.

Ethnography goes beyond questionnaires and focus groups and uses participant observation and interviews. However it is important to note that when ethnography is used to aid new product development much shorter periods of time are spent conducting the ethnographic research in comparison with traditional ethnographic studies. For example, the time needed for participant observation and interviews, in relation to new product development, could be around two weeks for a small scale study.

The customer understanding gained from ethnography can be used to drive the discovery, design and/or evaluation of new products and services.

Key benefits of ethnography:

- Provides real life accounts of customers' everyday activities, desires, beliefs and values.
- Highlights the differences between what people do and what they say they do, and as a result find needs that have not been directly expressed. This is often missed with other

Understanding customer need during new product development

The application of ethnography

research methods such as focus groups and questionnaires

- Describes what meanings people place on products and services and how products and services are used.
- Gives the unbiased viewpoints of key customers that help when making key-decisions.

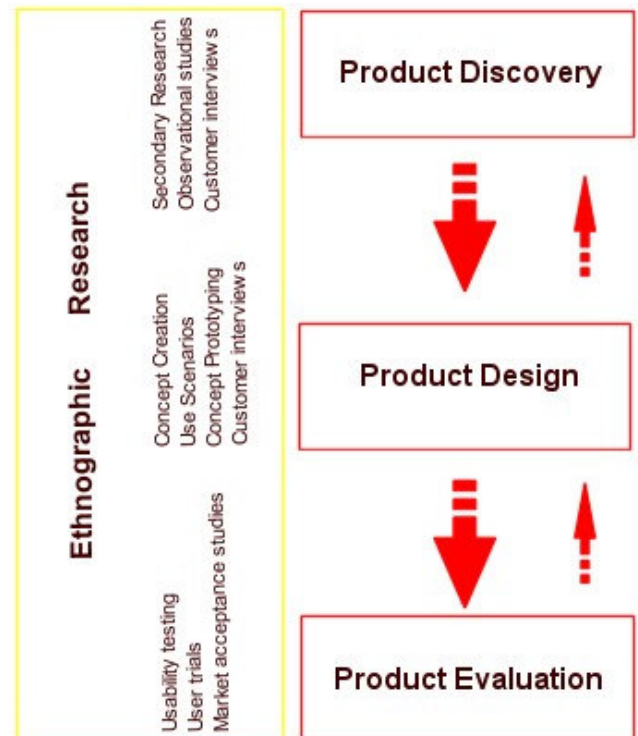
Large multinational companies, including Microsoft, Nokia, Ericsson, IBM, Hewlett Packard, Kimberley Clark, General Mills and Motorola, are using this approach to discover new product opportunities and also to design and evaluate products. For example, products such as Huggies Pull-Up nappies and Motorola's two-way pagers for the Chinese market were created and designed through the use of ethnography. This approach has also been used (knowingly or not) by many small companies and individuals for a long time.

Ethnography in new product development

Many leading companies are now taking a human-centred approach to new product development where the development starts with users and their needs rather than with technology. This is to make sure that the resultant new product or service created meets the needs of customers. Some companies who use ethnography as a key technique in the new product development process describe the approach as culture-based design because the development starts by uncovering the shared values, beliefs and protocols of a cultural group to help drive appropriate rules and designs for new products and services.

Ethnography has a major role to play throughout the new product development process to ensure that the new product or service is designed appropriately in terms of use, usability and meaning. Ethnography can be used in the *discovery* of new product or services opportunities; in the *design* of new products or services, where the new product or service idea is conceptualised and designed; and in the *evaluation* of new product or services where the new product or

service is evaluated in terms of usability and market acceptance.



During the design stage of the new product development process ethnographic techniques are used to generate rapid iterations of product designs ranging from initial concepts and storyboards through to working prototypes can be taken out to target customers to gain feedback and insight.

Ethnographic research techniques can be used early in the design stage to study how new product concepts relate to users' overall needs and motivations. Later, more advanced prototypes can be used to study detailed design issues.

Early prototypes can be as simple as just sketches created with pencil and paper, where the sketches show product concept ideas in terms of form and basic interaction. Slightly more advanced prototypes commonly used at this early stage of development are rough physical models made out of cardboard or foam

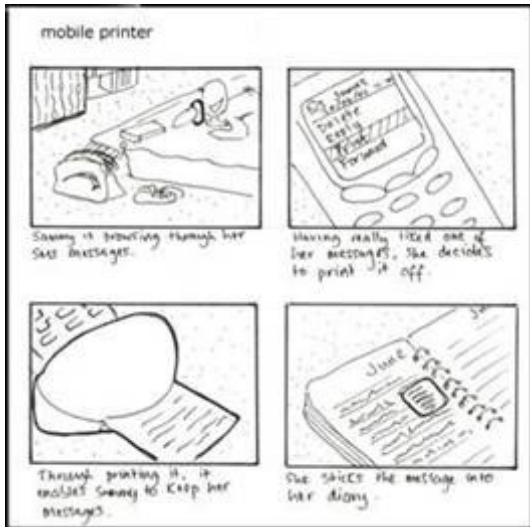
Understanding customer need during new product development

The application of ethnography

.....

together with storyboards showing the key features and design of the new product concepts.

The advantage of using early prototypes is that they allow changes to be made quickly and cheaply and therefore maximize the number of design changes possible. They also allow the designer to gain feedback on conceptual ideas from users (and the rest of the design team) without getting feedback on very detailed design issues that can be studied later on. It is important to note, however, that feedback from early prototypes can still relate to the use, usability and meaning of the new product or service.



As the product concept is refined more advanced prototypes can be made to test detailed usability issues and to investigate the impact of aesthetics on the meaning of the product. This is part of the evaluation stage of the new product development process.



During the design and evaluation stages it is important that prototypes are tested in the real context of use by target customers, because prototypes (and products) might be used differently in a real situation compared with an artificial test environment, for example in a laboratory. The testing of a prototype in a laboratory might lead to key design issues being overlooked that would have been noticed if the prototype had been tested in a real situation.

If it is not possible to take prototypes out into an environment where the new product would be used, then one way round this is to use role play and to simulate as closely as possible the real situations. This can often be done cheaply and quickly in an office environment using simple props. This method is now used extensively by the leading international design consultancies.

Ethnography can also be used during the evaluation stage to study market acceptance of the new product or service and how the new product or service should be positioned in the market. Creating the right branding for a new product or service requires the correct positioning of a product in the market. This can only be

Understanding customer need during new product development

The application of ethnography

.....

done if there is a deep understanding of customer behaviours, beliefs, desires and values and how they relate to the product offering. By the use of ethnography this deep customer understanding can be gained. Once this is known a marketing message can be created describing how the new product or service provides value and addresses the needs of customers. The marketing message can also be written so that it is in line with the beliefs, desires and values of the customers being targeted.

Conclusions

Ethnography can play a major role in the discovery, design and evaluation of new products and services to make sure that the needs of target customers are met. Meeting a customer need does not just mean creating a new product or service that fits a purpose but also making sure that the user experience and meaning of the new product or service is right. The use of ethnography can help ensure that all these aspects are considered.

In terms of the overall time and cost of developing a new product or service, the use of ethnography is also not time consuming or expensive. Only a small number of people need be involved during the ethnographic research and only simple tools are required. In addition, the information gathered from ethnographic research can help save time and money during the product development and testing stages. This is because design issues have already been studied during the rapid iterations of product concept development and user studies. The marketing work can also run more efficiently as there will be a rich body of material to help in the development of marketing strategies, including product positioning.

The key issue to consider when developing a new product or service is whether the needs of target customers have been sufficiently understood. As the President of Harvard Business School said "*If you think knowledge is expensive, try ignorance*".

About Light Minds

Light Minds helps companies translate new ideas into commercial products and services through consultancy work and training programmes.

Light Minds was established in 2003 to address the persistent problem of businesses not having a detailed understanding of their customers' needs when developing new products and services. Light Minds' approach transcends traditional market research resolving differences between customer needs and new solutions through the application of ethnography.

Ethnography goes beyond questionnaires and focus groups and uses participant observation and interviews to capture and describe customer behaviour, beliefs and values. This understanding of the customer is then used to drive the design and positioning of product solutions.

The multi-disciplinary team at Light Minds has skills covering the key areas of customer research, technology development, design and strategic-planning. The Light Minds team has many years of commercial experience in product and service innovation and has won many international awards for the new products they have designed and developed.

For more information please visit the Light Minds website at www.lightminds.co.uk or email the team at info@lightminds.co.uk.