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THE CONTRIBUTIONS OF NETNOGRAPHY IN NEW PRODUCT DEVELOPMENT

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in International Business

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1 INTRODUCTION

Market research plays an important role in international business strategy. Market and customer research, have been understood as a term encompassing various activities that allow the market researcher "listen to" the "voice" of market and customers in term of consumer opinions and behaviour, advertising communication strategy or understanding of class-based consumer cultures. There are numerous market research methods and each method contains itself both strengths and weaknesses. Traditionally, the firm uses typical market research methods such as focus group, interview, survey, and so on. Nowadays, in the age of Internet and technology, more and more companies have utilized the online market research methods e.g. focus group, online interview, online survey, online ethnography and netnography to conduct their market research projects. Among the online market research method, netnography is the most useful and beneficial to marketers to directly obtain consumers' insights from giant online resources. Many companies and market research agents recently apply Netnography in order to generate the deep insights of consumers' perceptions in different aspects. Netnography is utilized for various business purposes such as to gain the understanding of consumers' behaviour, to study about culture, to look for new product ideas, and so on. Recently, netnography is applied intensively in new product development process since netnography provides the researchers with a huge amount of useful information, which contributes to different stages of the new product development process. Therefore, applying netnography in the new product development process has become a phenomenon.

Netnography has been studying in various aspects (e.g. definitions of netnography, application of netnography, conducting procedure...) within different industrial contexts. Besides, there are many studies and researches about new product development in various perspectives, such as new product development models, management of new product development project, or interaction between customers and new product design, and so on. However, the connection and the interaction between netnography and new product development have not been studied recently. This opens opportunities for the writer to study and explore unrevealed issues regarding to applying netnography in new product development. In term of the relation between netnography and new product development, there are numerous of matters need to be explored; for instance, the process of applying netnography in order to benefit to new product development, the involvement degree of netnography in new product development process, or eliminating useless information from netnography so that only crucial data is utilized, and so on. In this thesis, writer focuses on exploring how netnography is applied in new product development process, and what benefits netnography can contribute to the succeed of the project.

The aims of this study are to understand how netnography is conducted for new product development purpose, and to analyse the contributions of netnography in the new product development process. To do so, a case-study strategy will be conducted with triple case studies. The case studies are chosen bases on many different criteria in order to select the most relevant cases. Eventually, the writer selected three case studies, which are Sunless tanning product project (HYVE), Listerine (NetBase), and Nivea co-creation and netnography in black and white deodorant. The case study strategy applied in this thesis includes four steps e.g. case selection, data collection, case study analysis, and generating the research outcomes from the analysis.

This study of the contributions of netnography in the new product development process may be useful for the readers in many ways. It offers the fundamental knowledge of netnography market research method and basic understanding of new product development process. Additionally, it emphasizes the differences between netnography and other market research methods in order to explain the reasons why many companies and market research agents recently utilized netnography in their market research projects. Furthermore, it highlights the contributions of netnography in the new product development process in order to indicate the importance of netnography in developing new product. Thus, the potential readers of the study can be students, marketers, researchers, product developers, or business managers.

All in all, it is worth studying the contributions of netnography in the new product development process since it helps the writers to explore an interested phenomenon and it provides the readers with a remarkable number of useful information, knowledge, and experience.

2 NETNOGRAPHY – AN ONLINE RESEARCH METHOD

This chapter introduces the netnography methods in various aspects based on the existing theories and researches. The chapter is divided into four parts. The first and second parts are definition and uses of netnography, which includes the fundamental knowledge and applications of netnography research method. The third part explains the steps of conducting netnography, and the method to perform each step. Additionally, the final part presents the evaluation of netnography method along with the comparison with other market research method.

2.1 Definitions and natures of Netnography

2.1.1 *Definitions and core elements of Netnography*

According to Kozinets (2002, 62), netnography, taken from “inter[net] and eth[nography], is a new qualitative research methodology that adapts research techniques of ethnography to study cultures and communities through computer-mediated communications. To be specific, ethnography is “the study of human behaviour in its natural context involves in observation of behaviours and physical settings” (Gates M. 2010, 189). In marketing research context, ethnography is a research approach in which researchers apply observation and interview techniques to study the consumer behaviour, attitudes, perceptions and differences between people in everyday situations (Malhotra & Birks 2007, 161). Additionally, computer-mediated communications (CMC) is any communication that occurs through a computer or network. CMC includes forums, postings, instant messages, emails, chat-room, and mobile text messaging (Kozinets 2010a, 189). Those CMCs are sources for researchers collecting their ethnographic data to arrive understanding and representation of culture or communal phenomenon. In summary, netnography is participant-observational research (adapted from ethnography) being conducted throughout online fieldwork (CMC, or internet-based sources)

Another school of thought terms netnography as digital ethnography or virtual ethnography, which “is essentially the application of ethnography to a computer-mediated environment with the epistemological remit largely unchanged” (Xun & Reynolds 2010, 18). It means that netnography is a qualitative research method which offers greater insight and understanding of the virtual world in order to discover and explain the consumer’s needs, ideas, choices, symbolic meanings and so on. Netnography naturally is the term implicating the acknowledgement of using online resources or computer-

mediated communications in conducting ethnographic techniques in order to collect data for interpreting, analysing, and explaining the phenomenon.

Netnography is a participant-observational research method based in online fieldwork (Kozinets 2010a, 60); thus, the core value of this method is participation, and immersion in research sources (online communities, CMC, forums, blogs...). Netnographic research emphasizes the interaction between researchers and online communities in varied perspectives. Netnography, an internet-based market research method, takes advantage of the observation and exploitation of online communities, forums, and social networks in order to gain unbiased consumer insight. Applying such active and direct method helps researchers easily approach consumers' responses; understand the emotional, social, and cultural context of their product experience. The collected data from netnographic research can be utilized in many phases of new innovative products research and development process from gaining understanding reaction of consumers toward the existing products, to discovering opportunity of developing new products, and exploring the consumers' reactions.

Netnography method can be distinguished from other market research techniques (e.g. focus group, interview) based upon its natural elements including focusing on cultural insights, and paying attention to the context of collected data (Kozinets 2010a). Particularly, netnography is different because it is not designed to collect the "content" of online communications but to look for the social interaction as embedded expression of meaning, and cultural artifact. Netnography looks at an issue within the interaction with others insight into a cultural environment. Furthermore, the other distinguishing feature of netnography is in considering the context of the words in social interactions. Every word or information should be understood in the integration and co-consideration with the history, the language, the abnormal meaning, and the communicator characteristics in order to explain and interpret properly the hidden meaning of the word or information. The core value of netnography is listening to consumers rather than asking them, understanding consumers' attitudes and behaviours rather than measuring their opinions. Hence, netnography is considered as a new market research method, which provides deep insight and understandings within natural, multi-dimensional, and high-technological research environment.

2.1.2 *Blending Ethnography and Netnography*

The definitions and the data sources of netnography emphasize the strong connection between ethnography and netnography. Hence, netnography imitates many common features from the ethnography research method. For instance, netnography also involves itself deeply in research fieldworks, or organization, communities that need to be stud-

ied in order to gain understanding and the explanation from insider's perspectives. Moreover, the research is conducted in a natural environment and in the participants' own world, so the participants feel comfortable to express their own true attitudes and opinion. It helps researchers collect valuable and natural data to analyse and explain research problems. As with the ethnographic nature, netnographic method requires researchers to immerse in the virtual space in the same ways as ethnographers in collecting data (Xun et al. 2010, 18).

Besides common characteristics, netnography contains its own natures, which is distinguishing from ethnography. The major difference between ethnography and netnography is about research purpose and the main data sources that each method relies on to collect information. In order to clarify the distinction between them, it is necessary to explain the notion of "pure" netnography and "pure" ethnography, which will emphasize the difference in term of data sources. According to Kozinets (2010), "pure" netnography utilizes data generated merely from online sources or other CMCs or ICT-related interactions including online interview, online participant, or online observation and download. Meanwhile, he mentions that "pure" ethnography uses data generated from face-to-face interactions and their transcriptions in field notes without any data form online sources. It means that netnographic data is collected completely from online resources within online communities, forums, or ICT interaction resources. However, only relying on collecting information from online is not always adequate to explore research problems and research questions. Consequently, netnographic researchers need to consider carefully whether using "pure" netnography or combining it with other data collection techniques.

Due to the inadequate and partial nature of netnography in collecting data, netnographic researchers need to consider whether to use "pure" netnography or "blend" ethnography/netnography in certain circumstance of their researches. "Blend" ethnography/netnography is a combination approach in which researchers gather information or data from face-to-face interactions as well as from online sources (Kozinets 2010a, 65). Figure 1 illustrates the mixture between "pure" ethnography, "pure" netnography, and "blend" ethnography/netnography in terms of research purpose and data collection.

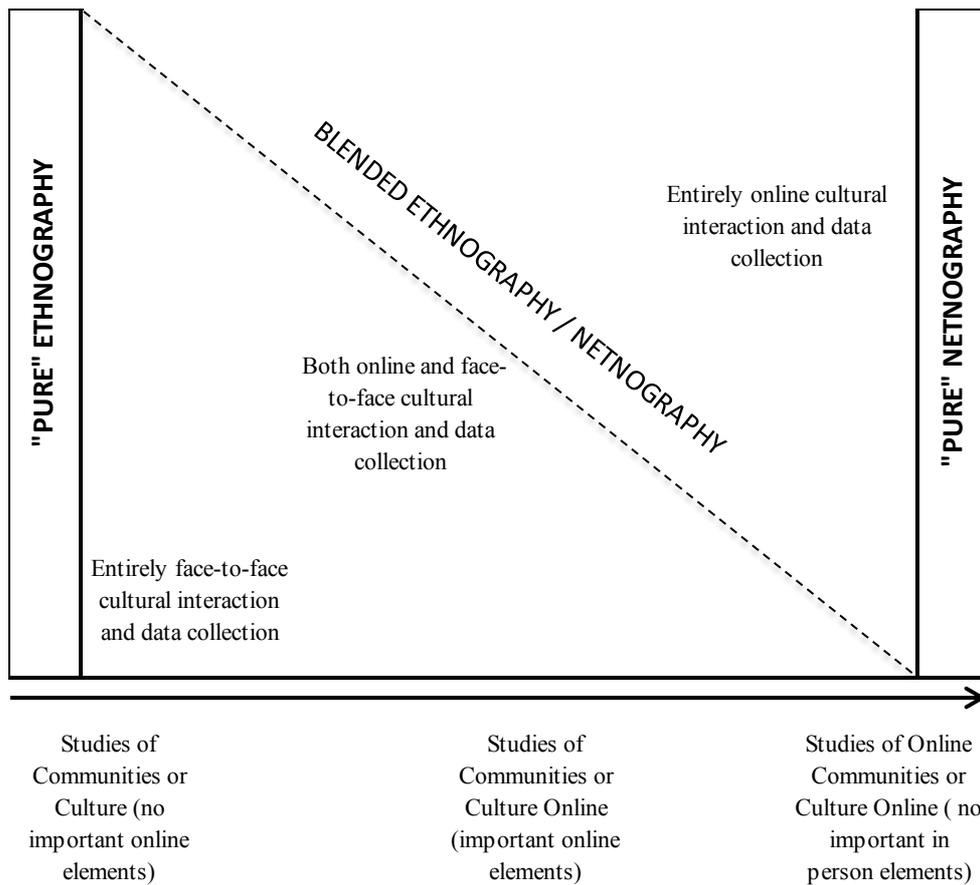


Figure 1 Coordinating online and face-to-face interaction and data collection (Kozinets 2010a, 67)

The figure provides understanding of the importance of online and offline data collection which lead to applying “pure” ethnography, or “pure” netnography, or combining them in “blend” ethnography/netnography. Netnography is entirely an appropriate method in studies focusing on online communities, online cultural or communal phenomena. Alternatively, in researches of online community related to larger social world and wider information, “pure” netnography is inadequate to gain a complete picture; therefore, the combination between pure netnography and ethnography is required.

2.2 Uses of Netnography in different perspectives

Netnography is utilized recently in market research as a useful tool for understanding customer behaviour, culture, and reaction with multi-dimensions and different purposes. According to Kozinets, the father of the netnography method, “netnography is a powerful way to understand the changing marketplace, to gain an understanding of tomorrow’s trends today, and to gain ideas and insights as valuable inputs to the front-end ideation process.” Particularly, netnography provides managers with deep and wide

studies of matters such as brand communities and negotiation, brand positioning and repositioning opportunities, community management, competitive analysis, new product development, trend identification and so on. On the other hand, netnographic researches also reveal matters related to fan cultures e.g. understanding the culture of consumption behaviour, how the culture is created and maintained, and communications around buying and using certain products (Kozinets 1997, 470-475). Indeed, netnography method is utilised to gain the understanding of online communities in the same way that anthropologists search for the understanding of the cultures, norms, and practices of face-to-face communities (Sandlin 2007, 289). Additionally, netnography ‘allows the researchers to gain access to consumer discussions by observing and/or participating in communications on publicly available online forums’ (Nelson and Otnes 2005, 90).

Nowadays, more and more companies have outsourced their market research activities in order to have a deeper understating of their customers as well as to look for new opportunities to enhance their business markets. Researchers believe in netnography method and have been applying it in market research activities. For examples, Danone has contracted with HYVE – a market research agency – to conduct a Netnography Insights project for Danone on drinks and beverages. HYVE analysed consumers’ statements, opinions, and feedbacks on all possible kinds of beverages (excluding alcoholic drinks), which resulted in solid and beverage-universal insights. Additionally, in the field of sports, by using netnography, Adidas successfully developed a new model of basketball shoes. (HYVE – Netnography Insights, cases and references 2013)

Netnography is a potential method of lead user identification (Belz & Baumbach 2010). Netnographic studies find information about lead users in online communities to identify lead users, and analysis their behaviours. It helps consumer researcher analysis consumer needs, potential consumption trend, and consumer behaviour since lead users usually participate in online communities to contribute their knowledge and experience about existing products, to exchange experience, and to communicate with other users. Lead user identification via netnography benefits producers in the way that producers can collect valuable information and sources for innovation and new product development. Furthermore, netnography is one of the important elements of co-creation for research and development innovation products (Bartl, Jaweckki & Wiegandt 2010). Besides crowdsourcing and co-creation toolkits, netnography provides unbiased, unobtrusive consumer insights through observation and online community interaction, which reveal the nature of consumer reactions towards company’s products. Based on that information, the company can understand what the costumers actually think of their products, and develop new products, which may satisfy the demand of consumers. Co-creation methods can also take part in the R&D process in term of providing valuable and natural data for the analysis process and potential product evaluation.

2.3 Procedure of conducting Netnography

Procedure of conducting Netnography is divided into four stages and follows six steps: research planning, *entrée*, data collection, interpretation, ensuring ethical standards, and research representation. Below Figure 2 represents the netnographic research process.

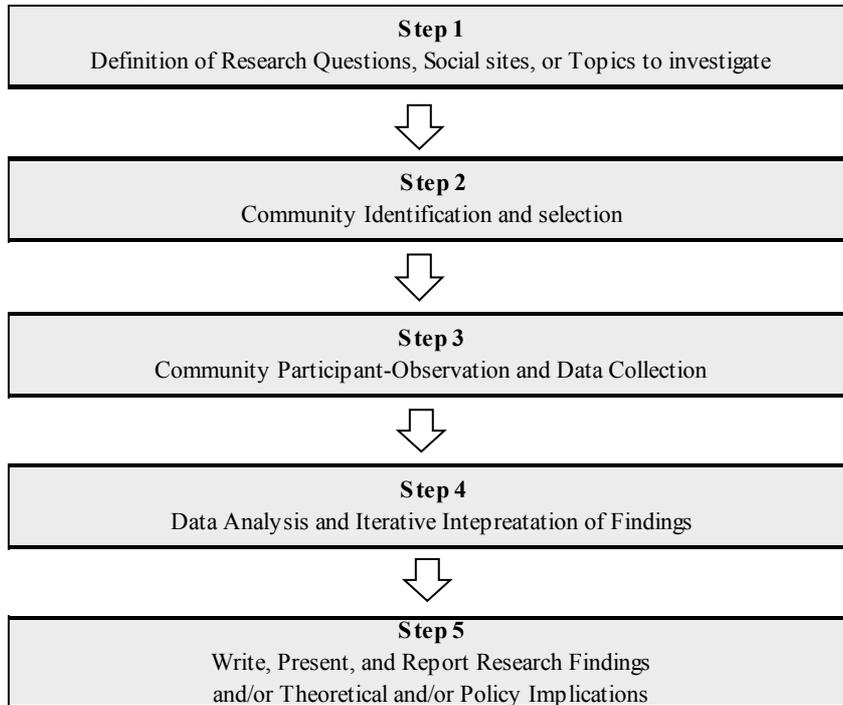


Figure 2 Steps of a netnographic research project (Kozinets 2010a, 61)

The definition and application of each step will be presented in following sections. The presentation is not in the format of step by step. The steps will be analysed along with the stages of conducting netnography research.

2.3.1 *Planning and entrée*

Planning and *entrée* is the first stage of conducting netnography research including two initial steps that help market researchers prepare themselves carefully for conducting netnography. Firstly, researchers need to determine research focus and research questions, identify the main topics that they want to investigate (Kozinets 2002, 63). In term of research design, Creswell (2009, 129) suggests that qualitative researchers should create broad questions to ask for ‘an exploration of the central phenomenon or concept in a study’. In netnographic research, it is useful to apply this principle in de-

termining research questions, since netnography is collecting information from the entire online community rather than pointing out personal opinions. Hence, netnographer can start with a set of research questions regarding the main research topic. During the process of investigation, the original questions can be changed eventually, and new appropriate and focused questions may emerge.

In the second step of planning and entrée, netnographic researchers need to find appropriate online fields for collecting data, and familiarize themselves with the online communities. (Kozinets 2010a, 79). Various online communities and tips to identify appropriate online fields for conducting netnographic research will be discussed in this section. Meanwhile, immersing into online research fieldworks of researchers will be mentioned in the data collection stage. There are many online communities supporting to the conducting of netnographic researches; however, there are many useful types of online communities to perform market-oriented netnography such as bulletin boards or forums, independent Web pages or Web rings, lists, multiuser dungeons, chat rooms, and virtual world (Kozinets 2002, 63). According to Kozinets (2010a), bulletin boards or forums are one of the oldest and richest online community forms. They are text-based information providing opinions towards particular orientations, or consumer topics. They are also called newsgroup, user groups, or internet-user groups organized around particular products, services or lifestyles. Nowadays, forums also comprise of new online communities such as Facebook, Twitter, blogs, wikis, audio/visual sites, social content aggregators, and social networking sites. Web rings, the second type of online community, are organizations of related web pages, which are linked together and are structured by common interest. Connection and interaction among these web pages create a huge opportunities for researchers to collect relevant data. For example, the web page www.epinions.com provides an online community for studying consumer-to-consumer exchanges (Kozinets 2002, 63). Besides, multiuser dungeons and chat rooms play a certain role as market-oriented source for finding information. Chat room can provide interesting information about particular themes such as certain industries, demographic, or lifestyle, segments. Virtual worlds are also popular in providing researchers with useful information, new trend, life-style, and customers' reaction toward certain phenomenon. Second Life, for instance, is one of the best well-known virtual worlds among the other sites e.g. Habbo Hotel, Club Penguin, BarbieGirls, or Gaia Online. Since there are different types of users participating in the online communities, researchers usually combine these online community sources in the data collection process in order to eliminate the limitations and enhance the advantages of each channel. (Füller, Bartl, Ernst & Mühlbacher 2006). Alternatively, they can also evaluate and choose suitable online communities for their investigation.

Researchers consider several criteria in order to judge among online communities and select suitable ones. One of the criteria is that the online communities should be

relevant to research focus and research questions. Chosen online communities are active and interactive, which means that there are regular diversified communication and interaction occurring via those communities between participants. In order to be able to collect valuable data in different viewpoints, online communities must contain detailed and descriptively rich data, which are offered by heterogeneous participants. Another requirement is that online communities should have a critical mass of communicators and an energetic feel. (Kozinets 2010a, 89). ‘The most relevant online communities and Internet locations should be selected based on an evaluation of the exchanged content, professionalism as well as on information regarding traffic and number of participants interacting with each other’ (Füller et al. 2006). The community members react differently to external inquiries. Some members are willing to share their opinion while the other slowly accept the outsiders and answer the questions within certain concerns. (Füller et al. 2006). Hence, before starting data collection process, marketing researcher need to familiar themselves with the nature of characteristics of online communities such as participating as group members, understand market-oriented behaviours, interests, languages, and creating wide networks (Kozinets 2002, 63). Indeed, it is important to get familiar with the communities, community members, and their communication behaviour and style in order to naturally access to their world for generating information (Füller et al. 2006).

The growing of the Internet and the vast amount of Internet sites create obstacles for netnographers to find suitable research sites. How can they manage to locate a specific community for conducting data collection among millions of webpages? The answer is using search engines in the early stage of searching and data collection. Major search engines like Google.com, Yahoo!, and MSN are best friend of the nascent netnographers (Kozinets 2010a, 88). Google.com is the best source of community information; however, researchers should use also Yahoo! because the results may be different between these two search engines. Besides, using the Google Groups site (<https://groups.google.com/>) or Yahoo! Groups (<http://groups.yahoo.com/>) provides researchers with the main newsgroups combined with web-based readers and interface. Basically, Google Groups or Yahoo! Groups filter websites or newsgroups or forums based on chosen key words, where researchers can obtain discussions, or ideas about a specific subject. Thus, Google Groups or Yahoo! Groups offer more relevant sites compared to pure Google or Yahoo! Search engines. Furthermore, netnographers can also apply some high-quality blog search engines available e.g. bloglines (<http://www.bloglines.com/>), blogscope, or Technorati (<http://technorati.com/>). In addition, some other good search engines for general research purposes regarding identifying community-related information are Wikiasearch (<http://search.wikia.com/>), Twitter search (<http://search.twitter.com/>), or Ning.com which enables the collecting of over 100,000 online groups (<http://www.ning.com>). In order to maximize the results of using

search engines, it is necessary and important to combine the application of various research engines. For example, researchers can combine general search engines (like Google search) with community search engines (e.g. Yahoo! groups) and searching on particular social sites.

2.3.2 Data collection

‘Data collection in netnography means the communication with members of a culture or community. That communication can take many forms. But whichever form it takes, it entails relevant involvement, engagement, contact, interaction, communion, relation collaboration and connection with community members – not with a website, server, or a keyboard, but with the people on the other end’ (Kozinets 2010a, 95). In general, a netnographer needs to participate in online community, interact with its members, and understand their viewpoints in the cultural context. It is of paramount importance that he/she should immerse in members’ discussion contexts to understand the culture of what the members are presenting.

My Entrée – online motorcycle community

k9drift ◦
 Join Date: Jul 2003
 Location: richmond hill
 Posts: 204

Class Research Project on Motorcycling & Self-Expression - need help please

Hi all my name is Tony Yu, a marketing student at York University. I am currently undertaking a class project that focuses on Online Ethnographic Research.

As I am researching on existing literature, I came across this site International Journal of Motorcycle Studies - <http://ijms.nova.edu/index.html>

There are some interest research articles on motorcycling. It's pretty refreshing to see how scholar are concluding about different aspects of our culture.

This one particular article by Hartmut Rosa touches a little on my focus on Self-Expression. Here is the article's concluding remarks about motorcyclist's pursuit of acceleration and speed in respect to the ever more competitive social and economical landscape we are in.
 "spinning like mad, they have the feeling of not going or getting anywhere at all; they have to dance faster and faster just to stay in place. Consequently, they burn out at full speed"
 Here is the link: http://ijms.nova.edu/Spring2010/IJMS_Artcl.Rosa.html

Figure 3 An example of start participating in an online community (Adapted from Tony Yu – Netnography – Theory & How To’s)

Data collection is interconnected with netnographic participation (Kozinets 2010a, 96). Netnographic participation means that researchers should be active and visible to other community members. To be so, they need to contribute to the community and its members such as posting comments, asking questions, or getting involved in a project... Besides, researchers can use emails, banners, pop-up windows, or articles to get in

touch with the community members in order to introduce the research project and invite them to participate (Füller 2004, 5). However, they do not need to attend every activity of the community but it is crucial to participate in some of the community's activity. Besides, they also do not need to lead the community, but they should not be invisible either. Through participation in an online community, netnographic researchers will find suitable members or subjects for collecting information, will increase their engagement in the community to obtain insiders' viewpoints, and are able to interact with member in term of discussion about certain topics or reflection on feedbacks. There are many forms of netnographic participation, and regarding each form, netnographers can obtain certain benefits or new learning or information form participation. Following figure will show potential forms of netnographic participation and its relevant outcomes.

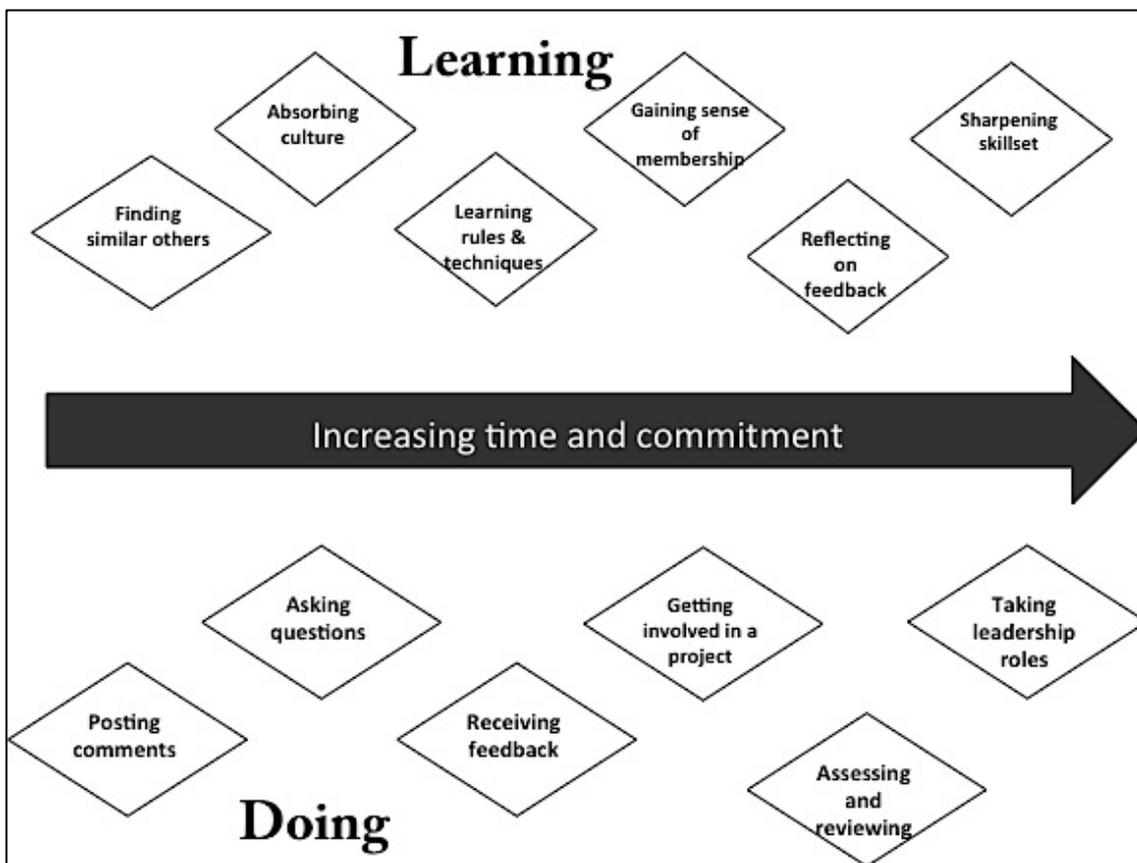


Figure 4 Potential forms of netnographic participation in an online community (Kozinets 2010a, 97)

Moreover, social media and search engines are useful sources for researchers to collect netnographic data from online communities. Kozinets (2010a) suggests using search engine e.g. Google, Google Groups, Google Trends, and Google Social Search,

or social network groups including Technorati and Twitter search. (Appendix 1 includes the same examples of using Google Groups and Google Trends)

According to Kozinets (2002, 63), there are at least two important elements of online data collection process, which are copying data directly from the computer-mediated communications of online community members, and inscribing data with regards to their observation of the community and the members, interactions, and meanings inside it. Netnographers can choose whether to use the manual data collection way or using qualitative data analysis software program to assist with coding and organizing the data. Manual data collection includes using pen-and-paper technique, or using jottings on computer files or in a spreadsheet e.g. Microsoft Excel. Besides the manual method, researchers can apply program such as CAQDAS to manage all the collected data (Kozinets 2010a, 99).

Additionally, netnographers have two basic ways to capture online data, which are saving the files as computer-readable files or capturing the online data as visual images of the screen as they appear when they see the data (Kozinets 2010a, 99). These methods have its own advantages and disadvantages, and using them depends on the nature and format of online data. In case that the communications are mostly textual (such as with bulletin boards, newsgroup, forums, micro blogs, and wiki), the best option to capture the data is saving the files as computer-readable files. On the other hand, when the data includes many visual cues, (such as in virtual worlds, blogs, social networking sites, or Google Group...), then netnographers need various screen capture methods to save the data as visual images of the screen.

Netnographic data collection aims to capture three types of data: archival data, elicited data, and fieldnote data. Archival data is captured directly from communications of online community members, and netnographers have no involvement in creating or prompting for information. The second type is elicited data, which is created by researchers and community members through personal and communal interaction. Netnographers performs different ways of involvement in community such as posting, comment, email, chat, or interview in order to collect elicited data. The last one is fieldnote data generated by researchers' own observation of community, its members, and interactions. Researchers gain fieldnote data from their own participation process in online community. (Kozinet 2012, 98)

2.3.3 Data analysis

Data analysis involves the process of examination, interpretation, and inference of the collected data of netnographic participation and observation (Kozinets 2010a, 118). According to Miles and Huberman (1994, 9), there are many common qualitative data

analysis processes, some of which are adapted in analysing netnographic data. These methods in netnographic analysis include coding, noting, abstracting and comparing, checking and refinement, generalizing, and theorizing. Coding is the process of affixing codes or categories to the data drawn from field notes, interviews, documents, and other netnographic data e.g. newsgroup or blogs. Noting means that netnographers remark or note important points in the margins of the data. Abstracting and comparing involve in sorting and sifting materials or data to identify similar phrases, common sequences, relationships, and distinct differences. Checking and refinement are to isolate, check, and refine the understanding of patterns, processes, commonalities, and differences. The next stage of data analysis process is generalizing which aims to explain the consistencies of the netnographic data. The last step is theorizing which involves in constructing new theory in coordination with data and relevant body of knowledge.

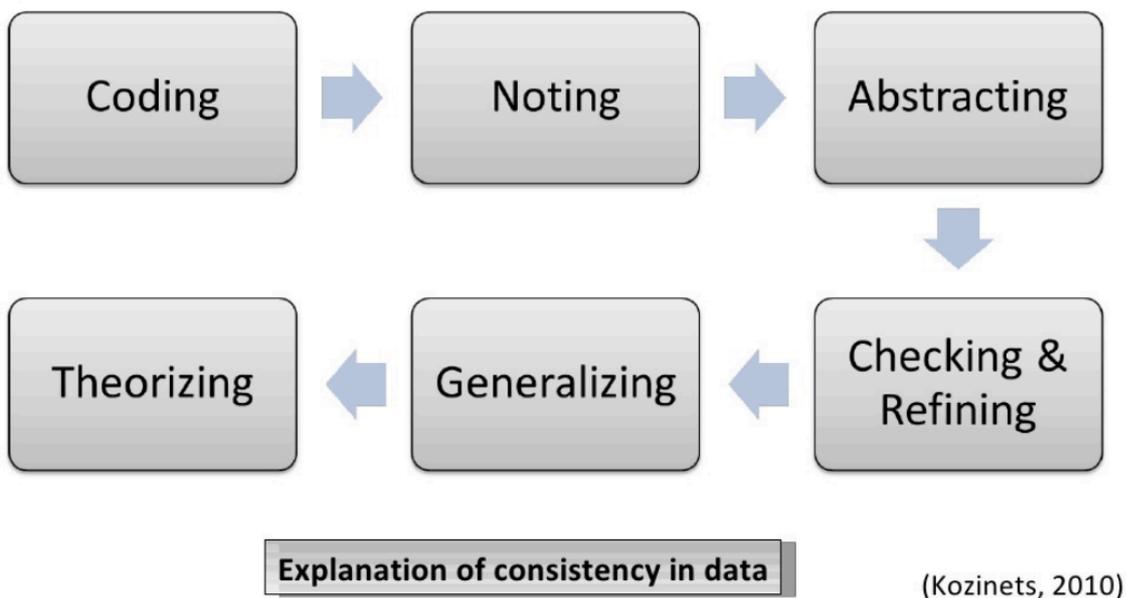


Figure 5 Data analysis via coding-based method (Kozinets 2010a)

Besides the above coding-based methods, netnographers can also apply hermeneutic interpretation in the data analysis process (Kozinets 2010a, 120). Arnord and Fischer (1994, 63) provide the explanation for the notion of the interrelation of the meaning of individual textual elements and that of the global whole as following “the meaning of a whole text is determined from the individual elements of the text, while, as the same time, the individual element is understood by referring to the whole of which it is a part. Specific elements are examined again and again, each time with a slightly different conception of the global whole.” The researchers need to put the collected data in the context of the field, the culture, or the communities where the data is produced in order to

examine and interpret the data in different dimensions and circumstances. This way supports the researchers in deeply understanding problems, culture, reactions, and behaviour of participants. Furthermore, in order to perform a good hermeneutic interpretation, netnographers have to delve into the social and historical contexts of the data to be able to explain, provide a subtle, specific, and cultural interpretation (Thompson, Pollio & Locander 1994).

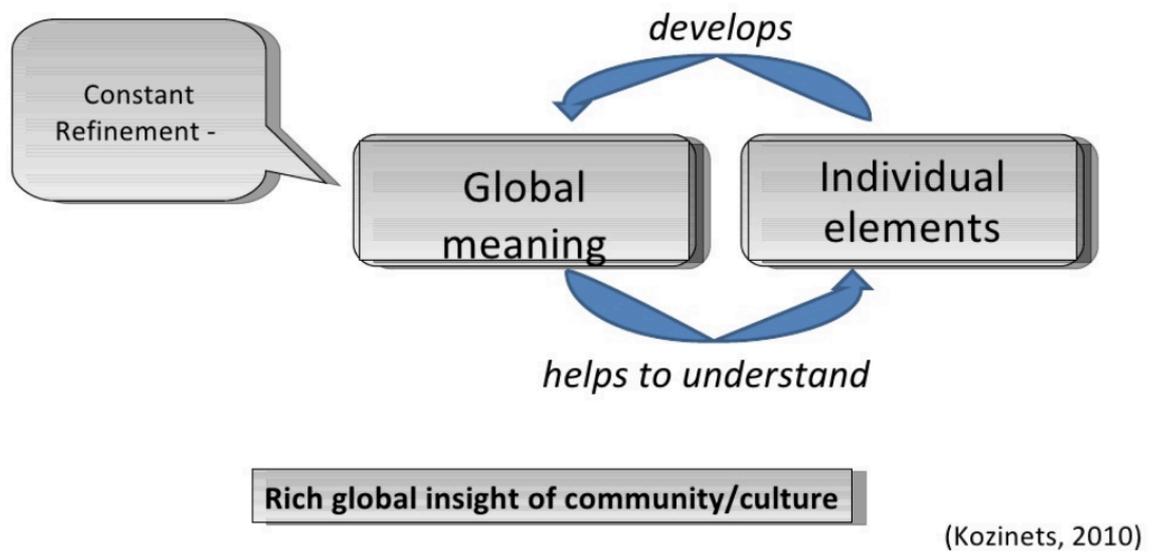


Figure 6 Data analysis via hermeneutic interpretation (Kozinets 2010a)

Not only the manual data analysis methods (e.g. coding-based method and hermeneutic interpretation) are useful, but also the computer-assisted qualitative data analysis methods benefit researchers in examination and interpretation netnographic data. There are several ways of using computer and software to perform data analysis, one of which is using CAQDAS (Computer-Assisted Qualitative Data Analysis). (Kozinets 2010a, 127). CAQDAS includes related software and computer programs that assist the researchers in analysing qualitative data (Figure 7). In the netnography context, it involves in the management and analysis of the huge amount of complex and diverse data. Alternatively, in case of smaller and less complicated data, researchers can use computer program with spreadsheets e.g. Excel in managing, coding and abstracting data. These programs and software provide useful tools for researchers in management, analysis, and interpreting data, which is less time-consuming and more beneficial. (Appendix 2 provides explanations of CAQDAS software package)

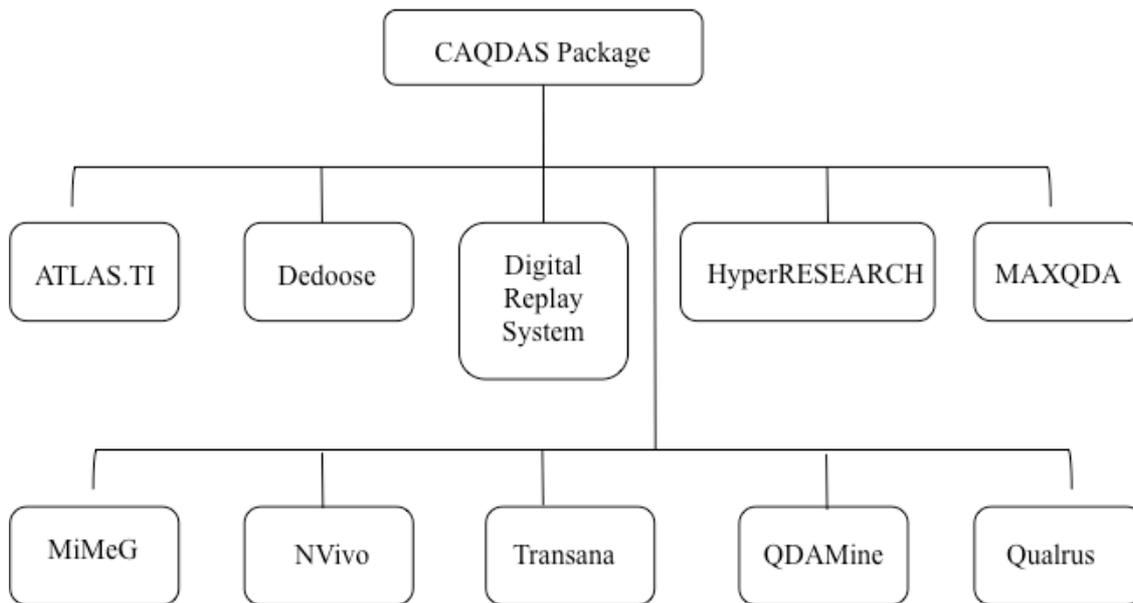


Figure 7 CAQDAS software package (from ESRC National Centre for Research Method – Qualitative innovation in CAQDAS)

The computer-assisted qualitative data analysis methods are utilized depending on the nature of the research, and the characteristics of the data that researchers want to collect. The researchers can use one of these methods or combine them in order to increase the efficiency of collecting and analysis data.

2.3.4 *Criteria to evaluate the quality of netnographic research*

Netnography is a qualitative online research method incorporating various methods in a single approach to study communities and cultures in the Internet age (Kozinets 2010a, 157). It is ‘essential in shaping our understanding of the Internet, its impact on culture, and culture’s impacts on the Internet’ (Baym 2006, 79). Qualitative online research is different from traditional qualitative research in term of the research environment, approach methods, participants, and types of data collected. Hence, researchers need different criteria to evaluate qualitative research in the Internet environment. In fact, the general lack of online qualitative research leads to more than a problem in conducting, evaluating and presenting online research findings such as netnographic research results. For instance, ‘many internet researchers have the misguided sense that they are the first to discover an online phenomenon’ (Baym 2006, 80). Netnographic researcher is not an exception. It also lacks of clear standards in evaluating research process and research findings. This deficiency leads to confusion in evaluating netnographic quality and presenting the research results.

In order to guide researchers in conducting and evaluating netnographic research quality, a set of netnographic criteria is developed. It includes ten criteria to evaluate and inspire netnographic quality (Table 1).

Table 1 Ten Netnographic criteria (Kozinets 2010a, 162)

Criterion Name	Definition ('the extent to which...')
Coherence	Each recognizably different interpretation is free from internal contradictions and presents a unified pattern.
Rigour	The text recognizes and adheres to the procedural standards of netnographic research.
Literacy	The text recognizes and is knowledgeable of relevant literature and research approached.
Groundedness	The theoretical representation is supported by data, and the links between data and theory are clear and convincing.
Innovation	The constructs, ideas, frameworks and narrative form provide new and creative ways of understanding systems, structures, experience or actions.
Resonance	A personalized and sensitizing connection with the cultural phenomenon is gained.
Verisimilitude	A believable and lifelike sense of cultural and communal contact is achieved
Reflexivity	The text acknowledges the role of the researcher and is open to alternative interpretations.
Praxis	The text inspires and empowers social action.
Intermix	The representation takes account of the interconnection of the various modes of social interaction – online and off – in the culture member's daily-lived experiences, as well as in its own representation.

The criteria provide the researchers with the preliminary understanding of evaluating quality of a netnography research. According to the criteria, evaluation of netnography research involves in considering different aspects e.g. innovation in generating information, reflexivity, literacy and so on.

2.4 Evaluation and comparison between netnography and other online market research methods

2.4.1 Advantages and Disadvantages of netnography method

The first advantage of netnography method is the great accessibility to a broader cohort of respondents, which means the researchers can quickly find and select respondents within the extensive online communities. The openness and the flexibility of online communities create opportunities for researchers recruiting participants for real-life market research activities. Moreover, the researchers have greater opportunity to connect continuously with respondents through the Internet in locally or overseas. It makes the netnography method become an international market research method without boundary or limitation. To some extent, netnography is considered a market research method, which saves both time and money for marketers. Particularly, using the Internet helps researchers save a significant amount of expense of recruit respondents, making appointments for data collection, and other expenses, which have to be paid for the non-internet-use market research methods. Additionally, there is a large number of data collection channels which may benefit to netnographers in conducting netnographic researches such as the availability of digitally achieved data, or online documenting e.g. blogs, forums... The other advantage of netnography is the reflective quality of online discourse. Using online/internet sources for data collection is a benefit to researchers in the way that they can directly quote opinions from respondents, use references from other members' links, and compare points of view from among participants. Those points help researchers gain a wide and deep understanding about certain research questions within extensive comparable information from online sources. (Xun et al. 2010, 19).

As a new research method, the netnography suffers from some weaknesses. The first weakness is about the instability of net base, user base and the digital information. It is difficult to identify the online community's users, and distinguish the human and non-human respondents (Xun et al. 2010, 19). Furthermore, Kozinets (2010a) states that the challenges for netnographers are how to find the appropriate data among huge amount of available data, and how to effectively utilize vast amount of data for the purpose of understanding the in-depth-insight into a community or a research problem. Besides, since netnography is a new method in market research, its analysis tools and processes are undeveloped although there are some tools available such as Google Analytics. Therefore, researchers need to develop particular ways or a system of analysis tools, which support researchers in data collection and data analysis (Xun et al. 2010, 19).

Table 2 present briefly advantages and disadvantages of netnography method according to Xun et al. (2010, 19):

Table 2 Advantages and disadvantages of netnography (Xun et al. 2010)

Advantages	Disadvantages
<ul style="list-style-type: none"> - Greater accessibility to a broader cohort of respondents - Greater continuity in research - More economically viable and time-saving than conventional techniques - Greater capacity and flexibility for observation and analysis - The reflective quality of online discourse 	<ul style="list-style-type: none"> - Respondent authenticity and instability of the user base - An underdeveloped analytical toolkit - Potentially poor quality of textual discourse - Ethical sensitivity

Although netnography method has its own advantages as well as disadvantages, it is evaluated as one of the most effective methods to do market research via Internet channels. The later part of this chapter will analyse the netnography research method in the comparison with other methods.

2.4.2 *Netnography in comparison with other methods*

Nowadays, in the age of Internet, online market research methods are likely used in many purposes. The online market research methods include online focus group, online survey and so on. They have many advantages such as less cost consuming, high response rate, or rapid development comparing to tradition market research methods. (Gates 2010, 166). However, comparing to netnography, they have number of disadvantages such as high possibility of bias, less interaction with respondents, hard to generate insights. Netnography is less biased in collecting data and analysis data because it is conducted by using observations of consumers in the context that is not fabricated by the researcher. Moreover, netnography provides valuable information with less costly and timelier than focus groups and personal interviews. (Kozinets 2002, 62). Focus groups and personal interviews approach and collect information form the outsider's viewpoints throughout questioning, observation, and face-to-face interaction. Besides, online focus groups reduce the ability of observation the participants and decrease the interaction with respondents (Gates 2010, 159). Meanwhile, netnography provides researcher a deep understanding from the insider's prism throughout immersion in the

online communities. Hence, to some extent, netnography is preferable in exploiting natural behaviours and deep personal opinions of customers, which are very valuable for understanding customer behaviour and predicting potential future consumption trend.

Netnography method adapts ethnographic research techniques to study culture and communities through the Internet, and online communities. Thus, netnography contains many common features with ethnography such as gaining deep understanding from informants, looking at issues as insider's viewpoints, and connecting between data analysis and culture integration. Compared to ethnography in the market research context, 'netnography is far less time consuming and elaborate' (Kozinets 2002, 62). Netnography supports researchers in access fieldwork, data collection, and data analysis more than the ethnography does because it utilizes the Internet and online communities.

Additionally, data collection and data analysis process of netnography is more advance than that of other qualitative research methods because of its advantage in using computer, Internet, and analysis software. First, the netnographic data are in digital form, so it is simple for researchers to collect, save, or analyse them. Moreover, the researchers can insert data into software or analysis programs straightforwardly. Furthermore, supporting software such as CAQDAS help netnography researchers deal with vast and complicated data; supporting researchers in performing data collection and data analysis more effectively and therefore less time consuming compared to other market research methods (Kozinets 2010a, 128). An example is high-quality-based computational tools, which allow researchers to write and save their own note, observation, and marking on top of the data set. It is extremely useful in collecting, skimming, and classifying netnographic data. Besides, those computational tools support researchers in arranging and saving data logically without unnecessary lose of information. To some extent, the researchers can take advantage of the supporting software to reduce the large amount of data into flexible, coherent, and adequate information in order to build up coherent insights and understandings.

In summary, the chapter introduced the netnography method in different perspectives. It provided the preliminary and fundamental knowledge of netnography market research method in term of definition, procedure, advantages, disadvantages, and comparison with other methods. The next chapter will introduce the theories of new product development process.

3 NEW PRODUCT DEVELOPMENT PROCESS

The aim of this chapter is to introduce the new product development process in term of the fundamental definitions and the procedure of the process. In addition to the definitions and steps of new product development process, the chapter also presents the roles of consumers in the new product development process.

3.1 Fundamental definitions and terms in New Product Development field

3.1.1 Fundamental definitions and terms

There are many different definitions of new product development concepts as well as many discussions about its processes, activities, and models in various perspectives. Before understanding what new product development is, it is essential to explain the notions of product and new product. Baker and Hart (2007, 41) state that ‘the product is the object of the exchange process, the thing which the producer or supplier perceives as of equivalent or greater value’. In the common sense, a product is a thing or a substance produced by natural process or manufacture (Concise Oxford Dictionary). A product is not simply a thing or a service. It is surrounded by many elements that create its value and make it different from the others. A product is a multidimensional object. Once a product is researched, a further look at it in various dimensions to understand its tangible and intangible values is needed. A product’s dimensions are its brand name, packaging, price, technology, quality and so on. (Trott P., 1998, 120).

A product has many dimensions, and each dimension can be altered. Johnes and Snelson (1988) believed that the alterations of at least one dimension would create a new product. Thus, defining a new product needs to be considered in many different perspectives. A new product is a product that has not yet existed in the world market, and it creates a new market, such as a new discovery, new design, or manipulating existing technology in different ways (Trott P. 1998, 122). In another dimension, although a product is not new to the marketplace, it can be considered as a new product if it is new to the particular company and the company uses this product to enter or to establish a market for the first time. Besides, the products, which are generated from improvement and revisions to existing products, are also defined as new products (Trott P. 1998, 123). Table 3 provides some examples of changes that are capable of creating a new product.

Table 3 Different examples of a product's newness (Johne and Snelson 1998)

-
1. Changing the performance capabilities of the product
(e.g. a new improved washing detergent)
 2. Changing the application advice for the product
(e.g. the use of the Persil ball in washing machines)
 3. Changing the after-sales service for the product
(e.g. frequency of service for a motor car)
 4. Changing the promoted image of product
(e.g. the use of 'green'-image refill package)
 5. Changing the availability of the product
(e.g. the use of chocolate vending machine)
 6. Changing the price of the product
(e.g. the newspaper industry has experienced severe price wars)
-

Generally speaking, the newness of a product can be defined on two dimensions, which are 'new to the company' and 'new to the market or innovative' (Cooper 1998, 22). According to Cooper (1998, 22), based on two dimensions of newness, Booz, Allen and Hamilton (1982) identified six different types of new products. Table 4 presents the categories of new products and their brief explanations.

Table 4 Categories of new products (Cooper 1998)

1. New-to-the-world products	These products are the first of their kind and create an entirely new market.
2. New product lines	These products are not new to the market; however, they are new to particular company. The company can use these new products to enter an established market for the first time.
3. Additions to existing product lines	Additions are new items to the company and contribute to an existing product line of the company. These new products/items are also new to the market place.
4. Improvements and revisions to existing products	These products, although are not new to the company, are improved and changed their feature or value. The improvements offer users better performance or greater value over the 'old' products.
5. Repositionings	The new products belong to this kind are essentially new applications for existing products, and involve retargeting an old product to a new market segment or for a different application.
6. Cost reductions	They are new products designed to replace the existing products in the line. They offer same benefits and performance at lower cost.

The new product development (NPD) process is a series of activities to successfully develop a new product from proposals and ideas (Song, Montoya-Weiss & Schmidt 1997). There are numerous NPD process theories that are built and generated by scholars and researchers. For example, Song and Montoya-Weiss (1998) identified six sets of activities, which are strategic planning, idea development and screening, business and market opportunity analysis, technical development, product design, and product commercialization. Based on the researches of Booz, Allen and Hamilton (1982), NPD process includes eight stages of activities, which are (1) explicit statement of new product statement, budget allocation, (2) idea generation, (3) screening ideas and finding potential ones, (4) concept development, (5) business analysis, (6) product development, (7) test marketing and (8) commercialization. In another dimension, Yelkul and Herbig (1996) indicate the differences between traditional process and global process in new product development. According to them, the traditional new product development process comprises eight stages: idea generation, screening, concept development and testing, marketing strategy, business analysis, product development, market testing, and commercialization. Meanwhile, the global new product development process entails collaboration between many departments so that the problems can be found early and

can be solved effectively in order to contribute to the success of the project. These researchers have described the activities of the new product development process in different ways or formats that create the notion named 'new product development models'.

3.1.2 Models of new product development

'New product development models are usually the templates or maps which can be used to describe and guide those activities required to bring a new product from an idea or opportunity, through to a successful market launch.' (Baker et al. 2007, 158). Saren (1984) classified new product development models into five types, which are (1) department-stage models, (2) activity-stage models, (3) decision-stage models, (4) conversion process models, (5) response models.

The department-stage models examine the new product development process in term of the departments or functions that have responsibility for organizing and conducting various tasks (Baker and Hart 1994, 78). Departmental-stage models are done in the way that each department is responsible for certain tasks. For examples, R&D department provides the technological ideas; the engineering department takes care of potential ideas and develops possible prototypes; the manufacturing department will find the way to mass manufacture the products; and the marketing department will plan and conduct marketing strategy in order to launch the new product.

'Activity-stage models improve on department-stage models in that they focus on actual activities carries out, including various iteration of market testing' (Baker et al. 1994, 153). Activity-stage models is similar to department-stage models but they use the feedback loops to facilitate iteration of the activities (Trott 1998, 128). However, the activity-stage models emphasize the simultaneous nature of activities in the NPD process. It means that there are many similar activities occurring simultaneously, although they happen at various intensities (Trott 1998, 129). The important idea of this model is focusing on the whole process rather than the single stage, and the cross-functional approach is required to make the whole system runs effectively.

Decision-stage models present the NPD process as a sequence of decisions that managers need to make during the process in order to progress the new product development project (Cooper & Kleinschmidt 1993). New product development process is a refine system where proposal ideas are tested and feedbacks are evaluated, and then potential solutions are manufactured to satisfy the customers' needs. The consumers' feedbacks play a crucial role in this model. Therefore, decision-stage models highlight the feedback loops and emphasizes the dimension of information exchange inside the NPD process as a fundamental element.

Conversion-process models ‘view new product development as numerous input into a ‘black box’ where they are converted in to an output’ (Schon 1967). The input includes information from customers’ needs, feedbacks, new product from current market, or alternative manufacturing procedure. The output can be a new product, service, or a development of existing product.

Finally, the response models ‘focus on the individual’s or organization’s response to a new project proposal or new idea, or R&D project proposal in term of acceptance or ejection of the idea or project’ (Baker et al. 1994, 79). This model reveals various factors that influence on decisions as whether to accept or reject a new idea.

3.2 Stages of New Product Development process

There are many theories of New Product Development process presented by different models. In this thesis, the new product development process will be explored and illustrated with the dimension of activity-stage model. Trott (2002, 212) viewed NPD process under the lens of activity-stage model and generated a set of NPD activities comprising idea generation, idea screening, concept testing, business analysis, product development, test marketing, commercialization, and monitoring and evaluation.



Figure 8 New Product Development process (according to Trott 2002, 212)

3.2.1 *Idea-generation stage of New Product Development process*

The early stage of New Product Development process, idea-generation stage, comprises activities of idea generation, idea screening, concept testing, and business analysis. This is an important stage of new product development. Decisions are made in this stage, and then are not changed easily at the later stages. Occurring changes subsequently costs a lot of time and resources. (Gupta & Wilemon 1990; Khurana & Rosenthal 1998). The first stage of the process starts with the *idea generation* step, which is collecting or creating a large number of potential ideas, or new product proposals (Rochford 1991, 288). The ability to create new product ideas depends on the organization's resources e.g. human resources, finance, time, or R&D capability (Majaro 1992, 68 – 74). Ideas can be generated from both internal and external sources (Rochford 1991, 288). Mathot (1992, 23) presents some idea generation techniques such as systematic analytical techniques (e.g. morphological analysis), associative techniques (e.g. brainstorming), and analogical techniques (e.g. synetics). Table 5 lists some sources that a company can utilize to generate the new ideas.

Table 5 Sources of Idea generation (Rochford 1991, 294)

Internal Sources
Employees
Sales
Marketing
Research and Development
Technical Service
Customer Service
Production
Quality Assurance/Control
Management
Finance
Internal market study reports
Existing research and development programs
Technological surveys
Normal design development process
External Sources
Customer needs
Competitive pressures
Licensing
Patent office
Data banks
Existing needs analysis
Research institutes
Public reports
Consultants
Customers
Vendors

Idea Screening is evaluating and selecting qualified ideas from the large list of potential ideas (Hamilton 1974, 15). The first step in the idea screening is determining the crucial criteria used to evaluate the new product proposals. These criteria should be developed before the ideas are generated. (Rochford 1991, 291). Criteria to evaluate ideas can be formulated based on several factors with regards to commerce, finance, or technology (Cooper 2000, 114; Majaro 1992, 20). Besides, O'Meara (1961, 85) classified criteria in screening into the categories of marketability, durability, productive ability, and growth potential. For example, secondary criteria comprise market size, market's

potential growth, product's uniqueness, and feasibility of technology or production (Rochford 1991, 294).

According to Kucsmarski (1992), there are six types of screens, which are growth role, category, strategic role, new product type, internal strength, and financial risk. Each type represents issues with regards to choosing new product ideas, which may be evaluated. The first type, growth role screens, 'can be used where the new product strategy stipulates a growth role for its new product development efforts.' (Baker et al. 2007, 265). The new product ideas, which belong to this type, enter a new category on the company's portfolio, expand the company's global market share, and create a whole new category for product market, strategically expanding sales. (Baker et al. 2007, 266). The second type, category screens, encourage new product projects, support a conservative approach to new product development, minimize the size of task, and maximize product energy strengths. (Baker et al. 2007, 266). The next type is the strategic role screen used to define competitiveness, market and business requirements that new products are supposed to satisfy. Screens for new product types is screening for issues regarding ideas classification, which are new to the world, new to the market, new to the company, or new to the company's product lines. (Baker et al. 2007, 267). Internal strength screens discover the issues, which examine whether the idea makes use of patented technology, increases the use of an 'efficient manufacturing system', capitalizes on existing marketing and sales efforts, and exploits technological, engineering, design or marketing skills (Baker et al. 2007, 268). The last type, financial screens, point out financial elements of new product development project to make money (Baker et al. 2007, 268). According to Kucsmarski (1992), the financial criteria include revenue size, pre-tax profit contribution, ROI, payback period, gross margin and return on net assets. To sum up thus far, these types of screens can be used separately or can be combined according to the company's new product strategy.

The next step after screening is *concept development and testing*. 'It is intended to glean something of customers' opinions about the product idea before very much investment has been committed' (Trott 1998, 98). The concept testing's overriding purpose is to collect and estimate the reactions of customers towards the new idea concept before developing the physical product. Besides, the secondary purpose is to employ a number of supporting objects in order to profile the market (current buying pattern, existing segments, customer's view of the products if available), to assess likely purchase intention and position of the product, and to make improvements to new product concept (overall product concept, feature of the product concept). The sets of these supporting objectives are linked broadly through the concepts of customer needs and preferences. Figure 9 shows the relations of objectives through the concepts of customer needs and preferences.

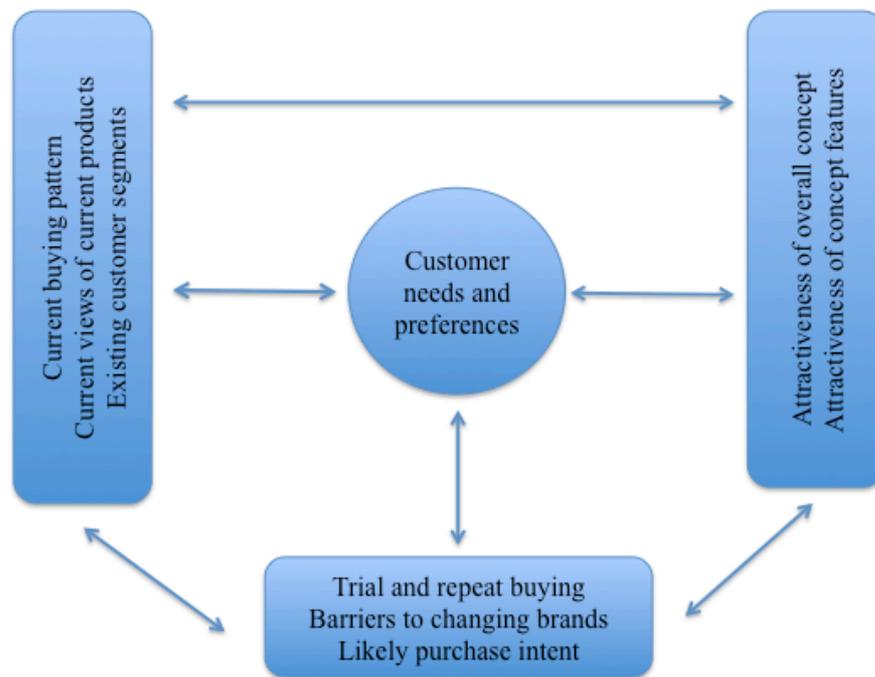


Figure 9 The purposes of concept testing (Baker et al 2007, 278)

In this step, qualitative research methods and small group discussions are applied to collect customers' opinions of the new concepts. Discussion and issues are related to different perspectives of new product concepts such as characteristics of product idea, product function, and design, comparing with existing products, and product packaging or advertisement. (Trott 1998, 98). Concept testing is very difficult in that leads to the higher possibility of making mistakes because people react differently and provide appropriate feedback on a totally new product concept without learning and initial testing period (Trott 1998, 148). Obtaining adequate opinions and evaluations from market and customers in order to make the decision whether or not to put the new product idea into mass-produce is a challenge for project manager. It requires extensive resources in multi dimensions. One of the resources is market research resource, which can come from both inside and outside the firm. Market research activities play an important role in the concept-testing phase as well as in later phases of the process.

Business analysis is 'execution of the marketing tasks required for converting new product ideas into well-defined sets of attributes that fulfil consumers' needs and desires' (Song et al. 1998, 126). Business analysis may involve the formation of preliminary technical plans, market opportunity analysis, marketing plans, financial reviews, and project budget (Trott 1998, 149). By doing this step, unforeseen problems in previous activities can be revealed. Market research activities in business analysis are microscopic analysis. Some of the financial techniques for new product development are sales forecasting, sensitivity analysis, cannibalization assessment, and break-even analysis

(Baker et al. 2007, 316). Sales forecasting is conducted based on the information collected during the screening and concept evaluation phases such as estimations of market size, market growth rate, market share of current product, market segments and purchase intentions. Sensitivity analysis is used to examine the effect of alternations on the new product's profitability. Cannibalization assessment occurs when a new product competes with an existing product, and the amount of new product's sales alters part of the existing product's sales amount. Four types of information, which are required for the cannibalization assessment, are unit selling price and variable costs for the existing product, unit-selling price and variable costs for the new product, predictions of the amount of new product sales that would come from old product sales, and forecasts of sales for the old product. Finally, the break-even analysis is one of the key financial analysis techniques to provide extra information, which support managers in making crucial decisions regarding the amount of product produced, the price of product, and the expectation of profit. Break-even analysis demands data of variable costs per unit, fixed costs, and proposed selling prices. (Baker et al. 2007, 319 – 322).

3.2.2 *Development stage of New Product Development process*

Development stage comprises of product development and market testing activities of new product development process. Product development is the process of putting new product idea into a physical form, which meets the needs of potential customers (Rogers 1983, 139-140; Urban & Hauser 1993, 39). It can be divided into two sub-activities named *product development and product testing*. During this stage, the firm invests extensive resources in developing and testing prototypes. Product development is developing a physical product entity in term of design, technique, and function (Song et al. 1998, 126). Product testing is 'testing the product itself, as well as individual and integrated components of the marketing and advertising programs' (Song et al. 1998, 126). Product testing 'must assess whether the new product does, in reality, deliver the benefits that were identified at the concept testing stage'; and 'whether those benefits continue to fulfil customers' needs' (Baker et al. 2007, 330-331). The purpose of product testing is to reduce the risk of making decisions leading to product launch at later stages of the process. In other words, the objectives of product testing are to contribute to the positioning of the new product, to support to the final selection of product features, and to assist in the market launch strategy.

Some professional activities should be done to achieve the purpose of product development and testing. They are (a) examining new product's features to ensure it fulfils the promises encapsulated in the concept statement; (b) comparing the new product with its targeted competitive products; (c) assessing how the new product can be improved

with an appropriate way to conform better to buyers' expectation; (d) evaluating the effect of changes to the product (in several elements e.g. content, design, materials, price, positioning, or package) on customer preference levels; (e) reassessing the purchase intent for new product; (f) and testing the proposed advertising, and selling strategies as well as the packaging associated with the new product. (Baker et al. 2007, 332). Besides knowing how product testing is conducted; the firm needs to make the decision of where product testing is performed. There are three choices regarding the location of product testing. It can take place in a firm's own laboratory, at a central location, or at a location of the product's users. Choosing the location depends upon the firm's capability and the new product's features. The inside laboratory is used in the early iterations of product testing in order to provide employees, experts, or consumers a chance to know certain features of the product. Central locations include shopping malls, trade shows, hotel foyer, and retail outlets. The customers will be invited to test the product and give their feedback. This type of location is suitable for testing comestible products. The third set of location for product testing is related to the natural usage context of the product; for example, product testing can be done in consumers' houses or workplaces.

Market testing, conducted after product testing, is an important step in the chain before introducing the new product to consumers. Testing market 'can entail informal discussions with prospects and distributors or it can encompass more formal experiments, with or without sales being made.' (Trott 1998, 100). The purpose of the market test is to understand the market situation for launching the product, to determine the price level, to refine the marketing plans, and to run initial activities –pilot run – for production and distribution before the full-scale launch. There are two kinds of market testing, which are limited testing and test marketing. Limited testing occurs before test marketing, or even can replace test marketing. It is related to time pressure, cost, competitive reactions and IT development. It is 'a stimulated experiment or a very limited commercial experiment using only a few sales outlets.' (Trott 1998, 101). Another type of market test is test marketing. Test marketing offers the opportunity to evaluate many elements of product production and distribution, and enable the tester to anticipate issues regarding the packaging, price, distribution, advertising, and sales promotion. The aim is to examine and to measure the reactions of consumers, competitors, and the market. (Baker et al. 2007, 362).

Test marketing is conducted in various ways. Baker et al. (2007, 363) suggests six basic steps to do test marketing: (1) recruit subjects, (2) test attitudes and beliefs, (3) Expose subjects to advertising stimuli, (4) subjects left to purchase, (5) subjects interviewed, (6) and subjects may be post-contacted.

3.2.3 *Launching stage of New Product Development process*

The final stage of New Product Development process includes launching new product (also called commercialization) and monitoring and evaluation (also called managing growth). *Commercialization* is ‘coordinating, implementing, and monitoring the new product launch’ (Song et al. 1998, 126). Cooper and Kleinschmidt (1990) defined ‘commercialization as trial production and sell, production and sell, production start up, and market launch’. Calantone and Montoya-Weiss (1993) noted that product launch is the most expensive, most risky, and least well-managed phase of new product development process. Launching is related to identifying target markets, establishing marketing mix roles, estimating the financial outcomes, and controlling the project (Hultink, Griffin, Hart, and Robben 1997, 244). In other words, the launch step is a set of activities to make top decisions in term of price, promotion, distribution, and product tactics. Effective launching is the key driver to succeed in commercializing the new product to the market. To be successful in launches requires superior skills in marketing research, sales force, distribution, promotion, R&D, and engineering. (Benedetto 1999, 530). Therefore, launching a new product demands the cooperation between the different function teams regarding marketing, manufacturing, logistics, and so on. Besides, the better performance in launching new product requires the firm to acquire several tactical activities from the multi dimensions. They are ‘high quality of selling effort, advertising, service, and technical support; good management of key aspects of the launch: marketing plans, overall launch direction, and the launch itself; good management of the support programs: distribution channel activities, sales force training, good pricing level, advertising program execution; and launch timing relative to competition and customers’. (Benedetto 1999, 539).

Monitoring and evaluating, part of managing growth, is the observation and evaluation reactions of customers in different markets towards the company’s new product. ‘Evaluation means appraising some aspect of the new product situation: Will people try it? Will they like it when they try it? Will they buy enough of it to make it profitable? Can we make it reliably? Can we market it effectively and efficiently?’ (Crawford 1986, 48-55). The first concern in this stage is related to the new product’s penetration into new markets. The speed of penetration highly depends upon the new product’s relative advantage, compatibility, divisibility, communicability and complexity. These elements create the differentiation of new product to existing products. The more highly different the new product is, the more quickly it is adopted because if it is too similar to existing products, the users may not switch. (Baker et al. 2007, 398). Thus, it is crucial to have a suitable strategy to penetrate into different markets, and observe the process in order to make the necessary changes. The second concern in the monitoring and evaluating stage is observing initial reactions of customers towards new products in its first new days.

There are various types of customers' reactions; observation and evaluation will guide the marketers to adjust their marketing campaign to ensure that target markets will adopt the company's new product. Once a new product successfully penetrates into markets, the subsequent strategic actions are developing market and managing growth. In this phase, it is important for the firm to do positioning of its new product and to enhance target markets to earn more market share. Product positioning 'refers to the perceptions that customers have about the product'. It is about finding how the customers discriminate between alternative products. (Trott 1998, 91).

3.3 Customer involvement in New Product Development

In the new product development process, the most important thing may be creating new ideas, as there will be no new product developed if there is no proposal idea. So where do new potential ideas come from and how can these be captured? As previously presented in the section of idea generation, there are many ways of generating and capturing new ideas from different sources; one of them is listening to the voice of customers. Listening to customers leads producers to understand what the needs of customers are. Once they can determine what their customers' desires are, they can then make a new product to satisfy those wishes. The success of a new product development project is manufacturing a new product that will be adopted by most of their customers. What is thus important is to know what exactly the customer's need is and how to capture it. 'A customer's need is a description, in the customer's own words, of the benefit to be fulfilled by the product or service' (Griffin & Hauser 1993). The customer's opinions play a crucial role in different phases of the new product development process. There are many ways of collecting the information on the customer's need depending on the interaction between the market researchers and customers - named customer involvement. The notion of customer involvement is defined as 'the interaction and/or collaboration between channel members (including customers and users) and company personnel during the course of product development to actualize a commercial product' (Pinegar 2000, 15). As the new product development process includes product development/technology development and product commercialization/ market development, the customer involvement also occurs in these two dimensions with different types and levels. Figure 10 shows the matrix, which classifies different types of customer involvement in the new product development process.

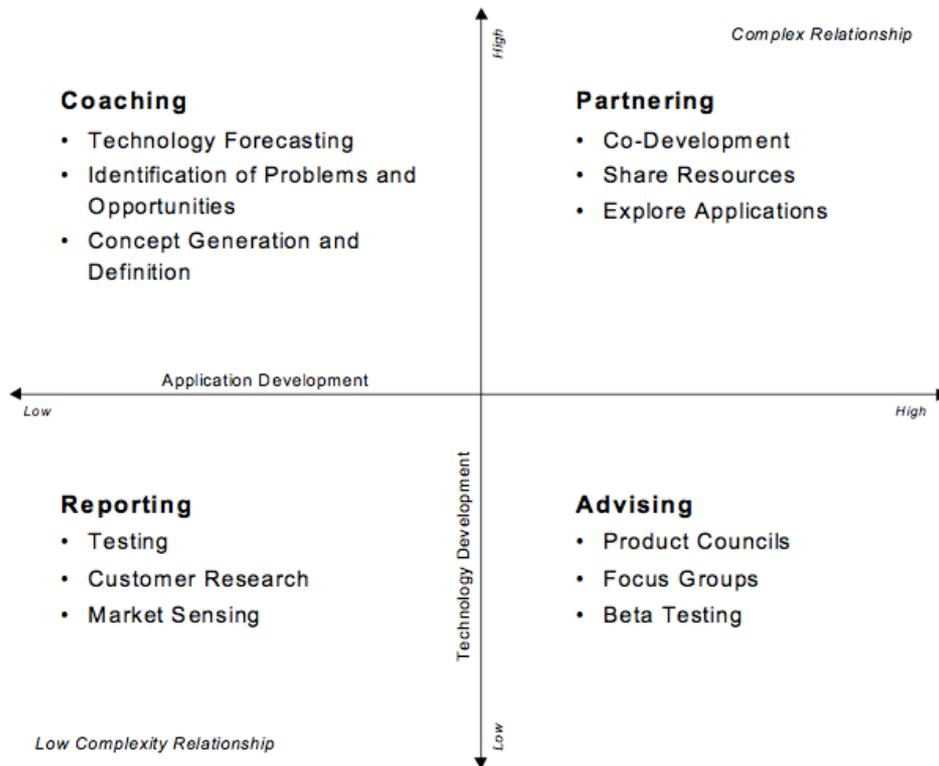


Figure 10 Classifying Customer Involvement (Pinegar 2000, 17)

From this matrix, many kinds of customer involvement, depending on what type of new product development activities the customer is involved in and how strong the interaction between customer and developer is, can be determined. Nevertheless, this matter will not be focused on this presentation. Alternatively, customer involvement issues will be discussed in the context of the different stages of new product development process.

In the idea-generation stage, customers' opinions lead developers to discover many potential new ideas, which can satisfy customers' need and create new market for the company. The company can apply various market research techniques to collect information from customers, and each technique is related to a certain level of customer involvement depending on collaboration between developers and customers. Besides idea creation, information gathered from customers can give developers an opportunity to anticipate the potential market for new product (Sandberg 2005, 89). Moreover, the company may systematize the creation of innovation and ensure the successful product commercialization by identifying lead users and learning from them (Hippel, Thomke & Sonnack 2000, 22).

In the development new product phase, customer involvement plays an important role in many steps of the process regarding concept testing and product testing (Trott 1998, 96 – 99). Tight relationship with customers in the development stage can improve

innovation in the development process (Sandberg 2005, 92). The study of Veryzer (1998, 149) shows that the offer and potential need in the development phase with customer involvement are converged earlier than they are in the same phase without customer involvement. Customer involvement occurs in two periods of product development stage: one is before the prototype construction (concept testing period), and one is after the prototype construction (product testing period). Firstly, in the early period of product development, market information is a prerequisite for developing a user-relevant product (Hart, Tzokas & Saren 1999, 20). The interaction with customers in the period before the prototype is formed provides useful information about customers' expectation toward the new product. Additionally, customers' feedback reveals inappropriate features of product concept and highlight wanted features of the new product. It helps to reformate product concept in order to develop a new product that can meet customers' demands. (Trott 1998, 98). Secondly, when a prototype is constructed, customers play an important role as evaluators. Generally speaking, customers' involvement in the evaluation process is giving judgments about the new product's performance. Besides, they also offer comparisons between new product and existing product in the same segment. Moreover, they can suggest relative measures by highlighting the advantage and differences of the new product from alternatives that create intentions-to-buy reactions toward the new product. (Trott 1998, 99). Customers' feedback at this stage contributes large amount of useful information for developers to be able to evaluate the product prototype, to compare between the prototype's features and what the customers expect, and to improve the prototype before progressing the production. Briefly, this section discussed the importance of customer involvement in different stages of the new product development process. Nevertheless, the interaction between customers and developers has not been mentioned intensely. Since this dissertation focuses on using online market research, netnography, in new product development process, customer involvement in online community research via netnography method will be presented in later sections.

4 RESEARCH DESIGN

The previous chapters presented the theoretical framework of new product development, and defined the notion of netnography as well as described the process of conducting netnography. This chapter describes the methodology applied in the study.

4.1 Methodological choices

The goal of this study, i.e. to analyze the roles of netnography in new product development process, demanded an intensive understanding of the phenomenon. This guides the methodological choices for the empirical research. The understanding is inferred from the explanation, describing, and analyzing the contributions of netnography in new product development. The phenomenon can be studied by recognizing and analyzing complex events occurring in a certain time or in a process. Thus, the understanding can be 'a matter of chronologies more than of causes and effects'. (Stake 1995, 37-40). In this study, the understanding is obtained throughout describing and analyzing the process of conducting netnography research method for new product development purpose, which reveals contributory roles of netnography in company's new product development process. The existing multi-dimensional theories of netnography and new product development build up a basic theoretical framework for conducting this study; however, the correlation between two subjects is still a blank, which is need to be explored further. As there was no clear theoretical guidance for study adoption of netnography, and the theoretical background is build up from diverse streams, the study has exploratory elements. Exploration entails an open approach (unstructured approach) (Fisher 2010, 169). Hence, the findings of this study are relied on the empirical process of collecting and analysing research data.

The previous chapters presented the initial framework of netnography and new product development process. The framework is build up based on theories to provide a theoretical overview of the new product development process and the netnography research method. Nevertheless, there are a few recent theories of applying netnography in new product development process as well as a limited amount of studies of benefits of netnography in innovation field. Therefore, there is only a rough theoretical framework of conducting netnography for new product development purpose. Consequently, without a theoretical framework, it is quite difficult for researcher to study process of the phenomenon (conducting netnography in new product development process) because a theoretical framework assists researcher to focus on the analysis and to determine the connection between context and content (Halinen 1994, 32; Pettigrew 1990, 272).

A rough theoretical framework, which can be formed before the fieldwork begins, will not be beneficial unless it can be revised along the empirical research process (Miles 1979, 591). On the contrary, the framework can be left open and it will be modified based on what emerges from empirical data (Carson, Gilmore, Perry & Gronhaug 2001, 11 – 12). In this case, the initial framework is used to generate overall knowledge of netnography and new product development, and to identify phenomenon of using netnography for new product development purpose. Nonetheless, it does not provide adequate basis for hypothesis testing. Thus, a framework derived from literature review will be evaluated and modified empirically by allowing new findings to emerge.

This study aims to understand the benefits of using netnography in new product development. Since the companies usually outsource their market research activities, there are two parties involving in the process, one is the agent who provides market research using netnography method, and the other is the company using the findings from netnography to create new product. Therefore, phenomenon should be analysed from the point of view of actors to achieve a comprehensive understanding. The hermeneutic and understanding nature of the study requires a close connection between the researcher and the actors, that leads to adoption of qualitative case-study strategy (Morgan & Simircich 1980, 498; Pihlanto 1994, 369).

4.2 Case-study strategy

A case-study strategy was chosen to gain an intensive understanding of applying netnography and its contributions to new product development process because this method allows interpreting holistic understanding of complex phenomena within their organizational context (Yin 1981, 59; Pihlanto 1994, 373). Another school of thought states that case-study research offers researchers opportunities to study a phenomenon in various aspects, examine it in the relation with other elements, and analyse a phenomenon within its environment (Valdelin 1974, 46 – 47). It enables researchers to achieve the holistic understanding of phenomenon via utilizing data triangulation (Ghauri 2004, 115 – 116; Yin 1989, 95 – 97). According to Eisenhardt (1989, 534), the case-study strategy ‘focuses on understanding the dynamics present within single settings’.

The case-study research process includes four stages, which are drift, design, prediction, and confirmation (Bonoma 1985, 204 – 205). In the first stage – drift – researcher becomes familiar with the research field as well as the key concepts. The drift stage in this study is writing literature review in netnography and new product development, and forming a priori framework based on previous theories. Secondly, design stage consists of obtaining research data, performing observations, and analysing case events, with

which to gain deeper understanding of the phenomenon. The empirical research of this study, analysing case studies, belongs to the design stage. The design stage is considered as exploratory and helps to modify the preliminary framework (Yin 2003, 6 – 8). The research data gained from design stage is thus adequate to revise the tentative framework and to interpret understanding of the phenomenon. Consequently, the study does not comprise the prediction and disconfirmation stages.

The case study strategy applied in this thesis includes four steps, which are case selection, data collection, case study analysis, and generating the research outcomes from the analysis.

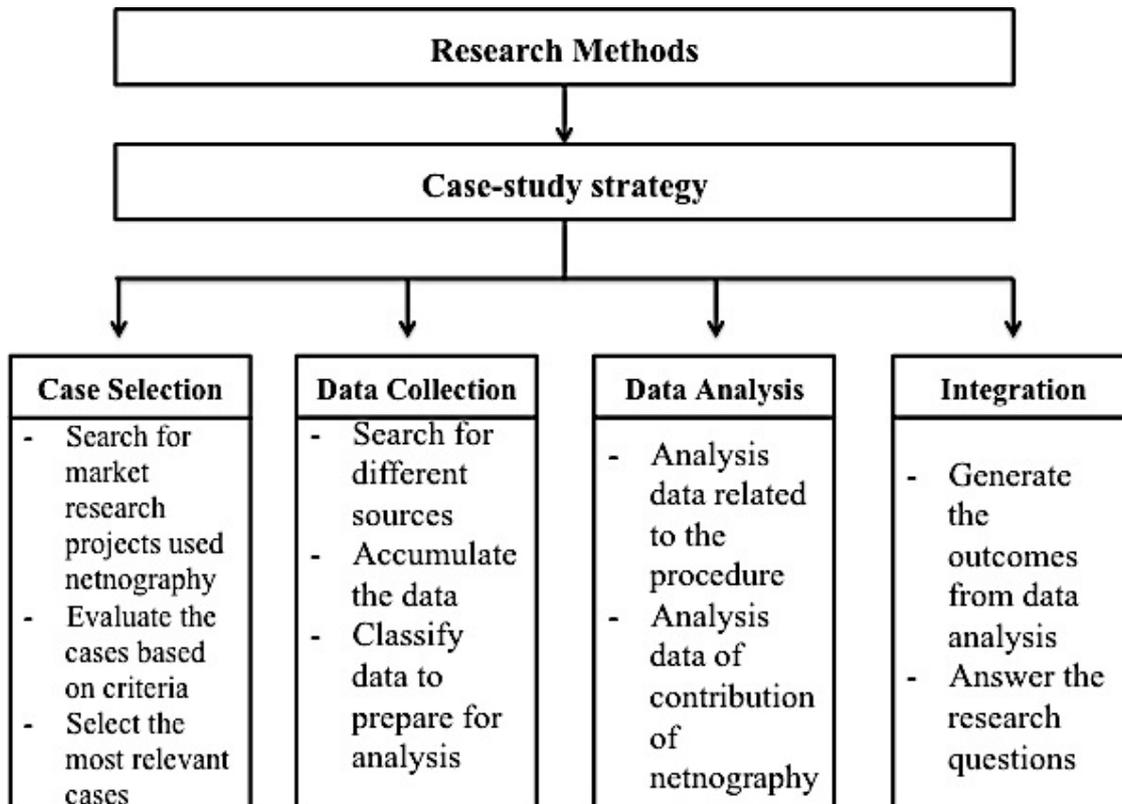


Figure 11 Case-study strategy process

The case selection is conducted to identify the most relevant case studies to the main topic (applying netnography in the new product development process). Among many market research projects, the relevant cases will be chosen for further research. The case selection research will be present in below section. The data collection, data analysis, and integrating research outcomes will be discussed in particular cases in the next chapter.

4.3 Case selection

The study contained many different cases in order to obtain an extensive understanding of the phenomena of applying netnography in new product development. Multiple cases analysis allows the comparison between the cases to enrich theory building (Perry 1998, 792), and to prevent from observers' bias (Leonard-Barton 1990, 250). However, it is a time-consuming effort to obtain an adequate understanding of a specific phenomenon, thus merely a very limited number of case studies are possibly carried out in one research project (Gummesson 1991, 76).

Case studies were chosen based on certain criteria. First of all, case selection is relied on the theoretical background and the research objectives (cf. Rowley 2002, 19). Thus the cases should relate to applying netnography in the new product development process. The outcomes of analysing case studies are supposed to contribute to building theory, support the prior framework, and provide deeper understanding of the phenomenon. Moreover, research resources and accessibility also influence on selection of the case studies (cf. Rowley 2002, 19). Table 6 shows the list of some projects applied netnography and the evaluation of them based on the previous criteria.

Table 6 Evaluation of the projects applied netnography

	Project Name	Conducted by	Related to NPD	Research resources available	Accessibility
1.	Sunless tanning products	HYVE	Yes	Available	Yes
2.	Listerine	NetBase	Yes	Available	Yes
3.	Nivea Deodorant	Nivea + HYVE	Yes	Available	Yes
4.	Adidas	HYVE	Yes	Resource is limited	Yes
5.	Coca-Cola	NetBase	No	Not available	No
6.	Danone	HYVE	No	Resource is limited	No
7.	Electrolux	HYVE	No	Not available	No

Regarding studying netnography, there are many netnographic researches conducted by professional market research companies or by companies' internal R&D unit. Among market research companies, there are two outstanding companies (HYVE and NetBase), which offer professional netnography market research services. HYVE, a

Germany-based company established in 2000, provides market research services such as netnography insights, innovation research, research on innovation community, lead users research, and industrial design (HYVE Company Overview 2013). HYVE provides their netnography researches to many different clients in diversified industry. For example, HYVE implemented an international Netnography research project for Symrise AG, a top global supplier of fragrances and flavourings in 2011. Moreover, in the same year, HYVE carried out a Netnography project for The Hochland Deutschland GmbH to analyse the trends of consuming cheese and food.

NetBase Solutions, a US based company, offers their clients a professional netnography services with an end-to-end Social Media Management System (SMMS) that is accurate, fast, flexible and easy to use (NetBase Company Introduction 2013). NetBase has its own clients who have used the netnography research services in order to understand consumers' insights in multi dimensions. NetBase's clients are international companies in various sectors, such as Adidas, Coca-Cola, Hp, Kraft foods, GFK, The Wall Street Journal and so on.

As the studying many case studies is time-consuming, one case study from each company is selected among the very large number of netnography projects. Case selection was considered based in initial criteria such as relevant background knowledge, research objectives, international elements, and accessibility. Eventually, two chosen case studies comprised 'The Sunless tanning products project' conducted by HYVE, and 'Listerine project' conducted by NetBase.

Along with netnography projects completed by market research companies, another netnography case study, which was accomplished by a company's market research department, is also included. This special case belongs to Beiersdorf enterprise based in Hamburg, Germany. The company conducted netnography research in order to enrich and supplement the new product development projects in international skin care industry. Specifically, Nivea, a well-known brand of Beiersdorf, applied netnography research along with co-creation tools to develop an innovative Black and White deodorant in order to satisfy consumers' needs and solve their staining problems.

In conclusion, this section discussed the case study analysis method applied in this thesis. Besides the explanation of choosing this kind of research method, the section also indicated the strategy of choosing the triple cases and introduced those case studies. Eventually, the writer selected three case studies, which are Sunless tanning product project (HYVE), Listerine (NetBase), and Nivea co-creation and netnography in black and white deodorant. The next section will analyse the case studies in many different dimensions in order to answer the research questions.

5 CASE STUDY ANALYSIS

The previous chapter introduced the triple cases, which were chosen based on certain criteria. This chapter will intensively analyse the case studies in different aspects in order to generate adequate information to answer the research questions.

5.1 HYVE – Netnography research on Sunless tanning products

The Sunless tanning products project was conducted by HYVE, a market research company. HYVE, a Germany-based company established in 2000, provides market research services such as netnography insights, innovation research, research on innovation community, lead users research, and industrial design (HYVE Company Overview 2013). In this case, HYVE plays the role as market researchers who provide research results to its client by using the netnography method. The main goals of Sunless tanning project was to discover the usage of tanning products, to generate the perception of tanning and beauty, and to compare to other tanning methods and solutions (Bartl, Hück & Ruppert 2009, 6).

The case will be analysed in two dimensions of the methodological steps applied by researchers, and the outcomes generated from the research. Figure 11 shows the methodological steps of conducting netnography in Sunless tanning case performed by HYVE Market Research Company.



Figure 12 Methodological steps of netnography in Sunless tanning project (Bartl et al. 2006, 6)

The netnography procedure applied in Sunless tanning case comprised five steps, which were defined as research field, identification and selection of online communities, community observation and data collection, data analysis and aggregation of consumer insights, and community insights translation into product and service solutions (Bartl et al. 2009, 6).

5.1.1 Definition of Research Field

The project started with *Definition of Research Field*, which included identifying research fields and major interests leading to research questions. HYVE marketers operated the first step by creating an extensive mind map containing structured topics, which supported them to define research strategies and to identify online research sources. They defined a set of relevant research questions as follows (Bartl et al. 2009, 6):

- ‘What are the triggers for consumers to enter the category of sunless tanning and what keeps them using the product?’
- ‘What are the daily rituals and habits of usage as well as cross-usage of self tanning product, face & body care products, make-up products?’
- ‘On which occasion sunless tanning products are used and on which parts of the body?’
- ‘Which problems consumers face with sunless tanning products and which major areas of improvements from a consumer point of view do exist?’

5.1.2 Identification and Selection of Online communities

The aim of second step, *Identification and Selection of online communities*, is to identify the Internet sources and communities where customers exchange their opinions and information regarding the research field. HYVE applied different searching techniques and skills used to identify online communities, which are presented in the early part of this dissertation. They considered online data sources such as forum discussions, blogs, Web 2.0 platforms, user generated content platforms, and so on. Moreover, they used online search engines, and Meta search engine to focus on set-up topics and interests. Eventually, 437 relevant communities in five different languages were identified within different research fields. For example, sources contain discussions on sunless tanning within the fields of beauty and care (e.g. www.beautyjunkies.de), fashion lifestyle (e.g. www.styleforum.net), health (e.g. www.healthboards.com), and shopping (e.g. www.ciao.com). Moreover, they also approached user generated content platforms

such as YouTube to obtain users' videos relating to the research topic. Additionally, they found various online communities focusing solely on the topic of tanning such as www.abtan.com, www.tantalk.com, www.tantoday.com, www.iamtan.com, www.tanningbeauty.com, www.tanfx.com, and many more. (Bartl et al. 2009, 7).

After they have identified a couple of hundred relevant online resources, HYVE Netnography researchers selected online communities that they wanted to immerse for in-depth analysis. How to choose a target online community partially depends upon the individual abilities. Nonetheless, there are reliable qualitative and quantitative criteria that assist researchers in the selection procedure. According to Bart et al. (2009, 7), qualitative criteria include 'topic focus', 'data quality', 'language type', 'interaction type', and 'profile editing'. Meanwhile, quantitative criteria comprise 'number of messages', 'frequency of usage', 'member activity', 'data quantity', or 'interaction level'. The outcome of the selection procedure is to generate a set of 3 to 15 online resources, which provide the most relevant information for further deep investigations. Moreover, to obtain an adequate amount of data for research purpose, more than additional sources can be added if needed. Throughout the selection procedure, HYVE Netnography researchers selected six most relevant online communities, which were www.iamtan.com, www.sunless.com, www.board.beauty24.de, www.gofeminin.de, www.healthboards.com, and www.bodybuilding-magazine.de. (Bartl et al. 2009, 7). These online sources provided marketers with diversified information and customers' discussions as they have accumulated a huge amount of different types of active participants.

5.1.3 Community observation and data collection

In stage 3, *Community observation and data collection*, researchers immersed in the online communities, observed the activities, understood social context, interacted with other participants, and collected relevant data. The approach is to study the nature and behaviour of online consumer groups in the natural context, thus collected data is free from bias. (Bartl et al. 2009, 8). Whereas the qualitative data analysis (QDA) software e.g. NVivo or Atlas helps file the data, the researchers manually interpreted and identified relevant statements for research question as the online communities create their own language. For instance, members of sunless tanning communities use the term 'raccoon eyes' to mention their troubles of tanning the area around the eyes when they use a tanning bed. (Bartl et al. 2009, 8).

I think that I have the worst racoon eyes in the world. Everyone at the gym I work at has let me know that my eyes are REALLY WHITE. I looked at a

pic of me from a few days ago and it looked like my eyes were glowing in the dark! You gotta wear the goggles when you use a tanning bed so I think the best solution unfortunately would be to use sunless tanner. (Source: www.iamtan.com, skinny_mini).

In this project, the authors were faced with the problems of identifying customers' statements that contained 'personal language', or 'community language'. The researchers had to generate relevant statements by reading and collecting them manually as they had no knowledge or software to solve this problem. However, nowadays there is a solution for this issue offered by Netbase market research company, which will be introduced in later part of this chapter.

Even though the software enhances the research functions and supports identifying posts containing certain key words, it cannot accurately exclude irrelevant posts within the context of conversation. Therefore, HYVE netnography researchers followed a procedure of understanding and qualitatively researching the content, which entailed (1) noticing customer statements, (2) collecting statements, and (3) thinking about interesting consumer statements. (Bartl et al. 2009, 9). To do so, researchers read statements many times, structured them by coding and cataloguing. Researchers combined an inductive and a deductive categorization procedure to build up a suitable coding system, which can be adjusted by merging and diversifying coding families. The results of this step were to structure the relevant data and the accessible formatted texts and reports, which included a category system of 825 codes applied on 3,128 consumer statements retrieved from the selected online communities. (Bartl et al. 2009, 9).

5.1.4 Data analysis and aggregation of consumer insights

Based on the collected data in previous step, researchers performed step 4, *data analysis and aggregation of consumer insights*. The goal of this stage was to look for the patterns and relationships across the discussions of customers, and to discover consumer insights related to the research matters. In the Sunless tanning project, HYVE netnography researchers found nine distinct consumer insights. One of them revealed the perceived problems with sunless tanning products. For example, the following quote was one of 1,600 original consumer statements relating to this insight (Bartl et al. 2009, 9):

DO NOT BUY THAT!!!!!!!!!!!!!!!!!!!! that is, if your talking about the tanning gun, ive seen it at walgreens. i tried it, it came out streaky, my feet were orange for 10 days and my whole body was orange it was sooo splotchy,

Translation of community insights into product and service solutions is the final stage of netnography research on Sunless tanning products. The challenge of netnography research is to transfer the consumer insights into solutions, new products, innovation, or simply an improvement. In this case, researchers worked closely with product designers to improve existing products, and create new products. It required critical thinking of researchers, and creative thinking of designers along with technology tools and approaches for the creation new products. Based on nine consumer insights generated in previous steps, researchers and designers developed four solutions for problems found related to sunless tanning field. Eventually, three of them were developed into new sunless tanning products. Meanwhile the other solution was related to consumer communication and new sales options.

In conclusion, although the solutions cannot be described in detail due to the security reasons, the netnography research did provide reliable consumer insights, which helped to identify existing problems of using sunless tanning products, and to generate solutions as well as create new products. For additional data, Appendix 3 shows some photographs illustrating the process of netnographic research on Sunless tanning products conducted by HYVE.

5.2 NetBase – Listerine’s new products from Netnography research

Listerine project is conducted by NetBase to analyze the consumers’ perception of Listerine. NetBase Solutions, a US based company, offer its clients an end-to-end Social Media Management System (SMMS) that is accurate, fast, flexible and easy to use. NetBase social intelligence provides a smarter way to monitor, understand, react, engage, and publish as fast as the speed of social – through both owned and earned channels. NetBase enterprise offers 12 simple and smart ways to help its clients understand their customers and then take action to improve their performance on critical business objectives: brand analysis, campaign tracking, product launch, influencer ranking, digital channel intelligent, purchase intent, risk management, competitive intelligent, partner monitor, category analysis, and product innovation. (NetBase Company Introduction 2013).

The project is an analysis of consumers’ perceptions of Listerine, a brand of Johnson and Johnson. The netnographic study on Listerine was conducted based on online sources such as social media, Internet data generated by consumers in Internet forums, blogs, and microblogs (Osofsky 2010). NetBase combined qualitative and quantitative research methods in this project. Qualitative research comprised of studying the amount of discussions about Listerine relative to other topics, consumer sentiment and passion about Listerine, and the driving forces of consumers’ behaviour in mouthwash products.

Meanwhile, qualitative research was done on overall reasons consumers like or dislike Listerine, and eventually generated key insights about the Listerine consumers. The aims of this netnography research was to understand the overall positive/ negative preferences for Listerine, to look for opportunities for leveraging likes as well as compensating for or overcoming dislikes. (Osofsky 2010).

The research approach followed several steps of the netnography procedure built up by Kozinets (2010) including planning and entrée, data collection, data analysis, and interpretations of findings.

5.2.1 Planning and entrée

The *planning and entrée* of this netnography study began with the set of research questions including (1) ‘Which online communities and other social spaces do consumers who are interested in Listerine congregate to?’, (2) ‘What brand meanings do culture members associate with Listerine’, and ‘What are some of the novel uses to which Listerine is put?’ (Kozinets 2010b, 7). The social media sources for consumer insights included Internet forums, blogs, and microblogs (Osofsky 2010). Figure 12 shows definitions and details of these online sources for netnography study.

Social Media Sources for Consumer Insights

Internet Forums

Online communities where consumers post questions, answers, comments, and general discussions.

Forums are often associated with particular topics such as hobbies, geographies, sports, lifestyles, illnesses, and more.



Blogs

Commentary or news on a particular subject; other blogs function as personal online diaries.

Some blogs allow readers to leave comments, thus fostering discussions like those found in online forums.



Microblogs

Communication platforms where users post short status messages.

The most popular microblog currently is Twitter.



NETBASE

Figure 13 Social Media Sources for Consumer Insights (Osofsky 2010)

NetBase marketers used a selection of search engines e.g. Google, Technorati, Twitter Search, and scans of visual, as well as audio-visual data on Facebook, YouTube, Flickr, and DevianArt. They also used NetBase's ConsumerBase tool to locate, organize, and classify these findings. (Kozinets 2010b, 6).

'ConsumerBase, NetBase's social intelligence warehouse, delivers real-time social data to all of our dashboards and social intelligence applications. It contains billions of conversations from more than 165 million sources globally, from forums and blogs to reviews to Facebook and Twitter. ConsumerBase sources include: Social media sources (including group or fan pages on social media sites including Facebook, LinkedIn, Pinterest, and YouTube, active Twitter accounts), Blogs and blog comments, Forums from sites (e.g. forums.ebay.com, forums.parenting.com, androidforums.com), News sources, and Consumer and professional reviews.' (cited from NetBase website/ Platform 2013)

5.2.2 Data collection

Data collection was based on certain topics leading to answering research questions. For example, they performed the investigation into frequency of Listerine keywords mentioned on social media in comparison with other brands, and the overall sentiment for Listerine. Marketers chose some popular brands such as Netflix, Coke, Pepsi, or Craigslist to study how frequent the Listerine is mentioned on Social Media. It turned out that the term Listerine is mentioned infrequently on social media comparing to other famous brands. Furthermore, in the comparison with other brands, consumer sentiment for Listerine is moderate. However, the passion index of consumers toward Listerine brand was high comparing to other brands. Additionally, marketers searched for positive and negative terms regarding Listerine's issues in order to understand fully consumers' opinions in different perspectives. Appendix 4 shows research results for the Listerine term, found in the Data collection process conducted by NetBased.

5.2.3 Data analysis and interpretation findings

Data analysis and interpretation findings were conducted based on netnographic information from the collection process. NetBase marketers accumulated consumers' comments and opinions on Listerine products, based on which they interpreted insights

to understand consumers viewpoints. They collected and classified comments into diversified topics in different dimensions of Listerine products. First of all, there were a lot of comments about Listerine benefits, which lead to understanding what consumers think about Listerine's benefits and creating potential advertisement ideas as well as developing new products. For instance, the netnographic data showed that half of positive comments pointed out Listerine's core germ-killing benefit, which inspired the marketers to have a creative advertisement having real customers talk about Listerine benefits in their own language. Furthermore, according to the research, the second most mentioned benefit of Listerine was that it could be used to treat toenail fungus, from which the marketers were able to research the effectiveness of Listerine for toenail fungus treatment, and thus develop a new toenail fungus treatment 'from the maker of Listerine'. Additional benefits mentioned include the benefit of repelling mosquitoes, acne treatment, Athlete's foot treatment, and even hair treatment. Even though these benefits mentioned by consumers were minor, they still lead to potential actions for further benefits to the company. (Osofsky 2010). Figure 13 shows an example of selected comments on Listerine's benefits and also interpretations from those. More illustrative graphs are displayed in appendix 5.

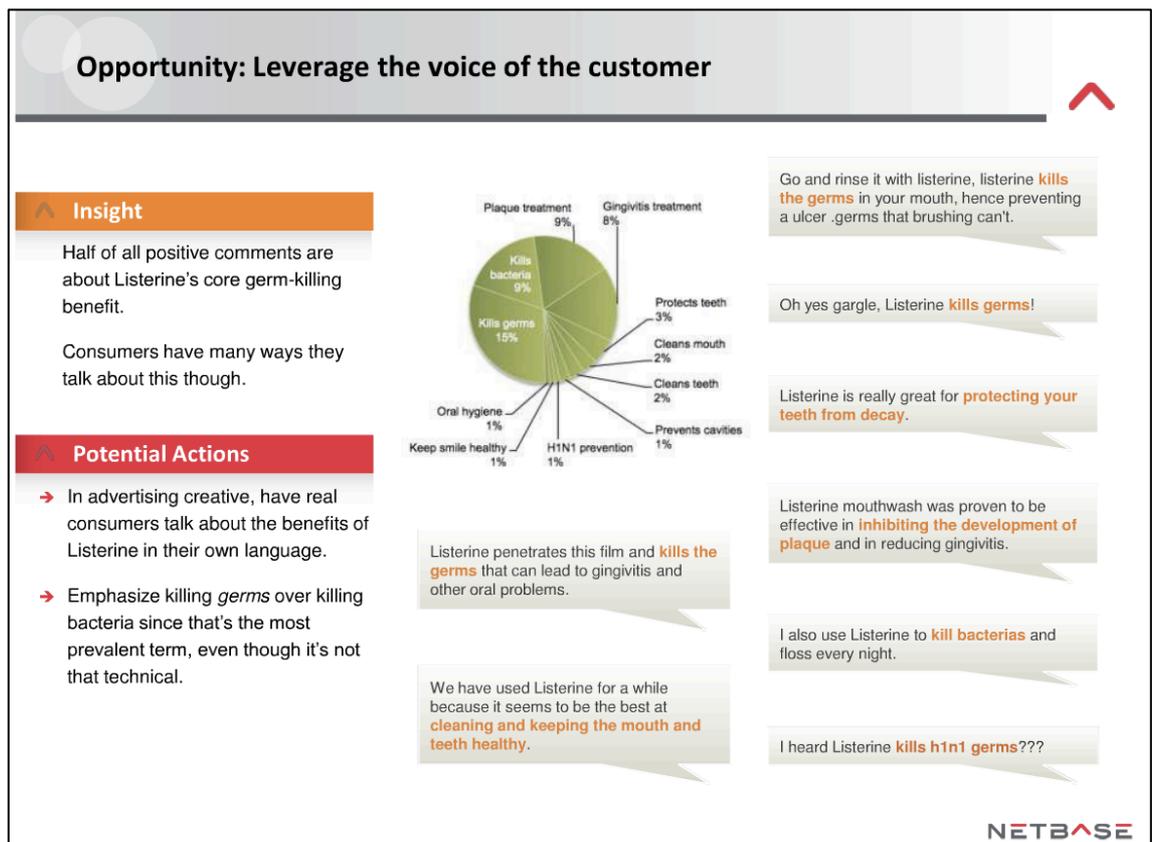


Figure 14 Data analysis and interpretation on Listerine benefits (Osofsky 2010)

Secondly, negative comments were taken to analyse issues raised by users and to develop solutions or new products to satisfy consumers' demands. The biggest issue was that Listerine is too strong and caused some mouth burning and soreness. The issue was taken in account and the company developed a new gentle version of Listerine called 'Listerine with Soothing Power'. Besides, some consumers complained that Listerine dries out their mouth, which lead to further investigation this matter and develop a new formulation to address this problem. Figure 14 presents an example of developing a new Listerine product from consumers' insights. Appendix 6 provides more graphs on interpretation of consumers' insights of Listerine's issues.



Figure 15 Analysis consumers' insights lead to a new Listerine product (Osofsky 2010)

Generally, based on consumers' insights collected from netnography research, marketers were able to determine positive and negative comments related to different dimensions of Listerine products. Both positive and negative opinions inspired marketers to develop new products, which would satisfy consumers' requirements and solve existing issues.

5.3 Nivea co-creates new product by using Netnography

Nivea is a well-known brand of the multinational skin care company Beiersdorf based in Hamburg, Germany. Beierdorf has almost 130 years of skin care experience and is a leader in researching and developing innovative and high-quality products. The company has internal R&D capabilities, technology-driven innovations, and co-creation partners, which strengthen the company's innovation activities. Beiersdorf's Nivea is one of the most well-known skin care brand in the world. The other Beiersdorf's successful international brand names are Eucerin, La Prairie, Labello, 8x4, and Hansaplast/ Elastoplast. (Beiersdorf Press Release & News 2011). Traditionally, the company's R&D activities were conducted by internal sources and relied on company's internal capabilities. However, in the last few years, Nivea has realized the value of external resources in the innovation and creations of new products. Among other things, the company realized the consumers is a valuable source for innovation. (Bartl et al. 2009). To be able to integrate the consumers' opinions in creating and developing new profitable products, Nivea has applied the co-creation approach beyond using traditional market research techniques.

The co-creation approach consists of exchanging information between inbound and outbound to connect internal innovation activities and contributive opinions of users. It means that internal technologies can be combined with external knowledge and information in order to co-create new product ideas. (Bilgram, Bartl & Biel 2011, 35). The co-creation program helped Nivea to continuously integrate its consumers throughout the new product development and innovation processes (Bilgram, Bartl & Biel 2010). There are many methods and tools available for companies to integrate with users. The most developments and advancements of these techniques are from netnography and online co-creation (Bilgram et al. 2011, 36). According to Bilgram et al. (2010), the co-creation program in developing new product comprise of six activities, which are listen, ideate, enhance, evaluate, refine, and conceptualize.



Figure 16 Nivea's co-creation program for innovations (Bilgram et al. 2010)

The project 'Nivea's Invisible for Black and White deodorant' was one of Nivea's innovation projects that applied the co-creation program in order to develop new products which satisfy consumers' demands. The aim of this project was to develop a new deodorant product, which highly satisfied consumers' expectation. The new Invisible for Black and White deodorant was supposed to help consumers avoid the white deodorant stains on black cloths and the yellow deodorant stains on white cloths. As an innovation strategy of Nivea, deodorant and antiperspirant staining was a high-priority topic, which needed to be studied more deeply from consumers' perspective. (Bilgram et al. 2011, 37). Listening to the consumers revealed issues which have long been unsolved. In this case, netnography was used as 'an entry project into the co-creation process helping R&D to immerse and orientate itself in the consumers' world' (Bilgram et al. 2011, 37). Netnography involved in the co-creation program of this project as an important tool to listen to consumers' ideas, to enhance and evaluate the potential ideas, and to refine and develop a new product.

The Netnography process applied in Nivea co-creation program includes steps, which are research definition, social media selection, social media observation, data analysis and insights, and product solutions (Bilgram et a. 2011, 35).



Figure 17 Netnography insights process (Bilgram et al 2011, 35)

The research definition and social media selection are conducted in the beginning stage of the research. Meanwhile, the social media observation and data analysis belong to collecting and analysis data stages. Eventually, the generated data will be utilized in the last stage of the research to develop product solutions.

5.3.1 *Research definition and social media selection*

A team of researchers and designers started the netnography with defining research fields, uncovering potential topics, and creating a set of keywords and phrases. Researchers defined research fields to be able to understand what they are going to study and to form the scope of the project. Additionally, throughout defining research topics and fieldworks, researchers generated initial evaluations towards the relevancy of research keywords, from which a set of keywords would be created. Moreover, the initial set of keywords guided the researchers to identify and select social media sources. (Bilgram et al. 2011, 37). During defining fieldworks and research topics, researchers noticed that staining was one of biggest issues, which consumers were discussing through many online channels. Thus, they started the netnography research on the topic ‘Deodorant and Antiperspirant staining’ with different keywords and phrases. For example, the main keywords and phrases were ‘yellow deodorant stain’, ‘deodorant stain’, ‘white stuffs under the arms’, or ‘areas under the armpit’ and so on.

Social media selection was started with a broad search of more than 200 social media sites in three different languages. The online social networks containing diversified

online consumers' discussions were screened extensively. (Bilgram et al. 2011, 37). The target social media sites were chosen from different online sources such as forum, blogs, social networks, review sites, user generated content, communication platform and so on. Through out these online communities, thousands of consumers discussed about Nivea's products in multi dimensions that create a huge source for Nivea to listen in. In order to explore social media and user generated content, Nivea researchers applied general search engine (e.g. Google, Google Groups, Google Trends, and Google Social Search, or social network including Technorati and Twitter search) and specific search tools developed by company's research team. In addition to general search methods, Nivea also utilized an extensive internal database, which contained user generated content platform, communities, blogs, advice portals, social networks, question and answer sites, and other online information source. (Bilgram et al. 2011, 38). Chosen social media sites were surrounded by relevant topics such as cosmetics, health, beauty, lifestyle, sports, body care, or maintaining good body smell. Furthermore, Nivea research team applied both qualitative and quantitative selection criteria in choosing and classifying online social sites. The selection criteria were the size and the activities of communities or quality of the online discussions, which supported researchers to identify the most relevant and insightful communities for further investigations. (Bilgram et al. 2011, 38).

5.3.2 *Social media observation and data collection*

Through the selection, classification, and initial observation, three main topics (types of stains, causes of staining, and stain removal) were generated for further observation and data collection. Firstly, types of stains was one of several topics discussed online by consumers. In online communities, consumers presented their perception and description of different types of stains that they have been facing with. Observing consumers' conversations revealed very different stains. Among these dialogue, users differentiated between 'yellow stains, white marks, discolorations, hard residues, sweat smell residues and sweat stains'. (Bilgram et al. 2011, 38). Besides common words about types of stains, consumers also used their own language to describe staining issues. Figure 17 shows consumers' descriptions of different types of deodorant stains that they have experienced.

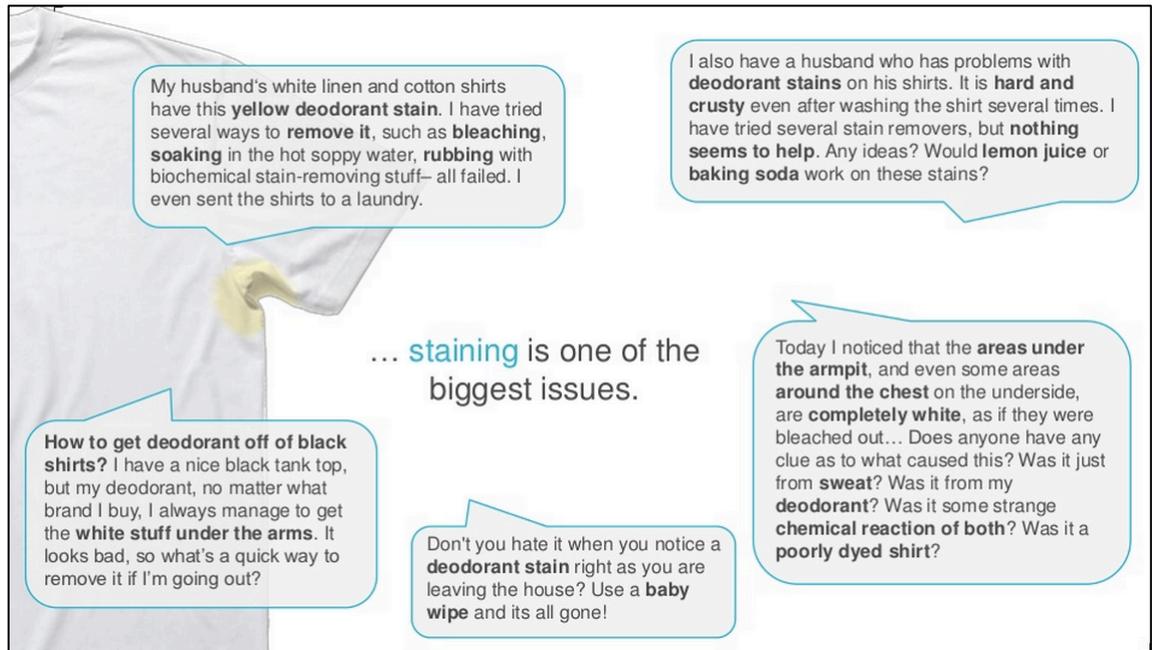


Figure 18 What consumers say about deodorant stains (Bilgram 2011)

In addition to the description of different types of stains, consumers also classified the stain types in their conversations. Eventually, a ‘stain manual’ was derived from users’ discussion words and technical terminology used by Nivea’s R&D unit. ‘The ‘stain manual’ was enriched by user-generated content such as pictures of the respective stains and tutorials.’ (Bilgram et al. 2011, 38).

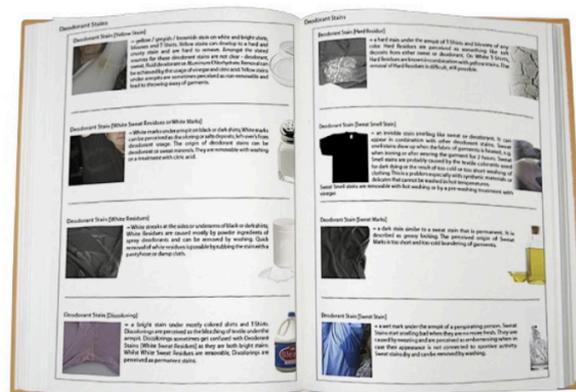


Figure 19 ‘Stain manual’ derived from users and R&D unit (Bilgram et al. 2011, 36)

The second topic originating from the online discussions was the causes of staining. In this topic, consumers shared their opinions on identifying the sources of deodorant stains. They stated that there are a ‘jungle of causes and effects’. Usually consumers identify one or two factors that caused the stains; for example, one user presented that ‘If the stain is yellow or green in colour and has a crunchy or crispy texture, it’s due to perspiration. If the stain, however, is white or clear with a greasy texture, it’s due to the antiperspirant and should be treated as a grease stain with the appropriate solvent.’ The conversations around this topic also proved that the consumers were not aware of the many complex factors impacting on the formation of stains such as sweat, deodorant ingredients, laundry detergent or textiles. (Bilgram et al. 2011, 38). Moreover, the results derived from the discussions provided researchers a number of very different causes of staining from which researchers can enrich their research data.

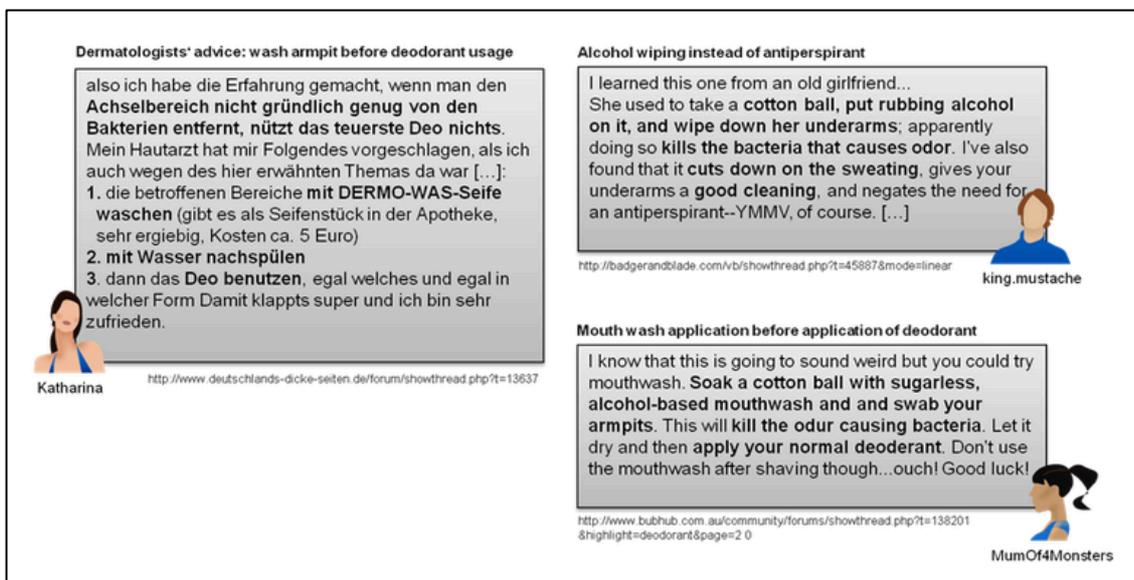


Figure 20 Consumer quotes on presenting stains (Bilgram et al. 2011, 38)

The last topic of discussion on staining was about how to remove stains from clothes and how to prevent stains. During the observation process, researchers noticed that consumers often tried different ways to remove stains and shared their experiences online. For instance, some users used citric acid, lemon juice, white vinegar, salt, bicarbonate, and some other ingredients to remove stains. In addition to these suggestions for stain removal, consumers also shared their experiences of ways to prevent stains. For example, some users talked about preventing stains by ‘letting the deodorant fully dry before putting on clothes’. (Bilgram et al. 2011, 38).

5.3.3 Data analysis and product solutions

In data analysis and insight steps of netnography, researchers collaborated with product designers to interpret and translate the consumer insights into initial product ideas (Bilgram et al. 2011, 39). Potential product ideas were generated from consumers' insights collected during observation users' activities and experiences, immersed in the consumers' world and conversations, and understanding consumers' needs and concerns. The process of data analysis was conducted based on different qualitative data analysis techniques. In addition to traditional data analysis tools, Nivea also utilized innovative methods in identifying consumers' viewpoints, deciphering their own language, and synthesizing netnographic data logically.

Consumers' insights collected from netnography market research techniques provided researchers with a huge amount of information on consumers' perceptions and expectations towards deodorants and stains. Based on analysed data, researchers were able to develop potential product solutions that could solve existing problems, which bothered the company's consumers. Eventually, the initial product ideas and solutions were put through the process of selection, enrichment, testing, and designing (Bilgram et al. 2011, 39). The whole process was based on the cooperation between consumers, market research team, and Nivea's R&D unit. Figure 20 describes the collaboration between Nivea's research teams and consumers in generating, enriching, and developing new product ideas and solutions.

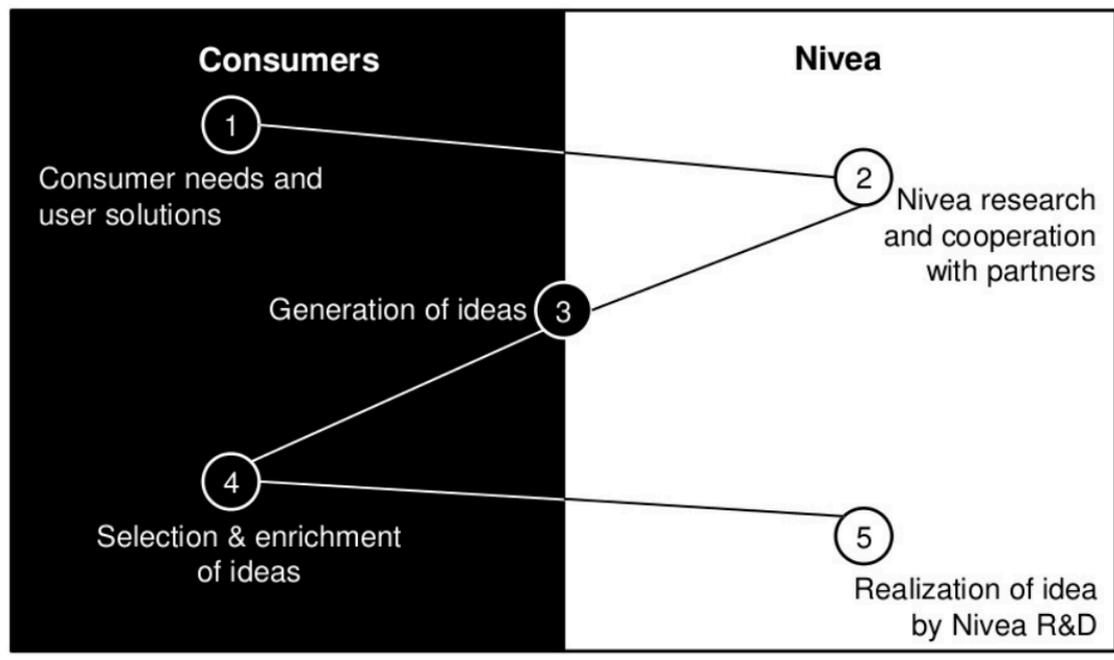


Figure 21 Collaboration between Nivea and consumers (Bilgram 2011)

As Nivea has applied co-creation strategy including netnography and co-creation in developing new product, netnographic analysed data merely helped researchers to get ‘a profound understanding of the users’ needs and values as a result of the context-rich qualitative analysis’ (Bilgram et al. 2011, 39). Subsequently, researchers needed to carry out a qualitative co-creation study in order to test the hypothesis and ideas, which were derived from netnography. However, netnographic data established a strong knowledge and understanding of consumers’ perceptions, from which researchers could perform further evaluating and also developing a new product. In other words, netnographic data was useful in many stages of the process including generating ideas and concepts, evaluating, designing, testing, and the launching. Therefore, netnography also played an important role in Nivea’s new product development process.

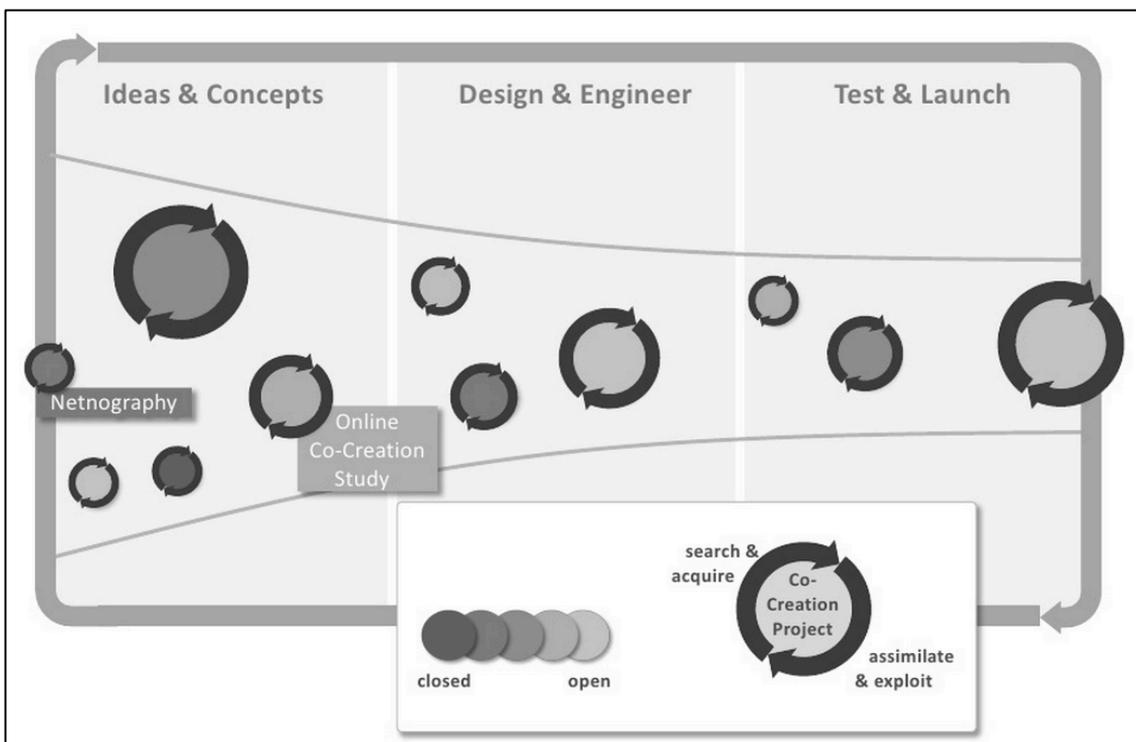


Figure 22 Netnography in Nivea’s co-creation strategy (Bilgram et al. 2010)

Netnography involves in the new product development process mainly in the first stage of the process e.g. idea generation, and concept development. Netnography in collaboration with online co-creation study provide researchers with rich preliminary information about consumers’ perceptions in multi-dimensions. Additionally, netnography is also useful in the later stages of the new product development process such as concept testing, product development, launching and so on.

In a word, the case study analysis section comprised of the analysis of three case studies related to netnography research e.g. Sunless tanning, Listerine, and Nivea. The case analysis delivered the understanding of conducting netnography in practical business cases in the context of new product development. The next chapter will present the research outcomes generated from the case study analysis.

6 RESEARCH FINDINGS

The research findings section present the outcomes, which are derived from the case study analysis. The research results are categorised into two main aspects including the procedure of conducting netnography, and the contributions of netnography in the new product development process.

6.1 Conducting Netnography in new product development process

As was presented in chapter one, the general procedure of netnography applied in market research projects includes six steps: research planning, entrée, data collection, interpretation, ensuring ethical standards, and research representation (Kozinets 2010a, 61). Based on formatted procedure, conducting netnography for the new product development purpose entailed modified steps and activities. The frame of the netnographic process is maintained even though there were changes and added activities in some steps.

In HYVE case study, the netnography procedure applied in the Sunless tanning case comprised of five steps, which were the definition of research field, identification and selection of online communities, community observation and data collection, data analysis and aggregation of consumer insights, and the community insights translation into product and service solutions (Bartl et al. 2009, 6). Comparing the original steps created by professor Kozinets, the netnographic research steps in Sunless tanning were slightly different in multi-dimensions. For instance, HYVE applied 5 steps of netnography research instead of 6 original steps. On the other hand, the names of steps and the methods of conducting each step were also different, instead of ‘research planning and entrée’; they named the stages as ‘definition of research field’ and ‘identification and selection of online communities’. The goals and purposes of those steps are similar, although there are some minor differences in conducting certain activities. The activities designed by HYVE were more likely relevant to listening to consumers’ voices and they support for collecting adequate information and generating potential new product ideas.

While the netnography project conducted by NetBase followed six steps of Netnography procedure built up by Kozinets (2010), netnography research applied by Nivea occurred in a modified process. The Nivea’s netnography process included research definition, social media selection, social media observation, data analysis and insights, and product solutions (Bilgram et a. 2011, 35). The netnography process applied by Nivea has many similarities to the process conducted by HYVE because Nivea continued with their project in cooperation with HYVE research agents. However, in the Nivea project, some steps were changed and various research methods were used to achieve the company’s objectives. Furthermore, Nivea utilized netnography as one of

the tools in company's co-creation project to develop new product, the other companies applied netnography as a main research method to listen to consumers and develop new product as well as solve existing product issues. Consequently, Nivea had its own requirements for certain kinds of information, which required modifying collecting data method. Additionally, the company also had different ways of interpreting netnographic information, which translated into new product ideas.

Although the netnography research processes conducted by case companies were different at some points, they followed some similar steps. The researches started with defining research fields, building research questions, and identifying the research path, which lead the research process to the next stages. Usually netnographic researchers formulate research questions regarding consumers' perspectives towards the company's products, product issues, and solutions. Based on the initial formulated research questions, they have limited the research scope to generating the criteria for selecting online communities and social media channels. After the selection of online communities, researchers defined a suitable and effective data collection method depending on the purpose of research; the kind of information and the nature of online communities. However, it does not matter which data collection method was used, researchers needed to ensure that they performed adequate observation of online communities, immersed themselves in research environments, and engaged fully with consumers in order to gain useful consumers' insights. The next step of the netnography process after data collection is data analysis and interpretation, which is conducted based on collected netnographic information. Researchers in three case studies conducted this step quite differently depending on the kinds of data collected and the purpose of research as well as the main points of the research questions. Nevertheless, potential product ideas, product solutions, and useful information relating to consumers' perceptions were derived from the data analysis process and utilized in later stages of the new product development process.

Netnography not only engages in the early stages of new product development, but also in the later stage of the process such as prototype testing, product developing, and launching stage. In both the Sunless Tanning and Listerine cases, netnography obviously played an important role in the early stages of the new product development process such as supporting researchers to understand their consumers, exploring potential product ideas and revealing existing product issues. That information built up a strong and extensive background for researchers to develop a new product, which would satisfy consumers' demand. Unfortunately, the contribution of the netnography research in the later stages of the new product development process was not highlighted in these cases. Nonetheless, in the Nivea case study, netnography was involved in both the early and later stages of the new product development process. Although researchers utilized netnography in collaboration with another method (co-creation), netnography played an

important role and contributed useful extensive research outcomes for new product development.

6.2 Contributions of Netnography in New Product Development process

Netnography inspires researchers with innumerable potential ideas generated by consumers for new product development. There are millions of users talking about a company's products in diversified dimensions. These discussions become a rich source of useful information upon which the company can draw from. An increasing number of online community members actively participate in web forums, social media, or various kinds of online interaction. They not only talk about products' usage or verbalize their opinions, but also suggest potential solutions for existing product-related problems. Netnography takes advantage of these huge sources available to gain consumers' ideas, opinions as well as attitudes towards products and brands. (Bartl et al. 2010). Indeed, according to Nivea researchers, netnography is an effective research method to listen to the company's consumers. Benefits of listening to consumers via netnography are immersing in the consumers' world and conversations, interacting with consumers in a natural and unaffected environment, creating a deeper relationship with consumers, gaining deep understanding about consumers' needs and concerns and getting rich consumers' insights in an unobtrusive way (figure 22). The benefits derive from the core idea of netnography, which is 'to gain unbiased, unobtrusive consumer insights through observing the conversation and social interaction of community members in an empathic way without intrusion and exertion of influence' (Bartl et al. 2010).



Figure 23 Benefits of listening to consumers via Netnography (Bilgram et al. 2010)

Additionally, in Listerine case study, netnography helped researchers to understand and interpret consumers' opinions on Listerine's products in both positive and negative aspects. Moreover, netnographic research results discover the new ways of using netnography, which could be a huge source of information for company to develop new products. Briefly, netnography helped Listerine understand its consumers, generate new ideas to develop new products, and solve existing product problems. In the Sunless Tanning case, the outstanding benefit of netnography is getting deep insights from thoughts and perceptions of consumers, who are highly involved and experienced users. In other words, netnography provides 'an in-depth understanding of the topics that are relevant for users with a certain product field, including their perception of existing products and brands, unsatisfied needs and innovative problem solutions' (Bartl et al. 2009, 11). In addition to the main benefit, researchers generated many other benefits from the netnography application in this research method in the new product development process. In term of product development, netnography is the source for product innovation and product modifications; it helps to identify user innovation and product prototypes; and it is also the qualitative evaluation of market potential, trends, opportunities and risks (Bartl et al. 2009, 10). Netnographic results can add benefits to a company in multi-dimensions (table 6).

Table 7 Result Dimensions of Netnography (Bartl et al. 2009, 10)

Product related results	Source for product innovations and product modifications Identification of user innovations and product prototypes Visualized product- and service solutions Qualitative evaluation of market potential, trends, opportunities and risks Definition of core values and unique selling propositions Insight based positioning strategies
Brand related results	Explorative derived brand & product positioning dimensions Brand comparisons and best practices
Target group related results	Qualitative triangulation of existing target group definitions New market and consumer segmentations Insights in use cases and area of usage Identification of Mead Users, Opinion Leaders and Early Adopters
Communication related results	Qualitative consumer feedback on communication activities and campaigns Development of consumer oriented communication strategies Directions for social media and viral activities

Netnography is a bridge connecting the company and consumers in many stages of the new product development process. The more the company collaborates with consumers, the higher the possibility of success is due to the potential benefits of involving consumers. Firstly, according to Bilgram et al. (2010), involving consumers creates a big advantage of finding the best idea, which leads to the developing of successful new products. Due to the nature of netnography research, researchers are able to understand consumers deeply by asking them the right questions in their own language style, observe them in an unbiased environment, and listen to their own opinions without boundary. Secondary, researchers can utilize consumers' contributions to evaluate and enrich ideas and concepts in a playful and compelling environment. Moreover, product developers can get consumers' feedback in the early stages of the new product development process. Furthermore, by using netnography to cooperate with consumers, researchers can discover new fields of application for product ideas. (Bilgram et al. 2010). For example, in Listerine netnography project conducted by NetBase, researchers found many undiscovered uses for Listerine mouthwash such as using Listerine as a toilet cleaner (Kozinet 2010b, 8). Besides, in the Sunless Tanning case, researchers and developers not only developed three new sunless tanning products, but also developed new con-

sumer communication ways and new selling methods based on consumers' online discussions.

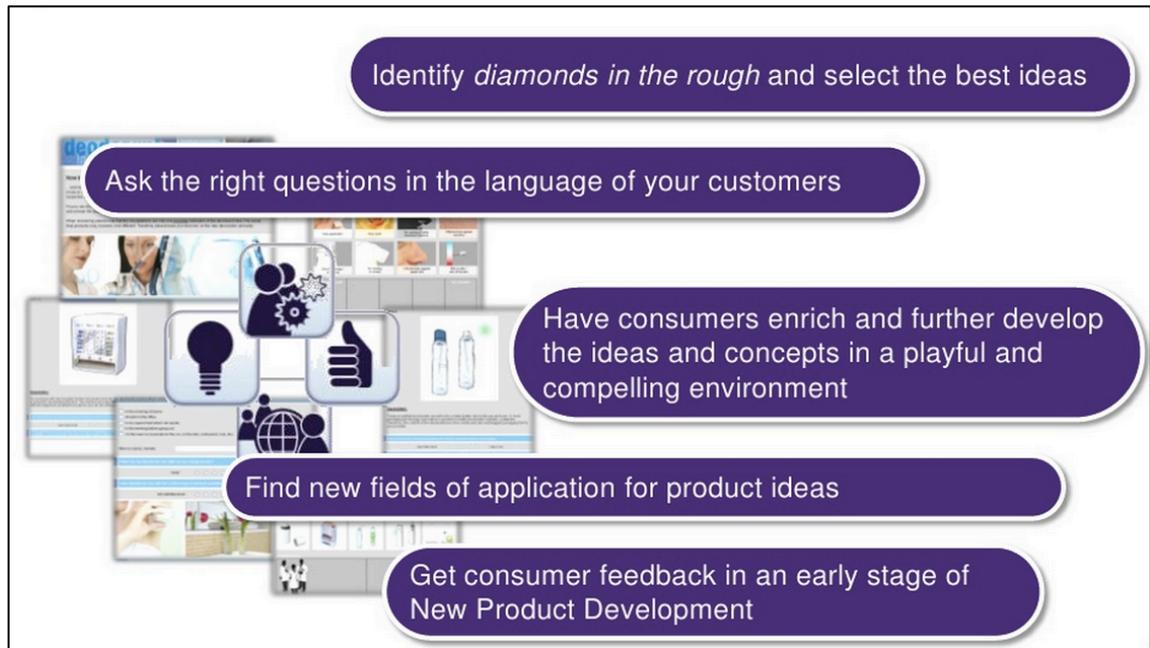


Figure 24 Benefits of netnography in idea enrichment and selection (Bilgram et al. 2010)

In addition to the direct benefits of netnography to new product development process, netnography also adds benefits to the company in many different perspectives e.g. management, innovation, and competitive advantages. Netnography has become an essential market research tool, which contributes extensively to innovation strategy in order to develop user-oriented products. Also netnography is the most effective method compared to other quantitative and qualitative techniques in searching and collecting ideation for evaluation and selection. (Bilgram et al. 2011, 40). Meanwhile, Kozinet (2010b, 9) stated that 'netnography is a powerful way to understand the changing marketplace, to gain an understanding of tomorrow's trends today, and to gain ideas and insights as valuable inputs to the front-end ideation process'. Netnography provides a huge amount of consumers' insights, which will be utilized eventually in innovation new product; choice making; new service models for co-creation of value; social media audits, usage, and opportunities; product and category usage and so on (Kozinet 2010b, 9).

To sum up, the triple case study analysis revealed a deeper understanding of using netnography method in the new product development. The study indicated the procedure of applying netnography in the cases and compared it with the initial theories. Besides, the study also highlighted the contributions of netnography and emphasised the useful applications of netnography in the new product development process.

7 CONCLUSION

The motivation for the study arose from the phenomenon that netnography has been utilized extensively in market research for very different marketing purposes. Nowadays, along with the developing of technology and social media, the netnography method becomes one of the most useful online market research methods. Many companies apply netnography in market research activities in order to have a deeper understating of their customers as well as to look for new opportunities to enhance their business markets. Netnography is one of the online market research tools, which provides researchers with deep insights and understanding of consumers' perceptions regarding company's products, brands, services and so on. Hence, netnography is a rich resource for searching for ideation, product innovation and solutions. Besides the other beneficial applications of netnography, utilizing netnography in the new product development process is one of the significant applications. Therefore, the other motivation for the study derives from the desire to study the relation between netnography and new product development process. Netnography involves in the new product development process as a market research tool to collect information regarding products' feedbacks, consumers' attitudes, problems, and potential solutions. Moreover, netnography offers product designers a massive source of potential ideas for innovation.

The purpose of the study was to analyse the contributions of netnography in the new product development process. The purpose of the study defined the main objective of the research, which was the analysing of the contributions of netnography in the new product development process including the whole process as well as the different stages of the process. The main objective of the study was pursued through the following sub-objectives:

1. To understand what netnography online market research method is.
2. To describe how a company/ the market research agents conduct netnography in online market research activities.
3. To understand what the new product development process is and what the roles of consumers' involvement in creating new product/ innovation are.
4. To describe how netnography is utilized in the new product development process.
5. To analyse the contributions of netnography in the new product development process.

The study began with the literature reviews regarding the knowledge of netnography and new product development based on existing theoretical frameworks and studies. The empirical research of the study was pursued through the analysis of three case studies, based on which research results were generated.

The first sub-objective was to understand what netnography online market research method is. On the basis of previous literature, netnography was defined as a new quali-

tative research methodology that adapts research techniques of ethnography to study cultures and communities through computer-mediated communications. Netnography generally is the term implicating the acknowledgement of using online resources or computer-mediated communications in conducting ethnographic techniques in order to collect data for interpreting, analysing, and explaining the phenomenon. Furthermore, Netnographic research emphasizes the interaction between researchers and online communities in varied perspectives. Netnography, an internet-based market research method, takes advantage of the observation and exploitation of online communities, forums, and social networks in order to gain unbiased consumer insight.

The second sub-objective was to describe how a company/ the market research agents conduct netnography in online market research activities. Based on the research of professor Kozinets, a famous pioneer of the netnography method, the procedure of conducting netnography is divided into four stages and follows six steps: research planning, entrée, data collection, interpretation, ensuring ethical standards, and research representation. In addition to studying the procedure of conducting netnography, the writer also studied the advantages and disadvantages of the netnography method.

The third sub-objective was to understand what the new product development process is and what the roles of consumers' involvement in creating new product/ innovation are. Based on existing theoretical framework and studies, the definitions of new product and the procedure of new product development were discussed and presented in chapter 2. Many different definitions of new product were defined depending on various dimensions of a product. Additionally, the different models of new product development were also present in theoretical review. There are many theories of New Product Development process presented by different models. In this thesis, the new product development process was explored and illustrated with the dimension of activity-stage model. According to activity-stage model, the new product development process comprises idea generation, idea screening, concept testing, business analysis, product development, test marketing, commercialization, and monitoring and evaluation.

The fourth sub-object was to describe how netnography is utilized in the new product development process. Based on the analysis of three case studies, the results indicated that the netnography process applied in the new product development process was modified and added some minor different steps compared to the original steps created by professor Kozinets. The changes made the netnography method become more useful and efficient for the new product development purpose.

The final sub-object was to analyse the contributions of netnography in the new product development process. The results from the analyses of the case studies implied that netnography contributed to the new product development process in many aspects. For example, netnography inspires researchers with innumerable potential ideas generating from consumers for new product development. Netnography creates a deeper rela-

tionship with consumers, gaining deep understanding about consumers' needs and concerns, and getting rich consumers' insights in an unobtrusive way. Additionally, netnography helped researchers to be aware of the potential uses of their own products, to enhance the application of the existing products, and to create the new useful products. Netnography not only contributed in the early stages of the new product development process, but it was beneficial in the later stages of the process as well.

All in all, the objectives of the study were achieved. The writer was able to present the understanding of netnography, to describe the procedure of applying netnography in the new product development process, and to generate the contributions of netnography in developing new product. Research outcomes are useful in term of exploring a phenomenon of netnography, and providing the readers with the interesting knowledge and experience.

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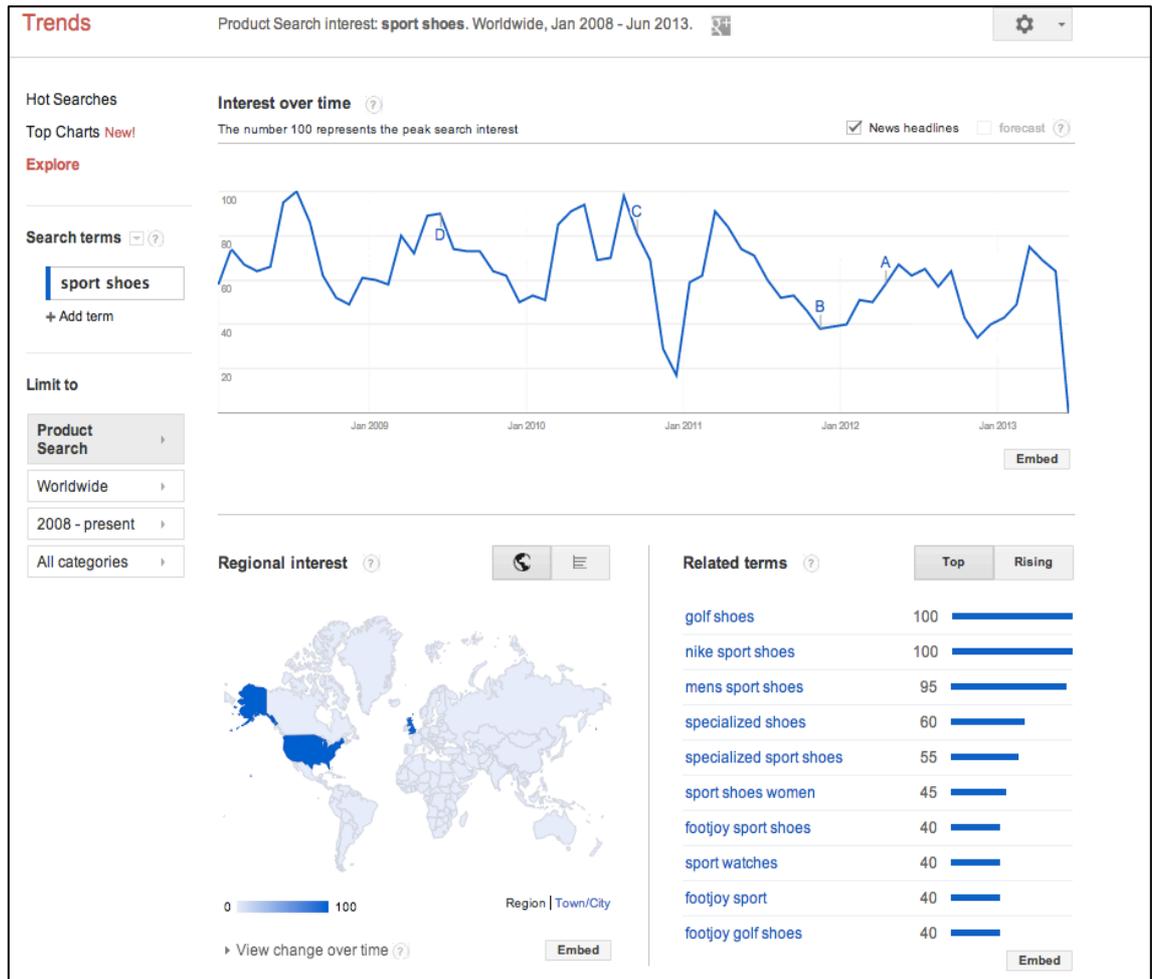
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APPENDIX 1 USING GOOGLE GROUPS, GOOGLE TRENDS



APPENDIX 2 CAQDAS SOFTWARE PACKAGE

Here is the information about the definition and application of CAQDAS software, which has been used in netnography research.

1. CAQDAS Comparison (by [Thomas Koenig](#))

This is a comparative overview of the most important computer-assisted qualitative data analyses software (CAQDAS, [Fielding & Lee 1995](#)) packages. Unlike most other reviews, it is not ordered by software products, but by product functions. As software capabilities are in a constant flux, we will aim to keep these pages up to date to reflect the latest versions of the reviewed programs.

Although it is true that all CAQDAS programs fulfill similar tasks ([Lewins & Silver 2004: 3ff](#); [Weitzman and Miles 1995](#)), at the same time there are some substantial differences between the different packages ([Heimgartner 2005](#); [Lewins & Silver 2004](#); [Lewis 2004](#)). These are not simple differences of taste. As I have demonstrated elsewhere ([Koenig 2004](#)), specific methodologies might require a specific CAQDAS, which may not always be the program most widely available. Even if the CAQDAS available to you might support your chosen methodology, classical path dependence theory ([David 1985](#)) cautions us against choosing a program solely on the basis that it is available at one's institution. Since the learning curve for almost all CAQDAS is steep, even peer group support might not outweigh the advantages a better fit for your methodology might have.

[Elsewhere](#) I have followed others (e.g.; [Lewins & Silver 2004: 3](#)), who argue that CAQDAS cannot decide about a methodological approach. I would even go further and suggest that CAQDAS affinities with certain methodologies may steer the analyst subconsciously towards these methodologies. It is therefore essential to decide upon one's methodology, **before** a decision on specific software can be made. Once the methodology is chosen, you can identify the tasks software should ideally perform to support this methodology. The following pages might assist you in these decisions, as will other software reviews and the developers' pages, which can be found [here](#). Also, keep in mind that some qualitative approaches might be served better by software **not** specifically developed as all-purpose CAQDAS. If you require only some CAQDAS functions, you might be better off with general-purpose software or more specialized programs, such as Transana. To facilitate this decision, some of these programs have been included in the comparison.

After reviewing [technical](#) and [ergonomic features](#) of the softwares, their suitability for different forms of [textual](#) and [multimedia](#) data, this comparison follows the conceptualization of the main CAQDAS functions, as they have been identified by Weitzman and Miles (1995): [Searches](#), [coding strategies](#), and [theory visualization networks](#). It is finish-

es with an assessment of their [stability and speed](#), [statistical functions](#), and a review of their [idiosyncrasies](#) and some [methodological affinities](#).

This review explicitly aims to include also software, which is not usually considered QDA software, as many of these programs fulfil some (but never all) of the functions that CAQDAS perform equally well or better. In many cases, more specialized programs, such as [fs/QCA](#) for ("Fuzzy Set") Comparative Analysis, or more general programs such as spreadsheets or search aides such as [Google Desktop Search](#) will be better suited for your research than CAQDAS. However, *Microft Word*, which has been suggested as a CAQDAS substitute ([La Pelle 2004](#)), in the fewest cases will be the most suitable substitute.

< http://www.restore.ac.uk/lboro/research/software/caqdas_comparison.php > retrieved 08.06.2013

2. ATLAS.TI

Computer software for the support of text interpretation, text management and the extraction of conceptual knowledge from documents (theory building); supports the qualitative analysis of large bodies of textual, graphical, audio and video data. Application areas include social sciences, economics, educational sciences, criminology, market research, quality management, knowledge acquisition, and theology.

< <http://www.content-analysis.de/software/qualitative-analysis> > retrieved 08.06.2013

3. Dedoose

Dedoose is a web-based (platform-independent) application for managing and analyzing qualitative and mixed methods research data with special features for collaborating simultaneously and dynamically. After a free full-function 30 days trial period a monthly fee will be charged for months that you actually use the application. The website presents the program features and includes support, publications and case studies.

< <http://www.content-analysis.de/software/qualitative-analysis> > retrieved 08.06.2013

4. HyperSEARCH

Qualitative analysis software for coding, retrieving, and analyzing texts and multimedia data.

< <http://www.content-analysis.de/software/qualitative-analysis> > retrieved 08.06.2013

5. MAXQDA

Udo Kuckartz released Windows software for qualitative analysis, the first version of MAXQDA in 1989. The user interface is available in 10 languages. The software is Unicode-based and works, amongst others, with PDF, DOC and image files and supports linking audio and video files with transcribed text.

< <http://www.content-analysis.de/software/qualitative-analysis> > retrieved 08.06.2013

6. NVivo

NVivo is a Qualitative Data Analysis (QDA) computer software package produced by QSR International. It has been designed for qualitative researchers working with very

rich text-based and/or multimedia information, where deep levels of analysis on small or large volumes of data are required. Works with an interface in English, French, German, Spanish, or Simplified Chinese. A Japanese interface is also available.

< <http://www.content-analysis.de/software/qualitative-analysis> > retrieved 08.06.2013

7. QDAMiner

A software package for coding, annotating, retrieving and analyzing collections of documents or images. The software comes with integrated statistical and visualization tools, a report manager, and several analysis and retrieval features. The command log documents the analysis process and makes it possible to supervise the analysis, multiple coders are supported. Feature list, screenshots and a trial version are available.

< <http://www.content-analysis.de/software/qualitative-analysis> > retrieved 08.06.2013

8. Qualrus

Qualrus is a general-purpose qualitative analysis program, which supports text, and multimedia sources. It offers intelligent suggestions throughout the coding process, and comes with a number of advanced tools to help with analysis of data once it has already been coded. Users can customize and automate many tasks by taking advantage of Qualrus's powerful scripting language.

< <http://www.content-analysis.de/software/qualitative-analysis> > retrieved 08.06.2013

9. Transana

Transana is a tool for the transcription and analysis of audio/visual data.

< <http://www.content-analysis.de/software/qualitative-analysis> > retrieved 08.06.2013

APPENDIX 3 NETNOGRAPHY RESEARCH ON SUNLESS TANNING PRODUCTS BY HUYE

This appendix provides the readers with the additional information of netnography research in sunless tanning product case study.



Objectives and Definition of Research Field

- Learn what **INFLUENCES** her
- Learn how she **THINKS**
- See the **WORLD** through her **EYES**
- Know her daily **RITUALS** and **HABITS** of usage
- Hear **WHAT** she **SAYS** and **HOW** she **SAYS** it
- Understand the **PERSON** not only single **BODY PARTS**
- Learn what **DRIVES** her
- Know what she **LIKES/DISLIKES** and how she encounters **PROBLEMS**
- Consider her **INNOVATIONS**

Beiersdorf – Sunless Tanning: Identify Special User Groups



Raccoon Eyes



"I think that I have the worst **raccoon eyes** in the world. Everyone at the gym I work at has let me know that **my eyes are REALLY WHITE**. I looked at a pic of me from a few days ago and **it looked like my eyes were glowing in the dark!** You **gotta wear the goggles when you use a tanning bed** so I think the **best solution unfortunately would be to use sunless tanner.**"

Source: www.lamtan.com

Tanning Desasters



MY GOD!!!!!! THIS SOOOOOOOOOO HAPPENED TO ME!!!! I absolutely **HATE** the **Jergens natural glow now**. My neck was sooo blotchy and my dad told me **I looked like I had a skin disease!!!!!!** It was **impossible to scrub off the remaining parts!!** I scrubbed and **scrubbed at my neck with a lufa until my skin was red but the blotches still wouldn't come off!!!**

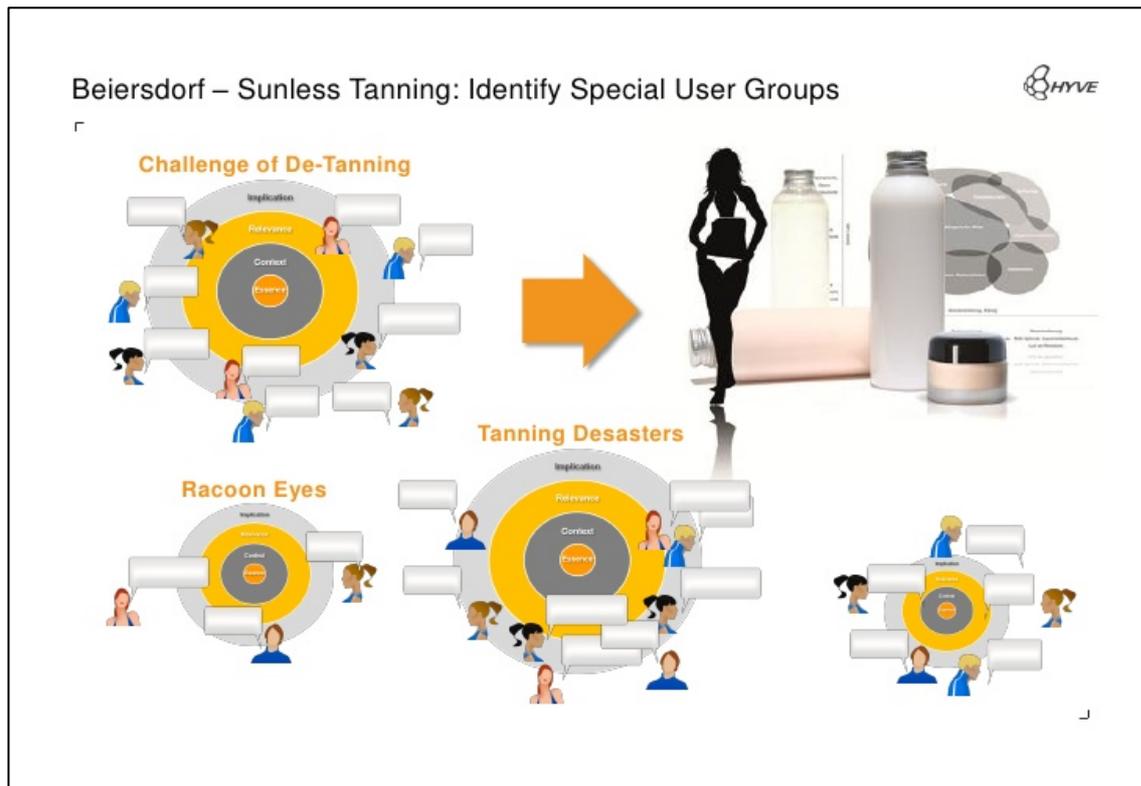
Source: www.lamtan.com

Challenge of De-Tanning



I know we talked about this a little while ago, but I **tried using nail polish remover to make sure the corners of my nails didn't get orange, but it didn't work.** Normally I just clip my nails really short so if there is **discoloration you can't really tell that much**, but it's really starting to bug me. **The nail polish remover is acetone free... does that make a difference?**

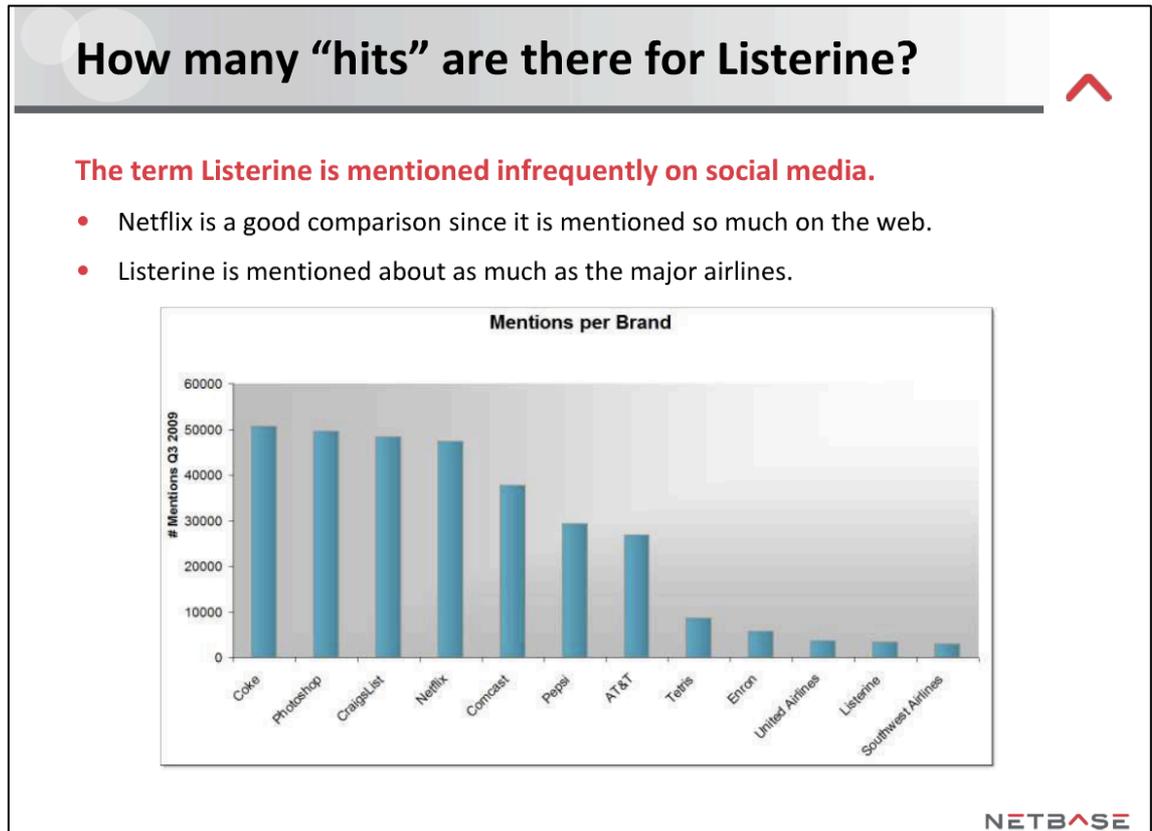
Source: www.lamtan.com



(Netnography User Innovation in Sunless Tanning Communities by Steffen Hück
<http://www.slideshare.net/netnography/netnocamp-slideshare-send?nomobile=true>),
 <retrieved by 22.07.2013>.

APPENDIX 4 DATA COLLECTION RESULTS FOR LISTERINE

There is a large amount of results, which has collected from Listerine netnography research. The write has present most of them in the previous section. This appendix widens the outcomes of data collection stage of netnography research in Listerine case in order to create a larger picture of netnographic results generating from the research.

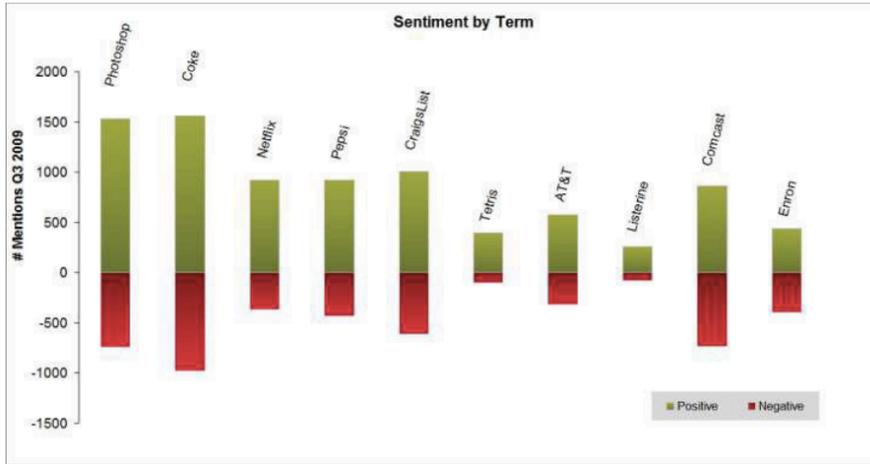


(Source: Netnography Case Study on Listerine by NetBase (Osofsky Micheal 2010) <<http://www.slideshare.net/mosofsky/netnography-case-study-on-listerine-by-netbase>>, retrieved by 25.07.2013.)

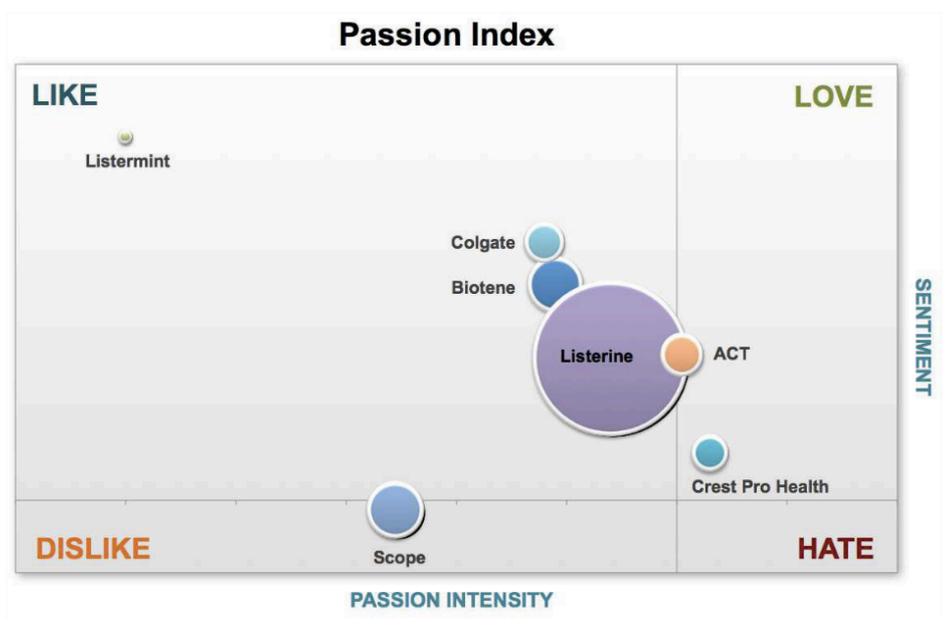
What is the overall sentiment for Listerine?



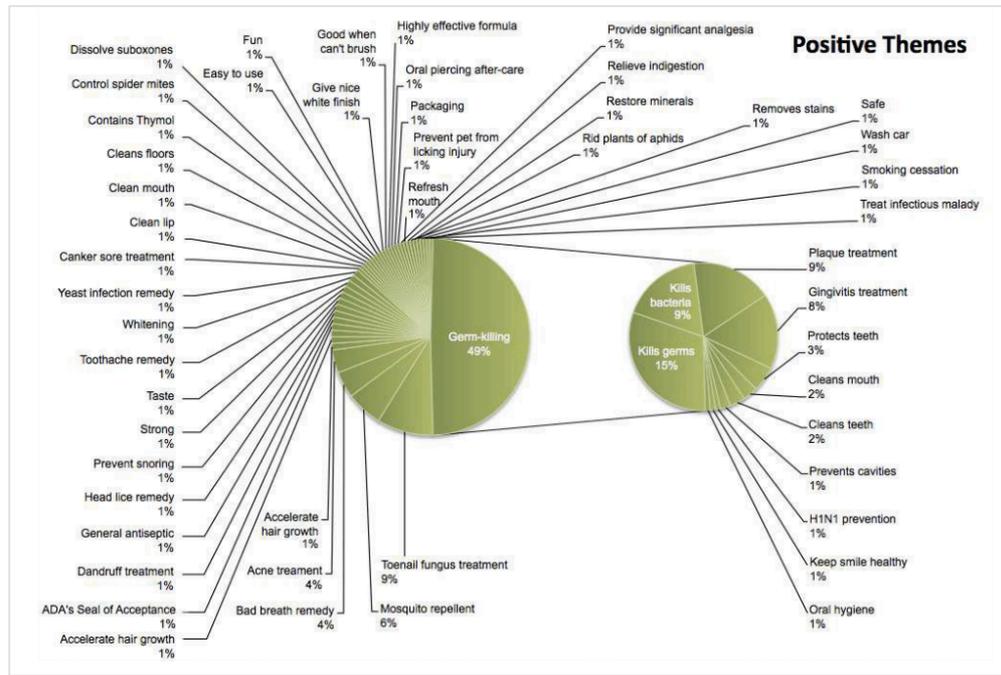
- As compared to other brands, consumer sentiment for Listerine is moderate.
- Photoshop and Comcast are reliable control variables for positive and negative extremes.



Passion Index

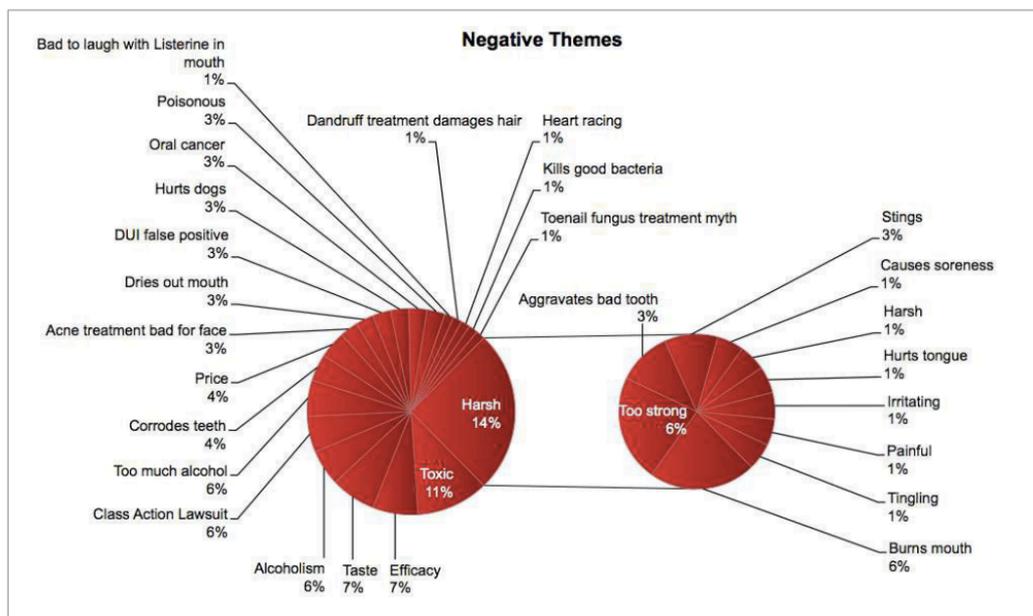


Positive Themes



NETBASE

Negative Themes



NETBASE

(Source: < <http://www.slideshare.net/mosofsky/netnography-case-study-on-listerine-by-netbase>>, retrieved by 25.07.2013.)

APPENDIX 5 DATA INTERPRETATION - LISTERINE BENEFITS

Opportunity: Toenail fungus treatment

Insight

The second most mentioned benefit of Listerine is that it can be used to treat toenail fungus.

This theme was 9% of positive comments.

Listerine Nail Fungus Remedy - I have also heard people saying Listerine footbaths can **cure toenail fungus**.

Many people find that when it comes to **treating nail fungus** Listerine and vinegar combined offer even faster results.

Many **toenail fungus sufferers** recommend using Listerine to help overcome the problem without having to use other products, whether they are prescription, over the counter or other home remedies.

Vicks, Listerine, Epsom salts, and hydrogen peroxide are also other options for a toenail fungus cure although these have been met with **mixed results**.

Listerine mouthwash is another common way to try and **treat toenail fungus**.



Listerine mixed with vinegar is also a good solution you can use as foot soak to **treat toenail fungus**.

Listerine is supposed to be one of the **biggest myths in nail fungus treatments** even though a lot of people claim soaking their feet in it has completely cured their nail fungus.

Potential Actions

- Determine effectiveness of Listerine for toenail fungus treatment.
- Introduce a toenail fungus treatment "from the makers of Listerine".

→ **If Listerine is deemed to be good for toenail treatment, some non-believers will need to be informed.**

NETBASE

Opportunity: Mosquito repellent

Insight

A commonly mentioned benefit of Listerine is that it can be used to repel mosquitoes.

This theme was 6% of positive comments.

Buck and Judy sent in a tip about using Listerine to **repel mosquitoes**.

I heard one time about using Listerine to **repel mosquitoes**, but I do not know if it works for these nasty fleas.

The best way of **getting rid of mosquitoes** is Listerine, the original medicinal type.

I am going to see if this rumor about using Listerine to **kill mosquitoes** really works.

Listerine is also good to spray on yourself to **keep the mskiters off you**.



i heard Listerine is **good for misquitos**.

Don't believe everything you read in a chain letter, however, Listerine sprayed or wiped on arms and legs do keep mosquitoes away.

A friend told me about killing mosquitos with Listerine, **at first, I thought it was a joke**, then a couple of weeks ago, I sprayed Listerine on the areas where I was bitten, the itch went away quickly.

Potential Actions

- Determine effectiveness of Listerine as a mosquito repellent.
- Publish a survival kit with Listerine listed as not only a mouth wash but also a mosquito repellent.

→ **If Listerine is deemed to be good for repelling mosquitoes, some skeptics will need to be informed.**

NETBASE

Opportunity: Acne treatment

^ Insight

Many consumers talk about using Listerine to treat their acne.

A few disputed the efficacy of this practice.

This theme was 4% of positive comments.

I have used Listerine for years to **clear up small blemishes**.

I read in a magazine that Listerine can actually help **reduce the redness of acne**.

I heard that toothpaste and listerine can be used to **clear or reduce acne**.

Listerine is **useful for zapping your zits Q**.

Some people use Listerine mouthwash as a toner, **because the menthol helps inflammatory acne**.



^ Potential Actions

- Determine effectiveness of Listerine for acne treatment.
- Introduce an acne treatment "from the makers of Listerine".

I can't offer you a solution, but just **don't use Listerine on your face**.

Rubbing listerine on the face helps you get rid of spots...? **you're being gullible**.

Do **not use** toothpaste or **Listerine!!!**

→ **If Listerine is deemed to be good for acne treatment, some non-believers will need to be informed.**



(Source: Netnography Case Study on Listerine by NetBase (Osofsky Micheal 2010) <<http://www.slideshare.net/mosofsky/netnography-case-study-on-listerine-by-netbase>>, retrieved by 28.07.2013.)

APPENDIX 6 DATA INTERPRETATION - LISTERINE ISSUES

Threat: Dries out mouth

Insight

Several consumers complained that Listerine dries out their mouth.

This is caused by the alcohol.

A dry mouth is believed to exacerbate bad breath.

This theme was 3% of negative comments.

Pro Health has no alcohol, because it is better to fight bacteria and gingivitis does not **dry out your mouth**, but told by another dentist, I was using Listerine, because the alcohol, which is the basis for the elimination of these bacteria what happens with this.

The only problem with Listerine is that in a documentary I saw on tv, they said alcohol based mouth washes actually **dry out your mouth** (because alcohol has a drying effect) and in the long run can **cause bad breath**.

According to my hygienist, the alcohol would **dry out your mouth**-impeding the natural mineralization of teeth from saliva and **possibly bad breath from a dry mouth**.

Crest Pro Health mouth wash is a better option than Listerine because it does not have alcohol in it (which can **dry out your mouth**).



Do not use listerine, it has alcohol in it and the alcohol has a tendency to **dry the mouth out**.

It's ironic, but i suspect that Listerine at night is bad for your breath, since it contains alcohol => **drys your mouth**, but you can't drink while you're asleep => excessive drying => **bad breath**.

Potential Actions

- Investigate the validity of the causal connection drawn by consumers and the media.
- If deemed to be true, develop a new formulation to address this problem.
- If false, then Listerine should address this better in public service pages like this one:
<http://www.listerine.com/healthy-mouth-body-dry-mouth.jsp>.

NETBASE

Threat: Alcohol abuse

Insight

A surprising number of people complained about alcoholics consuming Listerine.

This theme was 6% of negative comments.

As you have realized, she might be **abusing Listerine** for its alcohol content.

Understandable use of Listerine would be to cover up the beer on the breath, but a **lot of alcoholics drink it** to get drunk or get a buzz off of it, not to mention that mouth wash doesn't even compare to the cost of actual drinking alcohol.

Sister abusing Listerine needs immediate help.

So, instead of going to the store to buy their alcohol, the **drunks will now be storming places such as Wal-Mart in search of that special little bottle of listerine**.

Can I get drunk by drinking listerine? [...] Judging it has a poison control number on my bottle of Listerine, I don't recommend it.

I don't know the alcohol content of Listerine but depending upon the size of the bottle assuming you even hold down the contents of that bottle **you could get drunk and/or throw up**.



Potential Actions

- Make a donation to Alcoholics Anonymous or to science for alcoholism research.
- Do a Public Service Announcement (PSA) about the importance of getting treatment.
- Promote Listerine's efforts to fight alcoholism.
- Do a campaign to educate the market on how little alcohol Listerine actually contains.

NETBASE

(Source: Netnography Case Study on Listerine by NetBase (Osofsky Micheal 2010) <
<http://www.slideshare.net/mosofsky/netnography-case-study-on-listerine-by-netbase>>,
 retrieved by 28.07.2013.)