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## **A Guide to Methods for Small and Medium Sized Enterprises (SMEs) Designing for New Markets, Based on Cultural Research Experiences**

M. Haarakoski<sup>1</sup>, M.E. Johansson<sup>2</sup>, J. Lundberg<sup>2</sup>

<sup>1</sup>University of Lapland, Rovaniemi, Finland, <sup>2</sup>Luleå University of Technology, Luleå, Sweden

milla.haarakoski@ulapland.fi

### **Introduction**

When industrial products, produced by small and medium size enterprises (SME), are launched onto new markets, the products' success depends on several factors. Some factors affecting the success of products are customer preferences and criteria regarding the design of the products (Korvenmaa, 1998, p. 64). One important requirement thus, is to give consideration to culture related preferences in product design. Similarities in product design preferences in different countries have been found in earlier studies, however, clear differences have also been proven (Dawson, Larsen, Cawood & Lewis, 2005, pp. 393-403). As argued by Roberts (2001, pp. 1-15), it is important to conduct cultural research to enable product designers to design products better suited for customer needs. Critical adjustments must be made to accommodate the behaviours, beliefs and aspirations of target cultures in order to succeed at the new markets (Whitney, 2006, p. 1). A study (Kumar, 2003, pp. 51-52) has divided new market research into product-focused research, culture-focused research and activity-focused research. Their study, concerning construction of a new database with information about market preferences, is however, in progress and therefore its usefulness for a SME is still to be seen. Another study (Hofmeester, De Charon, 1999, pp. 118-165) has begun to build Methods Lab to assist designers in weighing and choosing appropriate user research methods for design. As with Kumar's study it is not yet available and therefore conventional methods, such as questionnaires, interviews and observations, were used in this study to serve SMEs with obtainable and reliable procedures to conduct a design research.

Arnold (2005, pp. 20-27) points out that companies might feel that funds invested in research are unnecessary even though reducing risk and maximizing potential for innovation is desired. It states in the same article that direct involvement for the data collection is advisable for the designer working at the company. Therefore, this study offers the SME's designer with guidance of how to collect the information in practice. The SME's are provided with instant advice of which methods to use when information about the cultural design preferences



is needed. This paper has tested some available methods to show SMEs which are suitable when design research is conducted in another culture. Consequently, SME's are provided with suitable methods and approaches for acquiring information about product design preferences in a foreign culture. By using presented methods, necessary knowledge to accommodate SMEs product design to a different culture can be achieved. The aim is to show the SMEs how to conduct design studies by themselves and what the benefits are of doing so.

This study is based on the experiences gathered in three countries, the USA, South Korea and Germany, during a field research from March to September 2005, a total of 15 weeks abroad. The research was carried out using seven cases from Finland and Sweden (table 1) to experiment in different ways of operating with various products and target groups. The cases represent different design problems, target countries, target groups and products; therefore the cases in this study all have different foundations. The context can be divided into six elements: product, usage, person, physical surroundings, context of social interactions and cultural context (Aula, Falin, Vehmas, Uotila & Ryttilähti, 2005, pp. 12-13), which all differ greatly in this study. In the present study the products have diverse purposes, prices, appearances and other properties. The products are used by varying target groups and the environments to use the products are neither alike. They differ by being from various phases of product development, strategic, tactical or operative (Järvinen, Koskinen, 2001, p. 32) some were open for radical development and others were in need of small refinements. In addition, the studied countries do not only differ in their geographical location but also in culture, traditions, values and history, giving several contrary views to the study. Therefore, the cases provided the study with an extensive ground to draw conclusions from. Because of the diversity of the cases, it was possible to create instructions which several SMEs can use as a direction for their own design research. Consequently, this study concentrates on presenting the most suitable methods for the SME in order to find out the product design preferences in the chosen target country.

**Table 1.** Background of cases provided by SMEs.

CASE	NUMBER OF EMPLOYEES	TURNOVER <sup>a</sup>	SELECTED PRODUCT	QUESTION DEFINED BY THE SME	TARGET COUNTRY	primary TARGET GROUP	secondary TARGET GROUP
A	250	30 (2005)	lifting aids for patients	What are the design preferences of hospital privacy equipment?	USA	staff at nursing homes or hospitals	patients at nursing homes or hospitals
B	80	6.5 (2004)	hunting knives	What are the design preferences concerning hunting knives?	USA	hunting knife users	potential users for hunting knives
C	240	37.5 (2005)	playground equipment	What are the design preferences concerning playground equipment?	South Korea	people with experience of South Korean playgrounds	experts and decision makers concerning playgrounds
D	16	2 (2005)	entrance doors	What are the design preferences concerning exterior entrance doors?	South Korea	constructors, house manufacturers and buyers	potential private customers of exterior entrance doors
E	33	2.5 (2004)	mooring fingers for small boats	What are the design preferences concerning mooring fingers?	Germany	harbor masters, boat club board members	boat users
F	20	3.6 (2004)	log houses	What are the design preferences concerning log house details?	Germany	log house owners, sellers and customers	potential customers for log houses
G	20	2.2 (2005)	trailer covers	What are the design preferences of vacuum pressed trailer covers?	Germany	car and trailer owners	potential customers for trailer covers

Note: <sup>a</sup>Annual turnover, million Euros and year.



## Method

### 1. Preparations for Field Research

As proven by former studies, well-planned design research helps to design or redesign a successful product. Previous studies also imply that the importance of high-quality design research is of equal importance to first-class design. (Chang, Van, 2003, pp. 173-180) Proper research families; approaches and techniques must be considered (Blaxter, Huges & Tight, 1996, p. 59), therefore the SME has to set accurate goals for the research in order to limit the theme to suit the case. Jan Trost emphasizes that the aim must be clear in order to conduct the study with correct methods (Trost, 2001, pp. 14-15). Aims can be defined by formulating a design brief, which is here described as a written explanation outlining the goals of the design project. A thorough and clear design brief is a critical part of the design process because it helps to develop understanding and serves as an essential point of reference. The brief ensures that important issues are considered and questioned before the actual design process begins. (Kettunen, 2000, pp. 64-65, Clear Design UK, 2005) Target groups were defined in the brief to acquire up to date information from the market of interest. The participating SMEs also selected target countries which they ranked according to their export interests. Based on the SMEs' preference countries, three were chosen according to the available economic resources.

Once defining the aims and design questions, suitable methods were chosen for acquiring the needed information. Possible user research methods for design are presented in The Methods Lab, where large population statistic methods, such as questionnaires, are suggested to be used in conjunction with individual interviews, to support each other (Hofmeester, De Charon, 1999, pp. 118-165). In this study, the methodological focus was on the questionnaires to attain quantitative data. Questionnaires enable the use of different languages, therefore the material could be gathered from a widely spread target group (Routio, 2000, p. 80). In studies concerning different cultures there is a risk of perceiving questions differently due to cultural background, which can affect the way of answering questions (Cheung, 2000; Douglas, 2003; Johnson, 1998; Lee, 2002; Van de Vijver, 1996). In order to minimize misunderstandings, questionnaires were mainly translated by natives in this study. Interviews were decided to be used to obtain deeper knowledge of the answers given in the questionnaires (Järvinen, 2000, pp. 153-162). Interviews allow subsequent questions to be asked and can cover unpredictable answer-options of the questionnaire. Therefore both quantity and quality are provided to the research. In addition to questionnaires and interviews a third method, web-questionnaires, was used. Therefore even a greater number of persons from the target group were reached. The questions in the web-questionnaire are identical to the printed ones, thus the main difference is the way the target group answered the questionnaire, which was through the Internet.

There are several question types to use in a questionnaire (Blaxter et al., 1996, p. 161). The strategy and form of the questions were prepared to support design related questions, therefore many explanatory pictures were used. Pictures together with short explanations help the target person understand design issues more quickly compared to explaining them with only words. Pictures also enable more advanced and accurate questions to be asked. Only essential questions should be asked to minimize the time and effort for both the respondent and the person responsible for the research process (Barnsley, 1993; Carpenter, 1993). Recommended time for the respondent to complete a questionnaire is less than half an hour (Ejlertsson, 1996, p. 12), which was a goal for this study.



The SME should consult instructive literature such as (Blaxter, 1996; Järvinen, 2000; Neuman, 2003; Routio, 2000) to choose the appropriate question type. The most suitable type of answering is mainly decided according to the information needed. Based on the pilot test, four types were selected for this study to maintain a clear and controlled structure for the questionnaire. The chosen types were Likert-scales with 7 categories (Huotari, 2003, pp. 33-34; Langerak, Peelen & Commandeur, 1997, pp. 281-289), boxes where options are marked with letters A to O, boxes where options are marked with X and open-ended questions where the respondent could write freely.

Once the questions were formulated the questionnaires were pilot tested to acquire reliability by using one case as example. A pilot test gives possibility to discover the mistakes and make corrections before conducting the actual field research with greater costs (Carpenter, 1993; Janes, 2001). One case (F) was chosen for the pilot because of the opportunity to conduct the test in Germany, during three days of BAU 2005 fair, the most important construction related event in Europe (BAU, 2005). The goal was to reach as many persons in the target group as possible, and to convince them to answer the questionnaire, in order to receive instructive experiences and to test different approaches. Based on the experience from the pilot test, questionnaires and strategies to conduct the field research were refined.

Preparations for the field research began simultaneously with the completion of questionnaires and interviews in order to use time abroad efficiently. Contact persons were acquired close to the target sites. As in a study about Dutch and Belgian industrial firms, the importance of cooperation among and between companies was emphasized (Langerak et al., 1997, pp. 281-289). One of the critical issues arisen from their study in new product development is the horizontal structures of the company. Therefore the recommendation in this study was to have at least one contact person for each SME to help organize the field research in practice. The contact person in the target country had knowledge of the product and design problem of the case and was therefore asked to find out the most adequate sites to deliver the questionnaires and help setting up meetings with respondents.

## 2. Field Research

The field research was conducted during 03.2005 –09.2005 in the USA, South Korea and Germany. Each case was studied by two researchers for 10 days in the selected target country. During this time information about the target country and the target groups were gathered.

The first activity in each case was to approach the contact person provided by the SME. Typically one or more contact persons assisted in gaining access to research sites and to meet respondents. The plan was to gain all available information from the contacts about how to reach experts and respondents for interviews and to obtain answered questionnaires.

One or more sites where respondents were asked to fill out questionnaires were found with contact person's assistance. The goal for sites was to provide the study with a number of respondents from one or more target



groups, depending on the case. The method to approach the respondent differed greatly due to situations. The first task to acquire an answered questionnaire was to gain access to the respondents. The second task was to convince a respondent to answer the questionnaire. The approaches to convince the respondents varied not only from country to country, case to case and site to site but also from day to day. A typical strategy was to inform briefly about the study and then ask the respondent to answer the questionnaire. In cases where the language was a barrier, an explanatory note written in the common language was used. Voluntary participation in a lottery was a way of raising the target person's interest. After the respondent agreed to answer to the questionnaire the method to collect it also differed. In some cases the method was to set a time for the researcher to collect the questionnaire. Another method was to ask the respondents to return the questionnaire to the researchers after it was answered.

To gain full knowledge of the research problem in each case, interviews were conducted with both experts in appropriate fields and with end-users from the target groups of the case. The interviews were conducted in a structured manner and aimed at giving a deeper understanding to the answers from the questionnaires. The intention was that the questionnaire was filled out by the interviewee before the interview. Thus the interviewee had an opportunity to explain reasons behind the answers he or she had given. Different approaches for interviews were conducted based on four factors. The first factor was who the interview is conducted with –an expert or an end-user. The second factor was whether the questionnaire has been answered or not. The third factor was the amount of available time for the interview. The fourth factor was the language skills of the interviewer and interviewee. The interviews were conducted in English, if necessary with the help of an interpreter.

Information gained from what people tell they are doing, for example during interviews, and what they actually do can be verified by observing (Järvinen, 2000, pp. 162-163). Interaction between user and product were observed passively (Ulrich, Eppinger, 1995, p. 38) at the target site to acquire authentic information about the activity. Observations were recorded by writing and photographing of the interaction. The environment of the case was also observed to get a general understanding of the culture. Foreign culture was compared to one's own and possible similarities and differences were noted (Alasutari, 1999, p. 218).

### 3. After Field Research

When all the quantitative data was collected, it was analyzed with the statistical program SPSS. This together with analyzing the performed interviews and observations (Arnold, 2005, pp. 20-27) to categorize gathered material gives the SMEs possibilities to produce design concepts which are customized for the market of interest.

## Results And Discussions

### 4. Preparations for Field Research

It is essential to plan the field research properly to minimize costs and time loss. Two SMEs (A and D) wished to change target country late in the preparation phase due to their insufficient background research of the design problem –however, it was too late in order to keep the time frame of the study. As a result, partly



unfocused research material was acquired for them, and therefore the preparations of research are emphasized. Efficiency and ability to diminish time abroad are strongly connected with the preparations done before leaving. All available knowledge concerning the target country's culture should be gathered by the SME before the field-phase in order to accomplish it successfully.

#### 4.1. Development of Questionnaires

An efficient method to explain design issues to a target group, is in form of pictures. Pictures can bridge over linguistic gaps as in a study between a Korean corporation and an American research and strategy centre (McNeill, 2005, pp. 16-19). The picture's purpose determined the size, resolution, color or colorlessness of it.

The level of difficulty, order of questions and length of a questionnaire affected the amount of answered questionnaires. In this study, the number of questions varied between 16 and 29 per questionnaire. If a single question in the beginning of the questionnaire is too advanced for the target person they are all most likely left unanswered. Therefore, a suggestion is to raise interest by placing easier questions in the beginning and leaving more difficult ones to the end of the questionnaire (Huotari, Laitakari-Svärd, Laakko & Koskinen, 2003, pp. 33-34) to avoid a deterrent effect. Considering these issues, more questionnaires will be acquired.

It is advisable to conduct a pilot test to find mistakes in order to improve the questionnaire. The recommended number of respondents are ca. 20 if the questionnaire constructor is present to note comments from the respondents (Ejlertsson, 1996, p. 33) during the pilot testing. In this study a pilot test was conducted with respondents close to the actual target group. As a result of the pilot test, the questions and structure of the questionnaire were improved. However, the most valuable knowledge gained from the pilot test was through the interaction with the respondents; people answered to a questionnaire if they had motivation, time and a suitable place to do it. In user centered product development literature (Huotari et al., 2003, p. 23) it is advised to reward the respondent. The reward can be in form of a gift for all participants or a drawing for a prize. A prize was found to be a good motivator, the best was however if the respondents had personal interest in the subject. It was also observed that some sort of attraction helps to raise respondent's interest. Therefore it is necessary to stand out in situations where there are many competitors for people's time or interest.

Before finalizing the questionnaire, the contact person or an expert in the target country was consulted regarding functionality and cultural aspects of the questionnaire. Due to the fact that all the questionnaires were developed in the same structure, improvements of one questionnaire could also be implemented to the others. Changes such as simplifying questions and diminishing the length of the questionnaire did increase the number of answered questionnaires.

Web-based questionnaires are not dependent from the field research, but must be sent to the respondents to acquire the results for the analyzing in time.

#### 4.2. Preparation of Interviews

Interviews followed the structure of the questionnaire which the respondent was asked to answer first. This resulted in simplified preparations and interview-time was set to approximately half an hour.



#### 4.3. Establishing Contact Persons

One of the most important tasks of the preparation phase is to establish contacts in the target country. In this study the contacts affected the outcome positively when they were highly involved, therefore motivators should be prepared and benefits emphasized for the contacts. An SME has much to gain by finding contacts, with connections to the desired field and target groups, early in the preparation phase.

### 5. Field Research

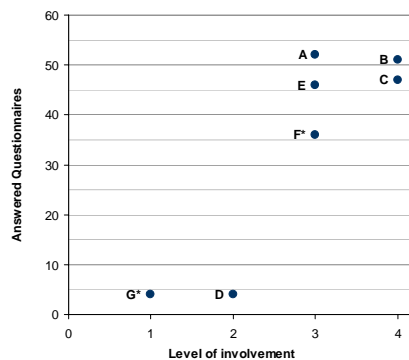
When arriving to a new country time is needed for acclimatization. In this study two or three days were used to get accustomed to the new location which eased the operation. The adjustment time was also used to observe, which is why a longer time for adjustments only benefits the SME. In this study there were more than one case studied in each country, which prolonged the actual time spent in the country. A discovery was that differences between cultures became apparent at different stages of the field research; prominent differences were observed instantly, while more subtle differences were noted later.

#### 5.1. The Importance of Contacts

Contact persons proved to be important due to the information they offered, which was not possible to acquire otherwise. The contact person also played a role as guide, providing useful information about local customs and behaviors.

The involvement of the contact had a direct affect on the outcomes, a contact with little involvement resulted in less answered questionnaires and interviews. This absence of involvement might be because the contact either could not see personal benefits from cooperation or lacked a full understanding of the requested task. The greatest contribution from contacts was pre-booked meetings with further contacts or interviewees, which maximized the use of time abroad. Typically the contact had a 10 day schedule, such as sites to visit and other valuable advice, this however varied between contacts as well as the tasks performed by them. The level of involvement varied between cases and this resulted in vast differences in amounts of answered questionnaires. (figure 1). It is evident in all cases that when the contacts are involved, the number of answered questionnaires is high.

**Figure 1.** The number of answered questions in each case as a function of the contact persons level of involvement.



\* Two contact persons; the level of involvement is a mean value of the two contact person's involvement.

Note: Level of involvement



- 4 The visit was well planned beforehand. Contact provided a thorough introduction to the culture and target sites. The contact offered a lot of help in acquiring interviews, questionnaires and further contacts. The contact provided additional help.
- 3 The contact provided good introduction to the culture and target sites. The contact offered help to acquire interviews, questionnaires and further contacts.
- 2 The contact provided introduction to the culture and target sites. The contact offered some help to acquire interviews and questionnaires.
- 1 The contact offered interviews and questionnaires.
- 0 No help from the contact.

### 5.2. Hints for the Interviews

Typically the respondent answered a questionnaire which was subsequently used as a base for the interview, however on a few occasions this was not possible. In those occasions pictures from the questionnaires were used and the interview was still concerning the subject, however in a more general level. If there was a possibility the interviewee was asked to fill the questionnaire out at a later time to enable comparisons between questionnaire and interview. The interviews were conducted with two types of respondents, experts and end-users. The experts provided the study with wider aspects on the topics of the case and understandings of how the culture has affected the design of products. The target groups for the questionnaires were end-users who providing the study with explanations to answers in the questionnaires.

### 5.3. Language Difficulties

The language of this study is English, however, in order to receive any larger number of answered questionnaires they were constructed in the native language of the target country. Even in cases where respondents had sufficient English language skills, some respondents decline to answer the questionnaire until it was explained that the questionnaire was in their native language. Language also affected the outcome in interviews when a translator was used. A professional interpreter is trained to translate objectively; however in two cases the contact person acted as an interpreter which could have affected the results. There is a risk that the contact aims to please the SME, instead of translating subjectively.

### 5.4. Recommended Sites and Approaches for Data Collection

The goal in each case was to locate sites that provided sufficient amount of appropriate respondents. The most productive sites turned out to be (A) cafeterias at hospitals, (B) shopping malls with knife shops and (E) harbors for private boats. A common factor in these cases was that the respondents had free time available and were open for additional tasks. In one case (C) the target persons were spending leisure time at the playgrounds with their children; however, the children occupied their time which prevented them from fully concentrating on the questionnaire. Too many persons in a site might have created stress and distractions. Therefore the most productive target site is a place where the target person has available time, nothing more important to do, no distractions, a place to fill out the questionnaire at and a level of interest in helping the study.

Different approaches to attain answered questionnaires were tested and the approaches can be divided into three stages; gaining access to the respondent, convincing the respondent and receiving the answered

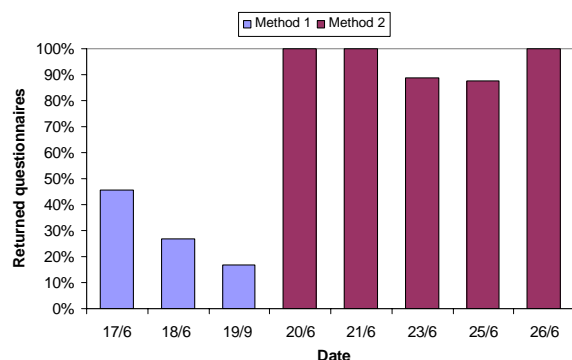


questionnaire. In three cases (A, E and F), formal permits were acquired in order to gain access to the target group, in the remaining cases a verbal permission granted access to the target site. The method of approaching the respondent affected the outcome; too detailed information of the study had a negative effect whereas a possibility to win a prize had a positive effect. Furthermore the environment influenced the amount of answered questionnaires. Respondents sitting without a writing support, such as a table, were more likely to decline to answer than those with support. The negative effect was even more prominent if the respondent had no place to sit. One possible explanation for this might be the length and level of difficulty of the questionnaire which demands time and concentration from the respondent.

### 5.5. Acquiring Answered Questionnaires

The third stage in attaining answered questionnaires was receiving them after they had been answered. The most effective approach to receive the questionnaires was when the researchers personally collected them at a later time. The least effective approach was when the respondent was supposed to return the questionnaire to the researchers. The return rate was low independent of the approach such as personally leaving the questionnaire to the researchers, leaving it at a designated location or sending it by mail. A prominent example of this is one case (E) (figure 2) where the first method was to ask the respondent to leave the answered questionnaires at a designated place and the second method was when the researchers personally collected questionnaires at a designated time. In the first method the responsibility of the questionnaire was placed on the respondent and in the second on the researchers. It is clear that the response rate is lower if the responsibility is on the respondent. One possible explanation for this is conscience; when the respondent knows that the researchers are returning to collect the questionnaire it is more difficult to not answer the questionnaire. Another explanation might be that it was forgotten to return the questionnaire to an agreed place. Yet another reason is that it is uncomfortable to deny answering a questionnaire face to face, thus it is easier to agree to fill it out without intending to actually perform the task. It has also been noted that the longer time between leaving and collecting a questionnaire, the easier it is for the respondent not to fulfill the task.

**Figure 2.** The success of two methods to acquire answered questionnaires in case E





Acquiring answered questionnaires consumes time, money and effort which can be kept to a minimum by proper planning. The target people and sites provided the study with a realistic and unfiltered image of who the end-user is and how the product is used. Skaggs (2005, pp. 50-60) suggests that the people responsible of the actual product development should conduct the field research to avoid a filtering of the needed information. Hietamäki and Hyvönen (2005, pp. 60-68) also emphasize that intermediaries interpret and filter the information and designers may not receive all the crucial information. Therefore, it is recommended that observations and interviews are conducted by a member of the SMEs' design team. As a result, first hand experience will be acquired, which the SME will base their future design work on. In this study the observations often took place while collecting answered questionnaires. However, it can be suggested that a SME uses reliable external sources for collecting qualitative information such as questionnaires, web-questionnaires or mailed questionnaires, if observations and interviews are conducted by the SME themselves. The use of external sources forces the SME to release control over the questionnaires which can affect the reliability of the information negatively.

#### 5.6. Observations

Throughout the study environment, products, target persons, activities and other objects or phenomenons were observed to create a full understanding of the culture and the case in question. Observations were made of the interaction between the end-user and the product, as well as of situations or locations where the product was present. Observations led to discoveries of problem-areas of the product and to ideas of solutions to design problems. Therefore it can be suggested for the SME to gain accurate first-hand knowledge of the design problem in the target country by observations.

#### 6. After Field Research

The goal for an SME to perform a field research is to acquire information that can be used, for instance, to improve the products' design in order to better suit the target country. In addition to the observations and immeasurable experiences achieved during the field research, the qualitative and quantitative material are of great value and will provide the SME with necessary and needed knowledge.

In two cases (D and G) the number of collected questionnaires was low and additional material had to be collected to be able to obtain reliable conclusions for future design. There are different ways of acquiring additional quantitative material. One approach was to use the contact persons at the target country to collect more questionnaires. Another approach can be to mail questionnaires with a response envelope to the target persons, although this method tends to have a low response rate. An alternative approach used in this study was web-questionnaires; this method however has limitations in reaching all persons in a target group due to demands of computer skills and access to the Internet access (Neuman, 2003, p. 301). Web-questionnaires also have issues, such as problems for the respondent to answer the web-questionnaire, variations concerning settings of the equipment and other problems with software, which might affect on the acquired material and therefore must be considered by the SME. On the other hand, a great number of respondents can be reached at low costs through the Internet, which is why web-questionnaires can be suggested as a good addition to personally collected paper-questionnaires.



Once all research-material is acquired by the SME it is advisable to use a statistical program for efficient and accurate analyses. There are programs for analyzing both quantitative and qualitative materials and the results can be used as a base for designing a product to suit the preferences of the target group. In this study the fact that questions were formulated in a structured manner facilitated the analysis. There were four types of answering the questions in the questionnaires and the questions were formulated so comparisons could be possible.

### **Conclusions**

The conclusions are based on the experiences acquired during the study and they are aimed specially for SMEs to give guidance in how to operate when confronted with product design related questions. The most important conclusions to help SMEs to conduct a successful field research are pointed out in this chapter.

#### **7. Preparations for Field Research**

- The SME should consider all possible options and methods to conduct a focused and efficient research. What type of information is needed; qualitative or quantitative?
- In culture related research it is useful for the SME to acquire the information at the target country to have an authentic experience of the culture.
- The SME has a lot to achieve by putting effort on finding proper contacts at the target country because the contact person's level of involvement directly affects the outcome.
- A pilot test before the field study is highly recommended to find any problems with either the structure of the questionnaire, the interview or the approach-techniques. Changes can be accomplished before the actual field study, which assures minimizing mistakes.
- The question types for a questionnaire must be chosen according to the needed information. Questions with easy answering types, such as yes/no or crossed boxes, are preferable when many questionnaires are wanted. It also makes analyzing go promptly. On the other hand more extensive information is collected by using open-ended questions.
- A questionnaire should be constructed in the target people's native language to maximize the willingness to answer.
- Pictures are needed to emphasize or explain questions about design. Thus risks of misunderstandings are minimized, especially in cases with questionnaires in a foreign language.
- The time to answer the questionnaire should not exceed half an hour; suggested time is ten minutes to keep the respondent interested.
- The SME can use the first questionnaire as a draft for any similar future investigations.

#### **8. Field Research**

- Respondents are more willing to answer to a questionnaire when they have available time, nothing more important to do, no distractions, a place to fill out the questionnaire at and level of interest in helping the study.



- The respondent has to be convinced to answer the questionnaire. In addition to explaining the importance of the study, offering a possible prize can raise interest in helping.
- Unnecessary filters between the information and the designer at the SME should be avoided to make sure the collected information stays reliable.
- To gain full knowledge of a culture related design problem it is recommended for the SME to interview both experts in appropriate fields and end-users from the appointed target groups. Experts can provide the study with additional knowledge of the culture and cultural effects on product design. The end-users offer information about the actual product user.
- The interview should be performed in the interviewees' native language to obtain original information and to minimize risks of misunderstandings.
- Observations of product, user, environment and interaction between them are essential for understanding cultural- and design preferences.

#### 9. After Field Research

- Web surveys can be used if the target group has access to the Internet and has sufficient computer skills to achieve more information.
- By using web surveys, it is easy to reach a large number of respondents without big expenses.
- Gathered material must be analyzed in order to withdraw conclusions and to implement them into future designs.

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