

**Investigating Social Presence in the Voice-Based Chat  
Room and the Text-Based Forum in the Chinese  
Online Learning Context**

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## **Abstract**

Social presence has long been considered to be a key factor in enhancing learning in online contexts (Garrison, Anderson & Archer, 2000; Gunawardena & Zittle, 1997; Kehrwald, 2010; Ko, 2012; Tu, 2002b). New modes of online interaction, however, require researchers to engage in constant re-evaluation of social presence theory. This study set out to investigate online mediated interaction in the voice-based chat room and the text-based forum in the context of Chinese online education. The main aims were to compare the level of social presence generated using the two technological tools, to explore how learners form an online community and to contribute to theory in this area.

A mixed-method approach was taken to investigate levels of social presence, drawing on data from 124 questionnaires, 96 postings of text messages and 3 hours and 12 minutes of voice messages collected from the text-based forum and the voice-based chat room and eight one-hour interviews with students, either individually or in pairs. The answers to the questionnaires were subjected to statistical analysis, the interactional data of both the text and voice messages were analysed using Rourke et al.'s (2001) categories and indicators of social presence while the interviews were transcribed and subjected to a more qualitative analysis.

The statistical analysis of the questionnaires showed that students tended to use text to a much greater extent than voice, probably because of technical constraints, and that students' perceptions of social presence in the two media were not significantly different. The analysis of the interactional data revealed that the density of social presence overall was slightly higher in the voice-based chat room than in the text-based forum, but the difference between the two media was not statistically significant. However, the density scores for the interactive category were shown to be significantly

higher in the voice-based than in the text-based interaction, while the opposite was the case for the cohesive category. When affective categories were compared, text and voice data were not significantly different.

As the voice-based chat room was synchronous and had the advantage of sound, students became more involved in the communication and thus a greater sense of community was created. As students developed closer relationships with each other, cohesive features could be dispensed with in the voice-based chat room, and this was why the text-based forum had a higher density of cohesive features. Voice-based interaction clearly enhances social presence and a community of learning. However, for technical reasons, it is currently recommended that students work in small groups for discussion activities and learners should have strong technical support.

From a theoretical perspective, the study underlines the need for the constant renewal of analytical tools and categories in the face of rapidly evolving interactional practice online. The multi-media resources drawn upon by students may include social media as well as university platforms and the use of emoticons, special symbols, multiple punctuation, photos and video-clips – not to mention the use of avatars and virtual worlds, which have not been considered in the context of the current study.

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