

Conducting Bilingual User Research

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Abstract

This paper discusses issues related to conducting user research -- such as interviews, usability tests and focus groups -- in languages other than the usability practitioner's native language. It addresses topics relating to the planning, execution and reporting of such research. This paper also presents an overview of cultural considerations, and provides practical advice for handling international travel and the language translation required when conducting bilingual research.

Introduction

One role of the usability practitioner is to understand the characteristics of users and to specify how a product can fit those characteristics. Because of this, international user research becomes an imperative for global market places. Although guidelines for designing international user interfaces have existed since the early 1990s (1, 2, 3, 4), companies still must test a localized design to ensure that it is usable. Companies that are in the early "needs-gathering" stage of product development can conduct research in target countries to ensure that their product will meet the needs and expectations of users from diverse cultures. Although existing literature has begun to address the issues involved in conducting international research (5, 6, 7, 8, 9), practitioners who are new to this type of research might find practical options for handling translation useful. Over the past ten years, the author has had the opportunity to conduct user research in a number of different countries: contextual inquiries in Italy, observations in Mexico, home interviews in Korea and the US, and usability tests and focus groups conducted in Spanish in the US. In each of these studies, it was necessary to conduct the research in the user group's native language, and then translate the results (either real-time or afterward) into English.

Because most, though not all, bilingual research takes place in a country other than the usability practitioner's, the first two sections provide a brief introduction to cultural and travel-related issues. The remaining two sections provide specific guidance for language translation and reporting.

Cultural Issues

In the United States, the usability practitioner typically relies on research techniques such as interviews, observations, usability tests and focus groups to understand users' needs. However, these techniques do not necessarily function well within all cultures, so it is essential for the usability practitioner to understand the target culture when selecting the appropriate research methodology. This section provides a brief introduction to the topic of cultural dimensions.

The cultural anthropologist Geert Hofstede (10) identified five fundamental *cultural dimensions* by which we can categorize a given country or culture. These are:

- Power distance: the extent that people accept large or small differences of power in social hierarchies, or the extent to which people accept that power is – and should be – distributed unequally.
- Individualism vs. collectivism: the orientation to individual or group achievements, or the extent to which people see themselves as separate from others in society.
- Masculinity vs. femininity (sometimes referred to as "toughness"): the degree to which a culture separates/doesn't separate traditional gender roles, or the extent to which individual achievement and success are valued.
- Uncertainty avoidance: the degree to which a culture is uncomfortable with uncertainty and seeks the truth, or the extent to which people feel threatened by ambiguity.
- Long-term orientation: the orientation to Confucian thought, which emphasizes patience, or the extent to which people are future-oriented.

Jordan (11) clustered various countries into *cultural groups* according to these cultural dimensions. His groups included Democrats, Meritocrats, Egalitarians, Supportives, Libertarians, Planners, Collectivists and Authoritarians. For example, he characterized France as a Supportive culture, which is tender and very uncomfortable with uncertainty. Supportive cultures have respect for authority and are not particularly individualistic. In contrast, Jordan characterized the United States as a Democratic culture, which is a tough, short-term culture in which there is a very strong emphasis on individual expression. People in Democratic cultures tend to be comfortable with uncertainty and have relatively little respect for authority.

The usability practitioner should learn to which of Jordan's cultural groups their target users belong, and consider Hofstede's cultural dimensions before determining which research approaches are most appropriate. For instance, in India, which is a Collectivist, long-term oriented, high power distance culture, usability testing is not an effective methodology because it requires participants to point out problems they experience while using a product. For Indians, giving a negative opinion about people or things generally makes them uncomfortable. Also, because India is a Collectivist cultural group, it is difficult to obtain an individual opinion. Test participants are likely to provide opinions they believe represent the collective opinion of their society (12). There are also cultures, such as Mexico, where research may be more successful if the facilitator is a local national rather than a foreigner. In Mexico, representatives from foreign companies can have higher perceived status, which can cause interviewees to be hesitant to point out shortcomings with a product. The cultural factors presented here are only a few that the usability practitioner may encounter when selecting culturally-sensitive research methodologies.

Travel-Related Issues

Logistical and travel-related issues become important when planning and conducting bilingual research in another country. There are several good references on this topic (3, 5, 8), as well as helpful books on doing business in other countries (13). Some practical advice from these sources and the author's experience include the following:

- When planning the research, take into account differing national holidays. These may affect the ability to recruit participants and/or make equipment or facility arrangements.
- Allow time to rest and adjust to the time difference upon arriving in the foreign country.
- Engage local people (colleagues in a branch office or hired professionals, for example) to help with logistics such as recruiting, translation, participant compensation and scheduling.
- Allow extra time for every aspect of the research, including travel from site to site, conducting the sessions and holding meetings.
- Expect that conducting research sessions in a foreign language, or even listening to a translation of the sessions, requires a more intense level of attention and is more tiring. Schedule fewer sessions per day than would be scheduled at home.
- Anticipate potential technology issues such as voltage compatibility, phone service reliability, and the availability of supplies such as videotapes, audio tapes, cables and batteries. Consider bringing extra supplies or having them shipped ahead of time.
- Expect the unexpected, and be prepared to adapt the research methodology quickly. Be flexible.
- Be prepared to work weekday nights and weekends. In many countries it is difficult for people to get time off from work.
- Have a contingency plan in case of personal illness.

Case study 1: Contextual inquiries in Italy

This case study illustrates several of the cultural and travel-related issues discussed in the previous sections. Several years ago, the author conducted a series of contextual inquiries for an Italian client in Italy. The goal of the research was to understand how home appliances were installed and used. The research entailed a week of contextual inquiries with both appliance installers and home owners regarding their experiences with the product. Before leaving for Italy, the research team took introductory Italian lessons and borrowed Italian language tapes from the local library. The team also arranged for the client to provide an interpreter to translate discussions during the contextual inquiries.

Upon arriving in Italy, a sales representative from the appliance company organized the interviews, drove the research team to each one, and made introductions. A male representative was arranged due to the masculine nature of the Italian appliance installation industry. Female researchers conducting contextual inquiries alone would be considered out of place within the

industry. Only one or two interview sessions were scheduled per day due to the relatively slow pace of work and the long meal times compared to the U.S. The team learned that it would not be appropriate to offer monetary compensation to the appliance installers; instead, the sales representative treated them to a meal in a restaurant. After preparing for and conducting the research, the team had a good understanding of how the product was installed and used, and also an overall sense of how the cultural context might affect design recommendations.

Language Translation

It is generally best to conduct user research in the user's native language so that he or she can express opinions freely and easily. For example, Rowley (5) describes a usability test of a software product that was conducted in Paris. Although the test participants had a good working knowledge of English, and it would have been easier for the test team to conduct the test in English, participants were encouraged to think aloud in French if it made them feel more comfortable.

In bilingual situations, it is necessary either to have a bilingual person on the research team conduct the sessions, hire a bilingual facilitator or have the usability practitioner conduct the sessions with the help of an interpreter. If non-bilingual observers are watching the sessions, it is necessary to have both a bilingual facilitator to conduct the sessions and a bilingual interpreter to translate for the observers (and to record the translation on videotape).

The author offers the following advice to usability specialists conducting this type of research:

- Consider learning some of the language before conducting the research (lessons, audio tapes, etc.).
- Memorize industry-specific terms in the foreign language.
- Hire a facilitator with experience conducting interviews and get to know him or her before conducting the research. It is important to thoroughly explain the purpose of the research (interview, usability test or focus group).
- Translate all written materials (questionnaires, test scripts, explanations of the product, etc.) beforehand to aid the facilitator.
- Conduct a pilot session to ensure that the facilitator is comfortable with the protocol. This is particularly important if the facilitator is used to conducting focus groups but has never facilitated a one-on-one usability test.
- Videotape all sessions and consider obtaining one to two backup audio tapes for future translation.

It is important to realize that many people who can moderate a session in another language will not perform interpretation during a session or provide translation services. Many vendors are very specific about this. It is also important to remember that some user groups speak one language and write another. For example, the author recently conducted focus groups in the U.S. in which the participants spoke Spanish but were unable to read the translated questionnaires. These participants had learned to read English when attending school in America and spoke Spanish at home with their families. One should consider this factor when there will be a spoken discussion as well as written exercises.

Technology issues

There are numerous technological issues involved in language translation. Whether renting a facility for usability tests/focus groups, or conducting them in-house, practitioners need to consider the equipment required to capture the results in two languages. When renting a facility, it is essential to work with a reputable firm and discuss technological needs in detail several weeks prior to conducting any research. Market research facilities are an obvious choice because they are equipped with one-way mirrors and have space for observers. A rented facility will usually subcontract the computer equipment and audio-visual (AV) equipment, so anticipate spending time on the phone clarifying your needs with the AV subcontractor.

Rental equipment may include:

- extra video cameras on tripods if several views of the session are needed (market research facilities typically have only one camera mounted on the ceiling);
- separate audio equipment for recording the facilitator in the users' native language and the interpreter in another language;
- headsets for the observers to hear the interpreter, assuming they don't speak the second language;
- a computer that meets pre-determined specifications (if testing software or a web site);

- a scan converter to capture the computer image (if testing software or a web site);
- a high-speed Internet connection (if testing a web site).

High-speed internet connections and scan converters can be very expensive to rent, so it is wise to get an estimate before conducting the research.

Case study 2: Usability test conducted in Spanish and English

This case study illustrates the translation and technology issues discussed in the previous section. The author recently conducted a usability test in Spanish that took place in Miami, Florida. The purpose of the test was to evaluate a Spanish-language web site with participants from various Hispanic communities. First, the team researched various market research facilities in Miami and selected one based on price and availability. The facility provided a list of reputable, bilingual facilitators, and the team selected one to conduct the sessions in Spanish. The facility provided an interpreter to translate real-time for the observers, most of whom spoke only English. The facilitator was contacted several weeks in advance and briefed regarding the goals of the test. In the course of translating the test script and tasks from English to Spanish, he made several useful suggestions for adjusting the scenarios and questions so they would be more culturally appropriate.

Five observers watched the test, three of whom spoke only English and two of whom were bilingual. The interpreter sat in the observation room and wore a headset. While listening to the Spanish-language sessions, she recorded a real-time spoken English translation. During the usability test, the English-speaking observers watched the sessions and listened to the interpreter's English translation on wireless headsets. The bilingual observers listened to the Spanish audio over a speaker in the observation room. The videotapes had the interpreter's English translation replacing the Spanish audio from the test room.

Analyzing and Reporting the Results

Conducting research in two languages presents only half the challenge. After completing the research, practitioners need to find the most efficient methods for analyzing and reporting the findings, often in two languages. The following are some suggestions for successful reporting of bilingual research.

As described previously, there are several options for handling translation real-time during the research, which allow the usability practitioner and observers to follow the session. The translated audio can then be recorded to audio tape, video tape or both. When analyzing the results, the practitioner simply listens to the tapes.

In some cases, it is not possible, or not desirable, to have the research sessions translated real-time. For instance, if time is limited, translation would reduce the number of interview questions that could be asked. In this case, it would be necessary to translate the sessions after the fact. One option is to ask a bilingual colleague to do the translation; another option is to hire a professional translation service. If video is not required, then a typed transcript in the practitioner's language is preferable because it facilitates report writing. If translated video is required to communicate the research results, then options are to have a translator watch the video and dub over the audio, or to have a translator add subtitles to the videotape. The author has used both approaches and found them acceptable, though subtitles make the audio seem more natural, as there are no long pauses when the participant obviously is speaking but the interpreter is waiting to translate the meaning of what is being said.

Even if the translation has been handled well, creating a highlight tape is more difficult when two languages are involved. It takes longer to locate appropriate quotes, and thus video clips, when the tapes have either dubbed audio or subtitles. Also, it is difficult to know exactly when to start or end a clip, because the participant's statement may be longer or shorter than the translation. Plan to spend more time creating a bilingual highlight tape than a single-language tape.

Assuming the research report is written in the practitioner's language, it may be necessary to have it translated into the other language for the client's team members who are not fluent in the practitioner's language. In this case, professional translation services are typically the most efficient and accurate method for translation, although it is also possible to ask a bilingual colleague to prepare the translation. Avoid relying on web site translation engines as they are not always accurate, especially in translating industry-specific terminology.

Case Study 3: Interviews and Focus Groups Conducted in Korean and English

This case study illustrates cultural and translation issues discussed in the previous sections. During the past year, the author led an AIR team to complete a five-month project with Samsung Electronics in Seoul, South Korea. The goal of the project

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was to develop interaction guidelines for Samsung's home networked products, including home-automation, home-office and home-entertainment products. The AIR team's role was to lead the Samsung design team in conducting consumer research (a series of home interviews and focus groups) in both countries, and then to lead a collaborative effort to develop the conceptual design for the user interface for those home networked products. The final result was a document containing the detailed interaction identity guidelines for the user interface.

During the research phase, cultural differences between Koreans and Americans became apparent. In the U.S., usability practitioners routinely recruit members of the general public and conduct in-home interviews. During this process, the team sets up video cameras, conducts taped interviews and follows the consumer through relevant portions of their home filming the environment. Koreans are more private than Americans, so to them the concept of a "home interview" was disconcerting. This made recruiting participants very difficult for the Samsung research team. The Korean consumers were also uncomfortable with the concept of being videotaped, so the video taken in Korean homes was minimal and by necessity, focused on products rather than people.

The language difference and the difference in the amount of videotape between the two countries presented a challenge when the AIR team, who spoke only English, needed to create a highlight tape of findings from both countries. Several options were considered, including flying a bilingual Samsung team member to Boston to help create the tape, and sending the English tapes to Korea so that a bilingual team member could create the highlight tape there. In the end, the team contacted an independent agency to provide written English transcripts of the home interviews and focus groups, and add English subtitles to the videotapes. Because professional translators were hired, the work took less than a week. The AIR team was able to create a highlight tape with clips from both countries, which successfully illustrated the important points from the research.

Conclusion

While conducting bilingual research is challenging, it is essential to gain an understanding of people whose language and culture differ from our own in order to design products that will be successful in a global marketplace. By planning ahead, practitioners can increase the likelihood that the research will run smoothly and that the analysis and reporting are efficient.

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