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Social Awareness Differences Between Collocated and Computer Mediated Teams

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ABSTRACT

This paper reports an empirical investigation into differences in team member perceptions of social intelligence, specifically the subcategory of social awareness, in collocated and computer mediated teams. Members of computer mediated and collocated teams completed the Emotional Competency Inventory (ECI) to assess their perceptions of "self" and "other" team members along the ECI dimensions of social intelligence, focusing on social awareness within the present research (Boyatzis & Goleman, 2007). There were significant differences in self perceptions of empathy and social awareness in members of collocated and computer mediated teams. There were significant differences in the team member perceptions of other team members in empathy, organizational awareness, service orientation and social awareness. There were also significant differences in perceptions of how members see themselves versus how their team members see them on these dimensions. These findings have significant implications for the ability of computer mediated teams to form and function effectively in comparison with collocated teams.

Keywords

Teams, Computer Mediation, Interpersonal, Emotion.

INTRODUCTION

Interpersonal skills are arguably one of the most important skills for people in the workplace today. Social capital, defined as the social skills and personality features that allow individuals to increase their outcomes through interaction with others, is seen as a strong source of competitive advantage in organizations (Glaeser, Laibson, & Sacerdote, 2002). Many researchers have found strong ties between interpersonal skills and career success (e.g., Putnam, 2000; Seibert, Kraimer, & Liden, 2001).

Beyond the basic advantages of interpersonal skills, the contemporary shift from hierarchical organizational structures to flat structures reliant on team based workgroups increases the importance of being able to work closely and effectively with others. Advances in computer technology and use of the internet to connect people have enabled the use of computer mediated (CM) teams in the workplace. One view of CM teams is that the ability to form teams based on expertise rather than geography can make them more effective at task performance than collocated teams (Lipnack & Stamps, 1997). This reasoning is consistent with findings from the group decision making literature regarding enhanced group performance based upon enhanced access to expertise and individual knowledge (e.g., Lorge & Solomon, 1955). However, there is also a history of findings suggesting that even teams with the best resources can fail to use them if negative social processes prevail (e.g., Janis, 1982; Kerr, MacCoun, & Kramer, 1996a).

Interpersonal processes and skills of group members may create the defining difference between successful and unsuccessful groups when both have equivalent access to expertise (Kerr, MacCoun, & Kramer, 1996b). The ability of CM and collocated teams to maintain positive qualities of interpersonal processes is dependent in part upon the levels of social intelligence present in team members. In CM teams, this contingency is more important as the basic mechanisms for developing positive interpersonal processes (e.g., trust) are more fettered by means and frequency of communication than they are in collocated teams (Lipnack & Stamps, 1997).

Researchers have found that CM communication can lead to *decreases* in team effectiveness (Baltes, Dickson, Sherman,

Bauer, and LaGanke 2002). Benbunan-Fich, Hiltz, and Turoff (2002) found that anonymity in CM teams increases hostile behavior and extreme decision making. These researchers and others (Branson, Moe & Sung, 2005; Branson & Sung, 2004) have found that asynchronous CM groups spent more time and energy on solving their general disagreements than solving their problem tasks. Branson Clausen and Sung (2008) discovered that collocated teams were more likely to form constructively styled teams, while CM teams were less likely, and therefore more likely to form passive/defensive or aggressive/defensive teams. They concluded that CM teams were less able to gather social intelligence (e.g., non-verbal communication cues) and were less capable of accurately assessing and managing their emotional and social relationships. It is evident that without strong underpinnings of social intelligence in CM teams, they are doomed to poor performance regardless of their potential advantages in member selection and information processing.

THE PRESENT RESEARCH

To examine the differences between the social intelligence of collocated and CM teams, we selected the Emotional Competency Inventory (ECI) as a reliable and valid measure of the emotional and social intelligences needed to interact successfully with others in a team environment (Boyatzis & Goleman, 2007). The ECI measures 21 different competencies relevant to interpersonal processes and perception in four basic clusters: Self-Awareness, Self-Management, Social Awareness, and Relationship Management. These measures are self-reported items wherein raters are asked to give the frequency with which they and others engaged in 63 different behaviors (e.g., "I offer feedback to improve another person's performance," "I listen attentively to others," etc.) on a scale of 1 (Never) to 5 (Consistently). These scores are then aggregated by group to form indices of not only individual emotional competence, but also others perception of their emotional competence and their aggregated perception of their group's emotional competence. We focused on aggregated Social Awareness as well as the subset of characteristics that comprise it, including Empathy, Organizational Awareness, and Service Orientation. These characteristics are indicative of individuals' ability to accurately assess the moods and emotional responses of others, (Empathy), understand the power, culture, and politics of key relationships (Organizational Awareness), and match their own behaviors and availability to others' needs (Service Orientation). The ECI is well suited to studying interpersonal perceptions in groups as it engages the individual in assessing themselves, as well as the other members of their group in assessing them, providing the opportunity to directly compare an individual's self-perception with how others in the group perceive the individual.

To study the differences in social intelligence between CM and collocated teams while maintaining a degree of matching control for individual differences, a mixed-repeated measures design was used. The same participants were placed in collocated teams as well as CM teams while the membership between the two groups was otherwise completely different. This allowed us to compare not only what team members thought of an individual between CM and collocated team experiences, but also how individuals thought of themselves between these paradigms. The CM team members were selected so they were geographically separated to prevent contamination of the process by face to face interaction.

Collocated and CM teams were taken from a senior level Managerial Accounting course, and were performing cognitive/logical type tasks in the form of a performance appraisal case and a budgeting case respectively. Each participant was a part of a collocated team as well as a CM team. Following completion of the first team activity, participants completed the ECI both for rating themselves and rating the other members of their team, then the second team task followed by ECI ratings for themselves and the other members of this second team.

The hypotheses guiding this research are as follow:

> H1: It is hypothesized that the Social Awareness of participants will be perceived as lower by members of that participant's CM team than members of their collocated team
>
> H2: Social Awareness of participants will be perceived as lower by members of those participants' CM teams than by the individuals themselves in relation to those CM teams
>
> H3: The Social Awareness of participants will be perceived similarly (no statistical difference) by members of their collocated teams and the individuals themselves in those collocated teams

It is unknown whether individual's self perceived social intelligence may change as a function of membership in a CM team versus a collocated team; however there is some basis to anticipate differential perception. Bem (1967) suggests that often our perception of our internal states is reliant upon self observation of our own behaviors. In the case of a CM team, one might have lower frequencies of socially intelligent behaviors to self perceive, and therefore might rate themselves as less socially aware in such groups.

PARTICIPANT DEMOGRAPHICS

Participants were 72 undergraduate students (43 Female, 29 Male) from the main and satellite campuses of a small Midwestern university. Participation was completed via the instructional components (case analyses) in a senior level Managerial Accounting course. Their *M* work experience = 10 years, and their *M* age = 30 years. Participants were combined into 24 VTs and 22 F2F teams.

RESULTS

ECI scores were calculated for each dimension of the Social Awareness cluster for individual participants' self-perception in both their collocated and CM teams (SELF-CT and SELF-CMT), and the aggregate of other group members' perceptions of the individual in both their collocated and CM teams (OTHER-CT and OTHER-CMT). These scores were then used to calculate difference scores between Self and Other (for both CT and CMT), Other-CT and Other-CMT, and Self-CT and Self-CMT within each of the dimensions of Social Awareness as well as the aggregated Social Awareness, as well as to make pairwise *t*-test comparisons using SAS. These dimensional scores and an aggregated Social Awareness score (the sum of Empathy, Organizational Awareness, and Service Orientation) were then compared to test Hypothesis 1: that individuals' social awareness will be perceived as lower by members of their CM teams than members of their collocated teams. The results of these comparisons are seen in Table 1 below.

Item	***M Other-CT***	***M Other-CMT***	***M Difference***	***Std. Err***	***t***	***p***
Empathy	4.01	3.29	0.72	0.12	6.28	**<0.01**
Organizational Awareness	3.74	3.32	0.42	0.10	4.21	**<0.01**
Service Orientation	4.01	3.45	0.56	0.12	4.57	**<0.01**
Social Awareness	11.76	10.05	1.71	0.30	5.72	**<0.01**

Table 1. Others-CT vs. Others-CMT

The perception of others in collocated teams was that individuals possessed significantly higher levels of Empathy, Organizational Awareness, Service Orientation, and Social Awareness.

Scores were also compared between self ratings on CM teams (SELF-CMT) and the ratings of others on those same CM teams (OTHER-CMT) to test Hypothesis 2: that individuals' social awareness will be perceived as lower by members of their CM teams than by the individuals themselves. The results of these comparisons are seen in Table 2 below.

Item	***M Self-CMT***	***M Others-CMT***	***M Difference***	***Std. Err***	***t***	***p***
Empathy	3.83	3.29	0.55	0.12	4.50	**<0.01**
Organizational Awareness	3.59	3.32	0.27	0.11	2.45	**0.02**
Service Orientation	3.98	3.45	0.53	0.12	4.41	**<0.01**
Social Awareness	11.41	10.05	1.36	0.30	4.54	**<0.01**

Table 2. Self-CMT vs. Others-CMT

The other members of CM teams perceived individuals' social awareness as significantly lower than they self-perceived on all dimensions.

Lastly, scores were compared between individuals' self-ratings of social awareness in CM teams and their self-ratings of social awareness on collocated teams. It was not known whether individuals' self-perception would differ between these two conditions. However, as can be seen in Table 3 below, individuals' self-perception significantly differed between the two conditions on the dimensions of Empathy and aggregated Social Awareness. Individuals' perceived themselves as significantly less empathetic and socially aware in CM teams than in their collocated teams.

Item	*M Self-CT*	*M Self-CMT*	*M Difference*	*Std. Err*	*t*	*p*
Empathy	4.01	3.83	0.18	0.07	2.64	**0.01**
Organizational Awareness	3.75	3.59	0.16	0.09	1.86	0.07
Service Orientation	4.08	3.98	0.10	0.07	1.47	0.15
Social Awareness	11.85	11.41	0.44	0.18	2.50	**0.01**

Table 3. Self-CT vs. Self-CMT

While these individuals also perceived themselves as lower in Organizational Awareness and Service Orientation according to raw means, the differences were not statistically significant (though Organizational Awareness was marginal).

CONCLUSION

Based upon this investigation of self and other perception of social awareness in CM teams and collocated teams, individuals are perceived as significantly less socially aware in CM teams than they are in collocated teams. Whether this is due to a paucity of information sampling (based on lower levels of interpersonal interaction) by team members or an actual degradation in the individuals' own manifested social awareness is unknown, but relatively unimportant. Whether the individual is in possession of greater social awareness than suggested by the ratings of others, the only individual those others interact with is the individual they perceive. As individuals are perceived as less socially aware by others in their CM teams, they will be treated as such and interactions will likely degrade on this basis compared with collocated teams as suggested by the self-fulfilling prophecy effect (e.g., Gueguen, Lourel, Charron, Fischer-Lokou, & Lamy, 2009).

Individuals are also likely to differ significantly in their self-perception and the perceptions of their CM team members, as evidenced by the significantly lower perception of individuals' social awareness by CM team members than the individuals themselves. This suggests that even when we perceive ourselves interacting successfully in CM teams, we may not have an accurate gauge of how others perceive us; perhaps due to the limited communication paths available to us (Lipnack & Stamps, 1997). This sort of "unawareness" effect, wherein an individual misestimates their likely success based on a lack of accurately perceived feedback, has been evidenced in other arenas wherein accurate self-perception is prohibited by lack of experience or understanding of feedback (Kruger & Mueller, 2002). It is something that all members of CM teams need to be made firmly aware of to prevent degradation of interactions through misinformed choice and behavior (e.g., mistakenly joking lightheartedly with someone who is angry at you). In addition, this finding is important to managing CM teams because as Jordon and Ashkanasy (2006) found, high emotional self-awareness predicts team effectiveness, and team performance. Individuals that are high on self awareness are those with low difference scores between self and peer assessment. Our research adds to this literature by identifying additional barriers to accurate self and peer assessment specific to the CM team environment. Understanding the limitations of CM teams is essential to improve CM team effectiveness and performance.

One of the most interesting findings of this study was the significant difference between how individuals perceived *themselves* in CM teams as opposed to collocated teams. Bem (1967) suggests that often our self-perception of our own ambiguous internal states (e.g., how much we empathize with another person) is based on empirical observation of our own behaviors and inference from them. Under such a model, if we exhibit fewer interpersonally empathetic or socially aware behaviors in one setting (CM teams) than another (collocated teams), we would be likely to perceive ourselves as less empathetic and socially aware in those settings. In fact, research has found that individuals who have an easy time recalling themselves behaving in ways relevant to a personality characteristic (e.g., recently behaving empathetically in a team) often adjust their estimation of their own possession of that characteristic to fit the recall based evidence (Schwarz et al., 1991).

Further research is needed to clarify the causal elements in these differential perceptions and to further explore their direct effect on team function, however some important conclusions may be drawn from even this limited investigation. When participating in a CM team, one must take extra care to engage with that team in a socially intelligent fashion: maintaining an awareness of others' perceptions and emotional responses to oneself and others, communicating these and other elements clearly to team members, and providing and attending to additional interpersonal cues to fill in the void left by the more limited forms of interaction (Lipnack & Stamps, 1997). We must all be aware that others' perceptions of us may differ from even our own perceptions of ourselves, and avoid the pitfalls this may lead to in CM teams.

As suggested in Branson Clausen and Sung (2008), it appears the shortage of social intelligence and social cues in CM teams may play a pivotal role in CM team members not forming the trusting, productive relationships necessary to form

constructive styled teams. In short, CM teams hold worlds of promise in their ability to gather expertise and skill from across the globe. It is up to us as members and managers of these teams to ensure that these resources are recognized and appropriately utilized in CM team environments and beyond.

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