Case Study: Emotional Intelligence as a Differentiator in Values Based Communication

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Abstract

This case study was designed to identify possible major differentiators in communication patterns within a constant set of professional values. The convenience sample included 53 physicians with a 100% response rate. The professional values of this group were measured using the Hofstede model. The survey results indicated this group of physicians shared common professional values, therefore for purposes of this study, professional values were considered constant.

Individual level differences were measured using a series of pen and paper assessments. These included locus of control (Rotter, 1966), self-monitoring (Snyder, 1984, 1987), and an emotional intelligence (EI) assessment (Bradberry & Greaves, 2005). The physicians had recently completed the Meyers Briggs Type Indicator® instrument and made their results available to the author.

Participants viewed a short video clip and were immediately asked to answer 4 questions relating to communication patterns within the clip. These results were then analyzed with the individual level differences, along with the gender and age data using correlational analysis. The highest correlations involved the emotional intelligence factor.

We can apply this analysis within the emotional process model (Druskat and Wolff, 2001). In the case of communication as an emotional eliciting event, the subsequent interpretation of the message and the resulting response may be affected by values (Herkenhoff, 2004). However this research suggests that when cultural values are constant, then individual factors such as emotional intelligence may be responsible in part for why different employees interpret a conversation differently and respond within that conversation differently. Perhaps improved emotional intelligence may lead to improved values based communication.
Introduction

This paper represents exploratory findings from a case study within the American medical profession. A group of physicians, working within the same organization, identified a level of dysfunctional communication amongst colleagues. The outstanding issue of this study was to identify why employees who shared common cultural values derived from the same country, same organization and same profession, demonstrated different forms and frequency of defensive communication tactics.

Numerous organizational behavior theorists have supplied extensive research concerning the influence of culture on individual values within organizations (Erez and Early, 1993; Lane and DeStefano, 1992; Punnett & Shenkar, 2004). The results of a ten-year research program, the Global Leadership and Organizational Behavior Effectiveness research program (GLOBE), validated a cross-level theory of the relationship between culture and organizational effectiveness (Javidan et al., 2004). Another role for culture in the workplace can be illustrated via the emotional process model (Druskat & Wolff, 2001). The culturally tuned emotional process (CTEP) model illustrates the role of cultural values at the individual level as filters both in the interpretation and response phases of processing an emotion eliciting event (Herkenhoff, 2004) This model is illustrated in Figure 1.

Figure 1
Cultural Influences in the Emotional Process Model

Values based communications demonstrate communication patterns that are influenced by the values of the individual. Values are defined as “enduring beliefs that a specific mode of conduct or end state of existence is personally or socially preferable to an
opposite or converse mode of conduct or end state of existence” (Nelson & Quick, 2006, p. 127). From the cultural perspective these values are derived from national, organizational and professional values. For example a German engineer working for Chevron may communicate more aggressively than his counterpart from Japan. In this example both professional and organizational culture are held constant while national culture varies. These particular national cultures vary on their degree of assertiveness (Masculinity index, MAS); Germany’s MAS score is higher than that of Japan’s (Hofstede, 1980). White et al. suggest that value differences in cultures can lead to failed communication efforts (2005, p.181) In values based communication the emotion eliciting event (Figure 1) is communication, but in this study all three sources of cultural values remain constant. Therefore the values filtering effect must be due to some source other than culture. This study examines several individual level characteristics as potential values filters (independent variables) in a values tuned emotional process (VTEP) model (Figure 2)

![Values Filters in the Emotional Process Model](image)

The third level of the communication accommodation theory (CAT) model (Coupland et al., 1991; Giles, 1973) shows that individual differences have enormous potential to cause miscommunications. These personal differences influence people’s communication patterns (White et al., 2005, p. 177). The independent variables were selected based on the existence of well established assessment instruments that were relatively brief to complete, did not require special usage licenses and had a demonstrated relationship with communication patterns.
The first independent variable is locus of control (LOC), as defined as an individual’s generalized belief about internal control (self-control) versus external control (control by the situation or by others) (Adeyemi-Bello, 2001;Rotter, 1966). Rubin (1993) demonstrated that that people with external locus of control found communication to be less rewarding and less satisfying, tended to avoid communication, and were motivated to communicate more ritualistically than internals. The results from a study completed by Liberty et al. (2003) showed that during oncological interviews, physicians with external LOC give more appropriate information than physicians with internal LOC and less premature information than physicians with internal LOC in clinical interviews. This result provides evidence that physicians’ LOC can influence their communication styles.

The second instrument, self monitoring, assesses the extent to which people base their behavior on cues from other people and situations (Jenkins, 1993;Snyder, 1974,1987). Smith et al. (1991) demonstrated that low self monitors are less expressive and rely on fewer emotionally based and relationally oriented communication tactics when influencing others.

The third instrument assesses emotional intelligence (EI) as defined by Goleman (1995) as the ability to recognize and regulate emotions in others and ourselves. Ciarrochi et al. (2001) broadened our understanding of EI to include the role of emotional intelligence in everyday life. According to Bennis (2001), EI accounts for 85-90% of the success of organizational leaders. Jackie Green, portfolio manager for the American Management Association, suggests that EI can help employees and managers communicate more effectively and reduce workplace conflict (2007). The literature suggests a link between effective communication and emotional intelligence (Bradberry & Greaves, 2005, p.120; Caruso et al., 2002, p. 55; Cherniss & Goleman, 2001, p. 37; Goleman, 1998, p.174). The Bradberry and Greaves (2003) EI assessment was chosen as a reliable instrument that did not require special consultant training to use and was reasonably short to complete.

Meyers Briggs Type Indicator® (MBTI) data was made available for this study, but was collected by the organization prior to the start of the study (Jung, 1923). The MBTI purports to measure four dimensions of personality using the four bipolar scales of Extraversion-Introversion (E/I), Sensation-Intuition (S/N), Thinking-Feeling (T/F) and Judging-Perceiving (J/P). E/I connotes an individual’s preference for obtaining information either through orientation toward the outer world of people and things or the inner world of concepts and ideas. The S/N index refers to ways of perceiving, either directly through sense-based empirical data (sensation), or indirectly through unconsciously generated information or hunches (intuition). The T/F index measures ways of arriving at judgments, either by impersonal, logical, and analytical processes (thinking), or by personal, subjective, and evaluative assessments of information (feeling). The fourth index, J/P, refers to preferences in becoming aware or drawing
conclusions, either coming to closure by evaluating the day-to-day influx of information (judging), or remaining open by merely gathering and storing data for use (perceiving). The four preferences are assumed to interact in complex nonlinear ways to produce one of 16 psychological types (e.g., INTP). Research points to a relationship between MBTI types and communication patterns (Craig & Sleight, 1990; Franzwa & Lockhart, 1998; Goby, 2006; Sfetsos et al., 2006). Clack et al. (2004) found that in their study “Doctors differed significantly from the UK adult population norms on most of the dimensions of personality measured, including those which measure an individual's preferred mode of perception, i.e. how one likes to take in information and learn about things. This suggests potential points for miscommunication in the doctor/patient consultation process.” (1990).

The dependent variable in this analysis is defensive communication tactics as defined as communication that can be aggressive, attacking and angry, or passive and withdrawing (Nelson & Quick, 2006, p. 261; Thomas, 1976, p. 900). Eight of the major defensive tactics include: power play, put-down, labeling, raising doubts, misleading information, scapegoating, hostile jokes, and deception (Nelson & Quick, 2006, p. 263; Robbins, 2003, p. 382-383). Erez and Earley suggest that effective communication may reduce any mutual threats between parties (1993, p. 202).

**Methodology**

In this study the population consists of 53 physicians from the same healthcare organization. Five physicians from the population were randomly selected to be part of the study group. All remaining 48 physicians provided observations of defensive communication tactics exhibited by members of the study group.

To develop the list of defensive communication tactics a sample of 13 out of the total 53 physicians volunteered to be interviewed about communication issues among colleagues. From these interviews a list of their seven of the most frequently cited defensive communication tactics were identified. All 53 physicians were then given the opportunity to indicate which they thought were the four most common tactics prevalent within their organization, out of the list of seven commonly occurring tactics. This data was collected in a group setting using clicker (polling) technology; each physician voted anonymously using the clicker, and could not see the results voted by their colleagues. The resulting four most common tactics included: labeling, power play, sarcasm, and deception. These four tactics were then provided on 5 point Likert scales to the 48 observer physicians for reporting of the frequency of occurrence, over the past year, of these tactics by the five physicians in the study group. The scales provided word labels as well as percentage labels (Figure 3).
Figure 3 Tactic Scale Example

How often does this physician display deception in his\(^1\) communication?

1. (Never/ 0%)
2. (Not too often / 25%)
3. (Often / 50%)
4. (Nearly all the time / 75%)
5. (All the time / 100%)

The observational data was then averaged for each of the 4 tactics and aggregated into an overall Tactic Score. These summative results could range from 0 to 20 based on this scale.

Members of the study group completed pen and paper surveys measuring EI, locus of control and self monitoring. The EI scale ranges from 0 to 100%, with higher scores indicating higher levels of emotional intelligence. The locus of control scores can range from 0 to 23, with higher scores indicating higher levels of internal locus of control. The self monitoring scale ranges from 0 to 18, with higher scores indicating higher levels of self monitoring.

Each member of the study group also watched a brief video clip on an individual basis and responded to questions about the top four communication tactics that had been identified as prevalent within the physician group and that were also depicted in the clip. These questions are summarized in Table 1. The responses were aggregated into an overall Video clip Score for each of the five physicians.

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\(^1\) Note all physicians in the study group were male so all pronouns and adjectives will reflect this.
Table 1 Video clip Questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Defensive Tactic</th>
<th>Example in clip</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Labeling</td>
<td>Ben refers to the attendant as a “ B----“</td>
<td>Were there any examples of inappropriate labeling by one party of another party?</td>
</tr>
<tr>
<td>2</td>
<td>Power Play</td>
<td>The airline attendant uses her position to insist the bag be placed below.</td>
<td>Was there an example of inappropriate position power to win the argument?</td>
</tr>
<tr>
<td>3</td>
<td>Sarcasm</td>
<td>Ben says to the attendant “…take the sticks out of your head “.</td>
<td>Were there any examples of sarcasm that got in the way of effective communications in this clip?</td>
</tr>
<tr>
<td>4</td>
<td>Deception</td>
<td>The attendant promises the bags will be safe but to Ben this is deception based on historical data.</td>
<td>Were there any examples of deception during the conversations in this clip?</td>
</tr>
</tbody>
</table>

The Meyers Briggs Type Indicator® (MBTI) instrument was completed by the study group physicians as part of their own organizational activities 3 months prior to this study. To use correlation statistics with the MBTI scores we need to first convert these scores to continuous scores with 100 at the midpoints instead of zeros (Myers & McCaulley, 1985; Wiggins, 1989). Continuous scores are derived by converting the four bipolar scales (eight scale scores) into four continuous scale scores (Appendix 1). Thorne and Gough (1991) concluded that for correlational work, there is nothing to be
gained by use of all eight scales. DeVito (1985) suggested that the continuous score is least emphasized in practice because it is a departure from type theory, but from a statistical perspective it is this score that is most useful in analyzing research findings. In this study, the MBTI scores were treated as continuous measures and were correlated with the dependent variable.

The cultural values were collected using Hofstede’s Values Survey Module (VSM) (1984,1993). This instrument includes the four dimensions developed by Hofstede and the fifth by Bond (1988). The five dimensions are summarized in Table 2.

Table 2 Hofstede / Bond Dimensions

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDI</td>
<td>Power Distance Index refers to the degree to which power differences are accepted and sanctioned by society. A high PDI describes a society that believes there should be a well-defined order in which everyone has a rightful place. Whereas a low PDI is associated with the prevalent belief that all people should have equal rights and the opportunity to change their position in society. This reflects how societies deal with the fact that people are unequal. All societies are unequal but some are more unequal than others.</td>
</tr>
<tr>
<td>UAI</td>
<td>Uncertainty Avoidance Index refers to the degree to which society is willing to accept and deal with uncertainty. A high UAI score suggests a culture that seeks certainty and security and wishes to avoid uncertainty. A low UAI score reflects that the society is comfortable with a high degree of uncertainty and is open to the unknown. A high UAI culture tries to minimize the possibility of unexpected events occurring by adopting strict codes of behavior. Cultures with a high UAI seek security and predictability. Change is often construed as threatening because the outcome is unknown. High UAI countries show a need for comprehensive rules and regulations, a belief in the power of experts and a search for absolute truths and values.</td>
</tr>
<tr>
<td>MAS</td>
<td>Masculinity Index refers to the degree to which traditional male values are important to society. For example, male values would include assertiveness, performance, ambition, achievement and material possessions. The female values would encompass issues such as quality of life, environment, nurturing, and a concern for the less fortunate. A high MAS culture would have clearly differentiated sex roles with men being dominant. In low MAS cultures, the sex roles are more fluid and there is a predominance of feminine values. In low MAS cultures a quality of life focus replaces the money focus found in high MAS cultures.</td>
</tr>
<tr>
<td>IDV</td>
<td>Individualism Index IDV refers to the degree to which individual decision–making and action are accepted and encouraged by society. It describes the relationship between individuals and groups and the extent to which the individual is integrated into the group. A high IDV score depicts a society that emphasizes the role of the individual. In high IDV countries the links between individuals are loose. People are expected to look after their own interests and at the most the interests of their immediate family. Conversely, a low IDV indicates a society that emphasizes the importance of the group.</td>
</tr>
<tr>
<td>LTO</td>
<td>Long Term Orientation stands for a society fostering virtues oriented towards future rewards, in particular perseverance and thrift. Long-term orientation pertains to the past and demonstrates, a respect for tradition, ‘preservation of face’ and fulfilling social obligations. Short term orientation focuses on the now and seeks quick results. Investment in long-term relationships is deemed unnecessary.</td>
</tr>
</tbody>
</table>

Analysis
The cultural values measured in this study are an aggregate of national, organizational and professional influences. The individual scores for each of the five study group physicians were compared to the sample mean values for each of the five dimensions to validate that culture was a constant in this case study.

The independent variables which include scores from EI, self monitoring, locus of control, MBTI, video clip, observed tactics and the age data were correlated with the dependent variable, defensive communication tactics. The gender data was not included as an independent variable as all of the physicians in the study group are male. The analyses between the independent and dependent variables were performed using a Pearson correlation matrix in SPSS 17.0 (2008). Spearman’s Rank Order Correlation (SPRC) statistic was then applied to this paired data to determine whether the association between rankings on these two variables of interest was statistically significant (Coakes & Steed, 1997; Cramer, 1998). The SPRC is essentially a Pearson’s correlation on data that has been ranked. In this analysis it should be noted that the data consist of a random sample of n pairs of numeric observations. Each pair of observations represents two measurements taken on the same individual.

**Results**

The cultural results for the study group were within one standard deviation of the mean, with no outliers evident. Therefore, as anticipated, the cultural values were considered constant in the study group and were not considered as an independent variable in the emotional process model.

Although there are only five data points, the data was still checked for linearity and homoscedascity using a scatterplot before Pearson correlations were run. There is no marked violation of these assumptions. The resulting Pearson bivariate correlation coefficients for all relationships are presented in Table 3.
Table 3 Pearson Correlation Analysis

<table>
<thead>
<tr>
<th>Avg</th>
<th>Std Dev</th>
<th>EI</th>
<th>E/I</th>
<th>N/S</th>
<th>F/T</th>
<th>P/J</th>
<th>Monitor</th>
<th>Locus</th>
<th>Age</th>
<th>Video</th>
<th>Tactics</th>
</tr>
</thead>
<tbody>
<tr>
<td>EI</td>
<td>75</td>
<td>15.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E/I</td>
<td>129</td>
<td>24.1</td>
<td>.326</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N/S</td>
<td>124</td>
<td>11.9</td>
<td>-.118</td>
<td>-.548</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F/T</td>
<td>-63.6</td>
<td>120</td>
<td>.207</td>
<td>.952</td>
<td>-.494</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P/J</td>
<td>21</td>
<td>113.6</td>
<td>.408</td>
<td>-.676</td>
<td>.582</td>
<td>-.638</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitor</td>
<td>1.8</td>
<td>2.16</td>
<td>-.320</td>
<td>.785</td>
<td>-.396</td>
<td>.801</td>
<td>-.933</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Locus</td>
<td>20</td>
<td>1.73</td>
<td>.611</td>
<td>-.210</td>
<td>.605</td>
<td>-.369</td>
<td>.629</td>
<td>-.533</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>47.2</td>
<td>8.6</td>
<td>.226</td>
<td>-.690</td>
<td>.076</td>
<td>-.830</td>
<td>.612</td>
<td>-.846</td>
<td>.422</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Video</td>
<td>3.0</td>
<td>1.0</td>
<td>.810*</td>
<td>.260</td>
<td>-.105</td>
<td>-.004</td>
<td>.187</td>
<td>-.231</td>
<td>.722</td>
<td>.409</td>
<td>1</td>
</tr>
<tr>
<td>Tactics</td>
<td>8.6</td>
<td>3.9</td>
<td>-.968*</td>
<td>-.271</td>
<td>.284</td>
<td>-.125</td>
<td>-.370</td>
<td>.371</td>
<td>-.517</td>
<td>-.378</td>
<td>-.831*</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).
The age data ranged from 34-57 years old and all physicians in the study group were male. The average age was 47.2 years old with a standard deviation of 8.6 years. The age data (Age) displayed a strong negative correlation with self monitoring (Monitor) (r = -0.85) and with the Thinking/Feeling (T/F) dimension of the MBTI (r = -0.83). However neither of these correlations achieved significance at the 0.05 level or better.

The self monitoring data shows an overall tendency towards low self monitoring. None of the physicians scored high on self monitoring; the observed scores ranged from 1 to 5 out of a possible score of 18. Although self monitoring achieved a strong negative correlation with the Perceiving/Judging (P/J) data (r = -0.93), this was not statistically significant at p< 0.05 level, nor was this relationship of any theoretical importance to the subject of this case study.

The locus of control data showed an overall tendency towards a high level of internal control. The observed data ranged from 15 to 23 out of a possible score of 23. The average score was 20 and all survey results fell within +/- 2 standard deviations.

All physicians in the study group displayed an introversion preference and an intuitioning preference. Four of the physicians indicated a thinking preference and one indicated a feeling preference. Two physicians indicated a judging preference, two indicated a perceiving preference and one was neutral. The only strong MBTI correlation developed between F/T and N/S. These relationships were not of consequence to the subject of this case study.

The video clip scores (Video) ranged from 2 to 4, with 4 being a perfect score. The average score was 3 and all data fell within one standard deviation of the mean score. The Video data achieved a significant relationship with the EI data (r = 0.810, p< 0.05).

The observed defensive communication tactics scores (Tactics) ranged from 6 to 12, out of a possible score of 20, with 20 being the highest possible demonstration of defensive communication tactics. These data fell within 2 standard deviations of the mean value of 8.6. The Tactics data achieved significant negative correlations with the EI data (r = -0.968, p< 0.01) and with the Video data (r = -0.831, p< 0.05).

Emotional intelligence scores were calculated out of 100% with higher scores indicating a higher level of EI. The average score was 75% with a standard deviation of 13.5%. The actual scores ranged from 50% to 89%. The strongest significant correlation between the dependent variable and the independent variables exists between EI and Tactics (r = -0.968, p< 0.01). A significant positive relationship exists between EI and Video (r = 0.810, p< 0.05).

First order partial correlations were then run between EI and observed tactics while adjusting for the effects of each of the independent variables. The results are provided
in Table 4 indicating a significant negative relationship still exists between EI and Tactics for each partial correlation.

<table>
<thead>
<tr>
<th>Control Variable</th>
<th>Partial r between EI and Tactics</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-.979</td>
<td>.01</td>
</tr>
<tr>
<td>Video</td>
<td>-.905</td>
<td>.05</td>
</tr>
<tr>
<td>Locus</td>
<td>-.963</td>
<td>.01</td>
</tr>
<tr>
<td>Monitor</td>
<td>-.966</td>
<td>.01</td>
</tr>
<tr>
<td>P/J</td>
<td>-.964</td>
<td>.02</td>
</tr>
<tr>
<td>F/T</td>
<td>-.971</td>
<td>.01</td>
</tr>
<tr>
<td>N/S</td>
<td>-.982</td>
<td>.01</td>
</tr>
<tr>
<td>E/I</td>
<td>-.967</td>
<td>.01</td>
</tr>
</tbody>
</table>

The partial correlation coefficients are no longer significant for the relationships between Video and EI when controlling for Tactics ($r = 0.042$, $p < 0.479$) and for Video and Tactics while controlling for EI ($r = -.316$, $p < .342$).

Spearman’s Rank Order Correlation statistic was used to measure the association between the EI rankings and the observed defensive communication tactics data (Figure 4). The resulting non-parametric correlation achieved significance ($\rho = -.900$, $p < .05$).
Discussion

The cultural values remained constant. The locus of control and self monitoring data showed little variation.

Physicians are typically low self-monitors as indicated in seminal research conducted by Helmeich and Merritt (p. 35, 2003) in which they recognize personal invulnerability as a professional attribute amongst physicians. Surgeons and anesthesiologists are attributed with a sense of personal competence and a denial of human weakness. In general they do not moderate their own behaviors based on input from their environment. This data supports this tendency. This characteristic did not demonstrate a significant correlation with the dependent variable.

The strong preference for high internal control, as detailed in this case study, is not surprising for this professional group. Physicians are individual contributors...
by job design and as such hold themselves accountability at the individual level in the majority of circumstances (Helmeich & Merritt, 2003, p.52).

The Meyers Briggs Type Indicator® data shows a high tendency to introversion and intuiting by all 5 physicians. This same pattern is demonstrated in earlier physician studies (Harris & Ebbert, 1985; Silwa & Shade-Zeldow, 1994). However none of the MBTI data achieved a significant correlation with the dependent variable.

Although the scores on the video clip and the EI scores were highly correlated, using the bivariate analysis, the first order partial Pearson correlation coefficients were not significant when controlling for the influence of Tactics.

The highest level of correlation with the dependent variable (Tactics) was with the independent variable EI. As the emotional intelligence score increases the frequency of defensive communication tactics decreases. This suggests that as physicians become better able to recognize and regulate emotions in themselves and others, they can better avoid using defensive tactics in communicating with their colleagues.

The Spearman rank order non-parametric correlation achieved significance between EI and Tactics. Only one physician mismatched in the rank order.

This suggests that EI may be an important differentiator in values based communication as depicted in the VTEP model (Figure 2). EI may play a role in both the interpretation and response of an emotional eliciting event, such as a communication between two physicians. EI may be one of the factors that explains why members who share the same cultural values may still interpret and respond to the same communication in different ways.

**Conclusions and Management Implications**

In this particular physician population there was a distinct concern about poor communications. It was a dilemma as to why people sharing the same mission and cultural values still experienced less than effective communication between colleagues. This study suggests that emotional intelligence may play an important role in communication patterns. In this particular case study the higher the level of emotional intelligence the lower the occurrence of defensive tactics in communication between colleagues. According the Cherniss et al. (1998) “It is possible for people of all ages to become more socially and emotionally competent”. This suggests that training and development of emotional intelligence competencies may enhance communication effectiveness in this workplace.
Limitations and Future Research

Because this analysis is limited in size and collected within one American organization, the generalizability of these findings is limited. Additional data needs to be collected to further validate these findings across a broader sample. This analyses needs to be conducted using several different professional groups while holding national and organizational cultures constant. The dependent communications variables could be further developed to provide more generalizable results.

These results suggest that EI may be an important independent variable that influences patterns of communications amongst employees. Further research needs to be completed to better explore this relationship.
Appendix 1

Converting MBTI score to continuous scores:

1. For overall preferences of E,S,T,J subtract the overall MBTI instrument score from 100.

2. For overall preferences I,N,F,P add the overall MBTI instrument score to 100.
References


