The Path to Effective Online Negotiations

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Introduction

While information technology has dramatically increased the speed and ease of many routine transactions, it has also brought forth challenges for the modern supply manager. The first of these challenges is to recognize that both the technology and our use of the available technology are rapidly changing. Thus, the supply manager needs to stay abreast of current trends, especially relative to the applications of technologies to supply and logistics practices. Further, the supply manager must understand how the use of on-line communication and negotiation fits with organizational strategies, purchasing and supply management strategies and the strategy for a given commodity.

Use of Technology

The authors have conducted two assessments of utilization of technologies – once at the NAPM International Conference in 2001 and again at the International Conference in 2002. There were 130 respondents from the first application and 61 from the second. Among the results, which will be discussed in detain in the Conference presentation, were the following. Those reporting no email decreased from 5% to 1%; use of chatrooms increased from 6% to 8%; video conferencing actually declined from 38% to 33%. Use of electronic means to check order status increased from 74% to 92%, while on-line ordering increased from 62% to 66% of the respondents. Other interesting data include use of on-line auctions increasing from 19% to 28%. Interestingly, there were significant changes in the way firms planned for on-line negotiation. Those who planned more for on-line negotiation than for face-to-face negotiation increased slightly from 30% to 33%, while those who prepare about the same declined from 56% to 43%. Alarmingly, those preparing less rose from 12% to over 21%. All of this suggests that use of electronic forms of communication with suppliers is increasing, but less rapidly than might be expected.

The immediate realization is that there are two negotiations for any on-line application. Before the actual negotiation over the issues comes the negotiation over the technology applications: what technology to use and when and how to use it. There are vast differences in technological capabilities between firms. Especially, smaller suppliers may have only rudimentary technology available, and may be unfamiliar or uncomfortable with all but the most

basic tools. The technology may be a significant inhibitor to the on-line process. For example, do the two parties have compatible software? Are both sides equally proficient in the use of tools such as chat rooms? Even deciding which form to use and how to proceed may, itself, become a negotiation.

Communication Style

An obvious deficiency of electronic communication is the inability to see the body language or facial expressions of the receiver of our electronic message. In a face-to-face discussion, it is immediately apparent, from these visual cues, when a message in misinterpreted, so the sender can immediately correct an unintended interpretation. Not having this feedback, it is possible that buyer-supplier relationships can suffer for reasons unknown to one side or the other.

Studies have compared the establishment and maintenance of business relationships based on forms of communication. Those founded solely on written communication tend to founder. Those that include written and telephone communication are sustainable, but the best relationships are those that go beyond other forms of communication to include face-to-face meetings. This notion is supported by Moore, et. al. (1999), who found that relationships were enhanced by personal knowledge about each other, and group affiliations.

Another consideration is the way the written communication is formed. Written messages are very different from the same messages delivered verbally. The way we speak isn't the way we write. Consider the differences between writing a letter and delivering the same message verbally. In written communication, there is no sense of timing, as in delivering the punchline of a joke. It is easy to sense the urgency in someone's voice, but more difficult to convey that gravity in writing. How do all of the jargon and slang words we routinely use in conversation look in print? Run-on sentences are hardly noticeable when spoken, but are painfully obvious in writing. Communication pace, volume and emphasis are ordinary parts of verbal communication, but are lost in writing. The skill with which we compose our written message may be more of a determinant of outcome than the message itself, or the strategy employed to derive it.

Negotiation Process and Outcomes

Setting aside these differences in communication, there are differences in the negotiation process, itself. This may lead to misinterpretation, misunderstanding and mistakes. Tactics of negotiation are influenced by form. Silence is a powerful tool in a verbal negotiation, but what constitutes silence when using email? When are communication delays interpreted as precipitated by the technology and when are they perceived as non-responsive?

In addition to the monetary settlement of a negotiation, other issues may include satisfaction with the process and satisfaction with the outcome. A negotiation exercise was conducted using a negotiation class of 72. The class was given the exercise one week and were to complete their negotiation by class time the next week. Students were divided into two person teams. Half of the teams were assigned as buyers; the other half were sellers. All of the teams were told to prepare a negotiation plan and strategy. Each buyer team was then paired with a seller team to conduct the negotiation. Half of the buyer-seller negotiation groups were told to conduct their negotiation face-to-face. The other half were told they could use any form they chose, as long as they didn't verbally communicate. They were required to negotiate

electronically. All of the students - regardless of the negotiation form - were given questionnaires to define metrics of the negotiation such as the number of negotiation sessions and total time required for the negotiation, itself. They were also asked to evaluate their satisfaction with the process and with the outcome.

The preliminary results given in Table 1, were very interesting. The face-to-face group completed their negotiations in an average of about 1.5 hours. In contrast, the on-line group averaged more than 3.5 hours to negotiate the same issues, and three of the groups deadlocked. Not only were they unable to reach a settlement, two of the deadlocked groups were sufficiently angry at each other that they were unwilling to talk to each other for not just the rest of the class period, but for the entire balance of the quarter. This level of irritation is highly unusual in that this case has been used with similar groups for many years without that sort of reaction.

The face-to-face groups expressed a high level of satisfaction with both the outcomes they negotiated (5.89 / 7) and the process, itself (5.67 / 7). The electronic groups, obviously were highly dissatisfied with the outcomes (3.86 / 7), but they expressed equal dissatisfaction with the process, as well (3.29 / 7).

It is of note that the face-to-face groups apparently prepared more thoroughly. They spent more time preparing and did so earlier than the electronic groups. Apparently, the prospects of facing their opponents encouraged more thorough preparation. The on-line groups seemed to feel less urgency, relying on the time delays between communications to discuss and prepare responses.

Conclusions from the Experiment

From these results, it is apparent that different approaches must be taken to on-line negotiations from those traditionally practiced for face-to-face encounters. Communication style must be adjusted, negotiation practices altered and consideration given to insuring that the negative results seen in the above experiment don't happen in real life.

This experiment will be repeated two times in the spring of 2002 at two different institutions to confirm the findings of the initial example. In each of these experiments, students from Supply and Logistics Management classes were used. Results were similar to those described above. In addition, a cross-country experiment was conducted where students from Portland State University and Western Carolina University participated. This test removed any prior knowledge of the individuals by their negotiation opponents. Again, results were similar.

On-Line Applicability

The above results call into question the circumstances under which an on-line negotiation approach would be appropriate and when should it be avoided. To assist in this determination, the authors propose an extension of the use of criticality grids. In the article "Using Criticality Grids to Determine Negotiation Strategies" (Buddress and Raedels, 1998), the authors demonstrate the application of this tool to supply chain negotiation.

A criticality grid is a 2 X 2 matrix that has two variables on two dimensions. On the vertical dimension, in the above article, external market criticality was defined. High criticality was

defined as patented products or proprietary technologies. Low market critical goods are commodities and non-differentiated industry standards such as light switches.

The horizontal dimension assesses the criticality of the purchased material or service to the ongoing operation of the firm. Low internal criticality indicates low volume usage by the buying firm, or that the products purchased are not important to the firm's strategic mission. High internal criticality indicates high volume requirements or a material's pervasiveness throughout the firm's product line. Please see Figure 1.

Buying approaches differ by quadrant of the criticality grid. For example, in the lower left quadrant, where industry standard products are purchased in small quantities, the transaction is often market (price) driven, with the objective of minimum administrative cost. Transaction automation is often the goal. In the upper right quadrant, strategic alliances may be the goal.

Applying this process to the conduct of a negotiation leads to the creation of a criticality grid where risk and importance of achieving a satisfactory outcome are to be considered for each side of the negotiation, as shown in Figure 2. The lower left quadrant, then, becomes one in which both sides perceive low risk and low importance of the negotiation. Industry standard products are to be purchased in smaller quantities. In this quadrant, on-line negotiation may be a suitable tool.

In the upper right quadrant, where patented products or proprietary technologies are to be purchased in large volumes, risk is significant, and importance of the negotiation is high. A strategic alliance is the likely objective, where most certainly face-to-face negotiation would be the only acceptable negotiating approach.

The original application of criticality grids, plus their extension to include the appropriate form of negotiation communication now give supply professionals tools to assess the appropriate form of relationship and the most applicable tools with which to negotiate with suppliers for each category of acquisition.

Conclusions

While the results of a single experiment may only be described as preliminary, there are significant differences between the on-line and face-to-face data. These give sufficient indications of substantial difficulties applying the on-line method to suggest a need for caution in its use and the need for further research. The use of criticality grids will enable supply professionals to determine the most appropriate applications of on-line negotiation techniques

References

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Table 1
Negotiation Experiment Results

	Face-to-Face	**On-Line**
Number of Sessions	Mean 1.37 (Range 1-3) Std Dev 0.69	Mean 2.46 (Range 1-14) Std Dev 2.85
Total Negotiation Time	Mean 1.51 (Range 50 min to 2.25 hrs) Std Dev 0.44	Mean 3.63 (Range 1 to 10 hrs) Std Dev 2.43
The following were rated on a seven point Likert Scale, where 1 = Very Unsatisfied and 7 = Highly Satisfied		
Settlement Satisfaction	Mean 5.89 Std Dev 1.31	Mean 3.86 Std Dev 2.23
Process Satisfaction	Mean 5.67 Std Dev 1.33	Mean 3.29 Std Dev 1.89

Figure 1

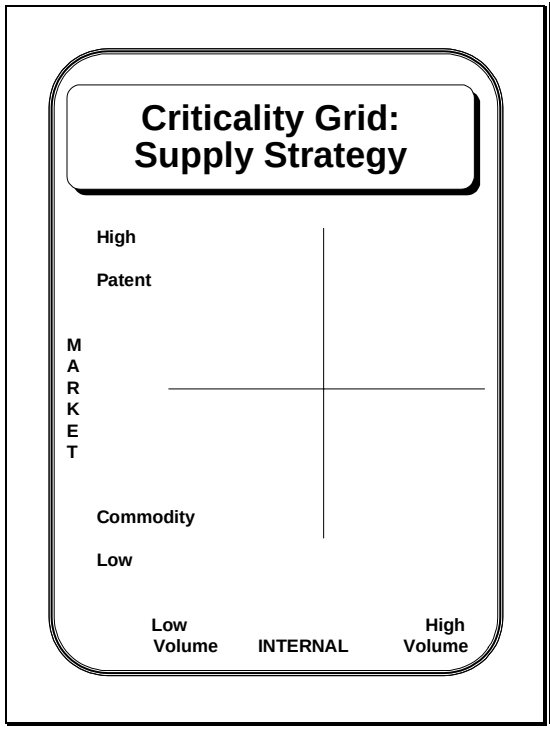

Figure 2