

# Effect of Culture, Medium, and Task on Trust Perception

Qiping Zhang

Long Island University  
720 Northern Blvd, Brookville, NY 11548  
qiping.zhang@liu.edu

## ABSTRACT

In this paper, we examine the effect of culture, media and task on people's trust behavior and trust perception in two different cultural pairs: American-American (AA), Chinese-Chinese(CC), on doing two different tasks: negotiation task and brainstorming task. Our data showed that in negotiation task CC pairs performed better in video condition than in IM (instant messaging) condition while there was no such difference for AA pairs. In addition, it took CC pairs longer time to reach negotiation agreement, but CC pairs perceived lower level of trust than AA pairs.

## Author Keywords

Culture, computer-mediated communication, trust, IM, video

## BACKGROUND AND HYPOTHESE

While communication technologies bridge people over time and distance, it is still not clear how different communication media influences people's trust building and perception in different cultures. Several studies (Zhang 2002; Setlock, Fussell, & Neuwirth, 2004) started to explore the cultural differences on computer-mediated collaboration. Culture becomes an important factor in assessing the impact of communication technologies. However there are much more to learn the role of culture in computer-mediated collaboration and communication.

In Zhang (2002)'s study, pairs of Chinese and Americans performed a negotiation task over audio-only or over audio plus video. They found that performance was the same across pairs from different cultures, but the trust perception in each other, was not only lower for Chinese overall, but lower still for Chinese communicating over audio only compared to video condition. One of the limitation of this study is that Chinese participants were recruited in the states instead of China, their native culture. In current study, we extended Zhang. (2002)'s work by adding additional factor – task in the experiment design, and recruiting Chinese participants back in China their native culture. In addition, we add American-Chinese pairs for the culture factor to explore how intercultural factor interacts with media effects and task effects. The primary objective of this project is to explore the cultural differences on computer-mediated communication and to understand how culture and communication media interact in different tasks to influence people's trust perception and group

performance. Thus it will provide insights into a better way to support cross-cultural collaboration and communication in global virtual teams.

The research problem we addressed is how culture and communication medium interact in different tasks to influence trust perception and performance. Following are our central hypotheses for the study:

H1 (media effect on performance time)

*H1a: video will reduce performance time compared to IM.*

*H1b: Chinese (high context) will take longer time than Americans (low context) in both media.*

H2 (media effect on trust perception)

*H2: video will increase people's trust perception compared to IM for both cultures.*

H3 (interaction effect of culture and media on trust perception)

*H3a: in video connection, Chinese will perceive higher level of trust than Americans.*

*H3b: in IM connection, Chinese and Americans will perceive similar level of trust.*

H4 (task effect on trust perception)

*H4a: in negotiation task, people will perceive more trust when they can see each other via video than when they cannot in IM.*

*H4b: in brainstorming task, people will perceive similar level of trust in both video and IM.*

## METHOD

*Design:* this is a 2x2x2 between subject design with culture (US vs. China), media (video vs. IM), task (negotiation vs. brainstorming).

*Participants:* 40 pairs of Chinese (CC) and 40 pairs of American (AA) undergraduate students. Participants in each pair didn't know each other beforehand.

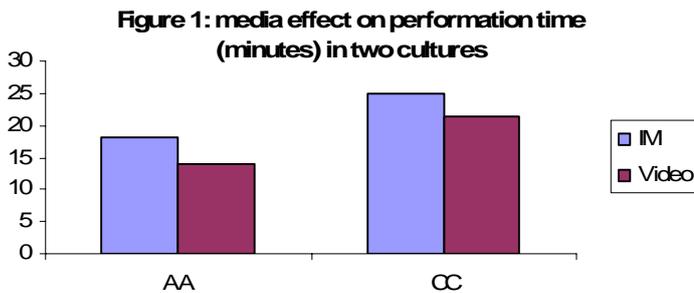
*Task:* brainstorming task (Hymes & Olson, 1992) and negotiation task (Zhang, 2002) were used in the experiment.

*Procedure:* pairs were assigned to each of the following condition: video-brainstorming, video-negotiation, IM-brainstorming, or IM-negotiation. After the task, participants complete the 8-item trust post-questionnaire adapted from McAllister (1995). The questionnaires used a

1-7 Likert-scale - 1 for strongly disagree and 7 for strongly agree.

## RESULTS

As shown in Figure 1, H1 was confirmed. Video did reduce participants performance time compared to IM ( $F(1,54)=6.29, p<.015$ ). It indeed took CC pairs longer time than AA pairs in performing tasks ( $F(1,54)=42.01, p<.001$ ).



H2 of media effect on trust perception was not confirmed. Overall, there are no media effect on trust perception ( $F(1,54)=1.31, p<.26$ ). Participants didn't achieve a higher level of trust in video than in IM.

H3 of interaction effect of culture and media on trust perception was not confirmed. American pairs perceived higher level of trust than Chinese pairs in both video and IM conditions.

H4 of interaction effect of task and media on trust perception was confirmed. ( $F(1,70)=3.65, p<.06$ ). Participants perceived higher level of trust in video than in IM for negotiation task, but same level of trust for brainstorming task. In addition, all pairs perceived higher level of trust in brainstorming task than in negotiation task ( $F(1,70)=88.78, p<.00$ ).

## DISCUSSION

Most of hypotheses were confirmed except that the interaction effect of culture and media on trust perception. The results of higher level of trust perceived by Americans than by Chinese actually contradicted with our hypothesis. The theory of nationality trust and social distance provide a possible explanation. In our study, AA pairs seemed more willing to treat each other as a temporary in-group member instead of a "real stranger", while CC pairs seemed treating the partner as an out-group relationship due to lack of long-term relationship. Such findings suggested to us that further

investigation of in-group-out-group effect is needed to clear out this finding.

The results of unconfirmed media effect on trust perception showed that video does not increase people's trust perception as always. Video will help only when the task involve conflict of interest by nature e.g. negotiation task. In brainstorming task when conflict does not exist, video does not help trust perception much.

## CONCLUSION

First, when no prior personal relationship existed (strangers), American pairs (low-context culture) perceived higher level of trust than Chinese pairs (high-context culture). Second, it took Chinese pairs longer time than American pairs in performing tasks. Lastly, video does not increase people's trust perception as always. Only when the task involve conflict of interest by nature, video will help.

Some implications from our study: First, providing a rich media channel like video vs. IM to virtual teams with no previous interpersonal relationships may engender high level of trust and thus improve their performance especially when they deal with tasks involving conflicts of interest. Second, we need to be cautious to treat performance time measure when dealing with cross-cultural collaboration. Longer performance time does not necessarily mean a bad thing. For people from a high context culture, it is important to offer them such extra time to build up the relationship and personal trust. In the long term, it will contribute to better group performance.

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