

# ***Minimizing Cultural Bias in Usability Testing***

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## **Abstract**

*Usability testing has earned greater acceptance in the software industry. However, the effect of cultural factors on usability has not been studied extensively. The only study of note in this area is the Virginia Tech study conducted by Ravi Vatrappu and Manuel Pérez-Quiñones, which arrived at the conclusion that cultural affinity affects the results of usability testing. My presentation encapsulates the findings of a recent study in Texas Tech University—that cultural affinity and identity become significant factors only when the testers and the testing process acknowledge it. However, the necessity of considering cultural factors in usability cannot be overlooked.*

## **Introduction**

With the increasing acceptance of usability testing as a vital step in product development, all elements of the process are being studied by academics and practitioners alike. One area that has not received much attention, however, is the cultural aspect- in particular, the effect of cultural factors on the testing process. In brief, cultural factors are believed to influence the results of usability testing, especially in the case of cultural congruence, that is, when the tester shares the same ethnic and cultural background as the facilitator.

## **The Precursor**

The only study of note in this area is the Virginia Tech study conducted by Ravi Vatrappu and Manuel Pérez-Quiñones. They evaluate the role of cultural distance in usability testing with the hypothesis that “having an interviewer of the same culture might mediate the effect of power distance. The cultural common ground between people of the same culture

will help effective communication and in identifying culturally related usability problems and/or design issues” [1] In this case study, the respondents were all students of Indian origin and were asked to test a web site meant for Indian students. The study highlighted two notable conclusions, firstly, that cultural connotations are too significant to be overlooked in a usability study, and secondly, that cultural affinity, or lack thereof, affects the results of usability testing considerably.

The authors reached this conclusion since the testers (comprising Indian graduate students) identified more usability problems, made more comments and suggestions, and offered more culturally-specific comments while working with an Indian interviewer as opposed to an Anglo-American interviewer.

## **The Texas Tech Experience**

Our testing experience at Texas Tech University offers an interesting corollary to the Vatrappu study. In this presentation, I will narrate the Tech experience, and demonstrate that, in the absence of any culture-specific cues, cultural bias can be reduced or even eliminated. Further, I will offer suggestions to actively reduce the element of cultural bias in testers and subjects alike, and to preserve cultural neutrality and objectivity during the testing process.

Usability tests at Texas Tech were conducted for a real client, in this case, the English Department, to discern the usability of the Department web site. Respondents included students of Indian and American origin. The product subject to usability testing had no cultural connotations; therefore, the respondents were not given any cultural cues. Cultural affinity played only a minor role in

recruiting respondents for the study. The greeter and facilitator scripts were culturally neutral. This neutrality reflected in the responses as well—respondents focused on the testing tasks without any reference to ethnicity or culture. Our conclusion was that, while cultural factors do play a significant role in usability testing, testers can and should take steps to minimize cultural bias in cases where a product is culturally neutral. In other words, cultural factors should be studied in usability testing when the use of a product or service is informed by culture and minimized when the product is not imbricated with cultural nuances.

## Implications for Software and Technical Communication

Just as the user is inseparable from the product, culture is part of the user-experience. The role of culture in the use of technology is an expanding field of study; meanwhile usability testing also needs to take cognizance of the culture factor in usability. Studies in this area are sparse; while organizations conduct extensive market research in various regional markets during a product launch cycle, few, if any, consider usability testing as part of this research. Usability testing can bring into focus cultural, linguistic, socio-educational, and ethnic variations in

consumer behavior. Usability testing necessarily involves taking cultural factors into consideration, especially when the product or service is subject to cultural nuances; however, it seems equally vital to eliminate tester bias in order to insure the integrity of test results when culture variations are not variables in the usability testing matrix.

Testers, while taking into account cultural differences, must also take pains to be culturally unbiased during the process of usability testing. This would imply the avoidance of cultural references in the scripts for usability testing. Further, testers would need to preserve cultural neutrality and objectivity in their interactions with respondents. Finally, the practice of decentering, which mandates involving researchers from different cultures, would also prove useful in minimizing bias.

The need for minimizing bias on the part of testers is vital in both instances—when the use of a product is independent of cultural influences and when it is informed by culture. However, in the latter case, minimizing tester bias is critical to successful usability testing. When properly executed and consistently recorded, usability testing can result in significant cost savings and enhanced customer satisfaction.

## References

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