

## ***How team satisfaction can undermine groupware use.***

# **Satisfaction, Technology Adoption, and Performance in Project Teams**

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### **Abstract**

Rita Vick's paper focuses on technology adoption and performance in teamwork contexts. One way to increase performance, she argues, is to increase information sharing. This commentary argues that adoption, performance, and information sharing may depend on satisfaction with current project work. The paper notes that there is evidence that satisfaction with project work is very high. If this is the case, then the adoption of teamwork technologies should continue to be slow. Furthermore, high satisfaction can have a negative impact on group performance, because it may cause team members not to stress challenging information that could disrupt team harmony. We suggest that the experiments that Vick proposes consider satisfaction and consider not only general information sharing but also classify information shared in terms of potential divisiveness.

### **The Importance of Project Teams**

Vick's paper focuses on teams. This certainly seems like a good choice for both theoretical and practical reasons. Almost thirty years ago, Bennis and Slater (1968) foresaw the emergence of a new kind of organization—the adhococracy. In these new organizations, they forecast, "Organization charts will consist of project groups" rather than stratified functional groups" (p. 74).

Today, many management experts are again calling for this type of revolution. Some continue to use the term adhococracy (Waterman, 1990). Others are using a newer term—the virtual corporation (Davidow and Malone, 1992). All, however, are calling for a massive increase in team-based work.

In reality, teamwork in organizations may already be widespread. Ghoshal and Bartlett (1995) argue that a number of leading edge organizations are already heavily team-based. Panko and Kinney (1996) conducted three surveys of working professionals to learn about the respondents' participation in project teams. In the first two surveys, subjects began with a check-off box on whether they had participated in a project team at work in the last six months. In the two surveys, 89% and 88% said that they had.

Nor were these trivial projects. Across the three surveys totaling 165 results from respondents who had worked on project teams involving fewer than 16 members, the mean team size was 7.7 members. The mean number of group meetings was 16.5. In the third survey (N = 105), which asked about project durations, the average duration was six months.

To summarize, the Panko and Kinney (1996) study found that project teams are already widespread, with almost 90% of respondents saying that they had worked on a project in the last six months. These projects, furthermore, were substantial in size.

## Adoption and Performance

Vick's paper focuses especially on two aspects of project teams. One is the adoption of technology. The other is team performance.

### Adoption

The "best" team technology does no good unless it is adopted by individual users and by groups. Some technologies, such as room-to-room video-conferencing, have been touted since the early 1960s yet have had only modest adoption by project teams.

Adoption is especially a problem in electronic meeting rooms, in which each participant has a computer and in which there are information sharing tools, such as public

screens and the ability to look at one another's displays. Most project team meetings today probably take place in traditional conference rooms, where even an

overhead projector may be a luxury. Moving such meetings to electronic meeting rooms filled with technology might be able to bring strong benefits, but only if these rooms are built and used. So far, organizations have been reluctant to do so.

### Performance

Teamwork is extremely expensive, given the group size and interaction frequencies discussed above. Unless teams perform very well, they will live up to the old jokes about groups that keep minutes and waste hours and about camels being horses designed by committees.

A great deal has been written about how to make project teams work more efficiently and more effectively. Most of the advice probably is good. However, there is so much advice in existence that it is difficult to select one or two variables to look at in controlled experiments.

Vick focuses on information sharing. This seems reasonable in light of past laboratory experiments and in light of many anecdotal incidents of problems occurring because information was not shared. However this also raises the further question of why

information is shared or not shared in one project team versus another.

## Satisfaction

The argument of this paper is that satisfaction with current project work appears to be a good variable to focus on if we wish to understand both adoption and performance.

### Satisfaction and Adoption

First, satisfaction with current project work should affect adoption. A basic principle of marketing is that products are successful only if they serve perceived unmet needs. All three words are important. First,

unless a product serves a need, it will not be used. This is especially true for expensive products, such as electronic meeting rooms. Second, the need must be unmet by the current

products or situations. Deficiencies in benefits sought, not just the benefits sought, are the keys to adoption. If people are receiving the benefits they seek, they have little incentive to change. Third, and perhaps most importantly, both benefits and benefit deficiencies are only important to the extent they are perceived as such by people.

In the case of advanced project team technologies, the core issue is the extent to which managers and professionals are satisfied or dissatisfied with their current project work. If they find meetings frustrating and feel that team performance is low, they are likely to lean toward new technologies—even expensive ones such as electronic meeting rooms. On the other hand, if they are satisfied with their current teamwork and the tools they use in project teams, then they will not have a perceived benefit deficiency. In this case, adoption is unlikely.

### Satisfaction and Performance

Satisfaction may also affect the information sharing that Vick notes is needed for good performance. If team members are satisfied with the group interactions and progress, they are not likely to stress

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information that goes against whatever consensus is forming within the group.

## Discussion

### Satisfaction and Adoption

As discussed above, satisfaction with the status quo works against the adoption of new technologies. If people feel that project teams are working well today and are satisfying environments to work in, they are not likely to change the way they work by adopting new technologies.

### Satisfaction with Team Size

Panko and Kinney (1996) asked a number of satisfaction questions of their project team respondents. They first asked about satisfaction with the number of members on the project team. One common belief about project teams is that they are staffed with large numbers of unnecessary people who waste resources and add coordination problems.

However, the Panko and Kinney (1996) respondents were very satisfied with the sizes of their project teams. When asked about the best team size, 69% said that the actual size was the best size, and those that wanted a change were almost equally split between those wanting an increase (12%) and those wanting a decrease (19%). Furthermore, only in a few cases was the desired change in size more than one person.

Consistent with Vick's concern with information sharing focus, the reasons why the actual group size was selected reflected a concern with information sharing. In 89% of the groups, having a mix of expertise was selected as a reason for selecting the actual team size. In 74%, it was having a representative from each affected unit.

### Satisfaction Regarding Participation and Performance

The Panko and Kinney (1996) study also asked a number of questions about satisfaction with performance and team interactions, using 7-point agree-disagree Likert scales. The answers indicated overwhelming satisfaction with the project work.

There was broad satisfaction with performance. Among all respondents in the three surveys, 93% agreed that the team successfully completed its task, and an equal percentage said that they did a good job.

There was also broad satisfaction with interactions. Among all respondents in the three surveys, 84% were satisfied with the meetings in general, while 89% said that the team members ended as friends. In the last survey, which had 105 respondents, Panko and Kinney asked a number of questions about satisfaction. Answers in all questions were strongly skewed toward the satisfaction end of the scale. The greatest level of dissatisfaction (34%) came in meeting duration.

Surprisingly, satisfaction had only a slight negative correlation with team size. This is surprising because in laboratory studies satisfaction usually falls substantially as group size increases (Wheelan and McKeage, 1993). This finding and the high level of satisfaction found for project team work in general should caution us to be wary about applying laboratory studies to real-world project teams.

Although satisfaction has not been examined widely in project team studies, Monge, McSween, and Wyer (1989) collected data on 903 meetings of three or more people. They found that about 75% of the respondents were satisfied with the meetings along several dimensions, while 10% to 15% were dissatisfied. The rest were neutral. In a post-test of the Panko and Kinney (1996) study, the authors found that a neutral value on the satisfaction scale tended to indicate that satisfaction was not an issue regarding the meeting.

### Satisfaction and Performance

Earlier, we noted that satisfaction may have a negative impact on group performance.

For instance, in a study not yet published, Panko (1998) had individual students and groups of three students (triads) create a spreadsheet from a word problem.

The triads, as expected, had many fewer errors than individuals working alone. Only 27% of their spreadsheets had any error at all. Nevertheless, the number of errors per spreadsheet were correlated with answers to several questions asked of triad members on a post-test questionnaire.

Surprisingly, there were a number of statistically significant correlations with the number of errors, despite the few errors that were made by any triad. Even more surprisingly, most of the correlations dealt with satisfaction with the group interactions.

Most surprisingly of all, every correlation between satisfaction and number of errors was positive. In other words, the more satisfied team members were with the interaction, the more errors they made.

This was not the first study to argue that satisfaction can be corrosive. In a sense Janis's (1972) book on groupthink deals with groups not engaging in conflict because of a desire to maintain a satisfying harmony.

## Conclusion

Many papers on teamwork begin with discussions about how inefficient and unproductive most meetings are. Such statements have been made so often they we tend to believe them without proof. However both the Panko and Kinney (1996) and Monge, McSween, and Wyer (1989) studies have shown that real working managers and professionals generally are satisfied with both meetings and project work. While some rouge meeting and project teams do occur and are especially memorable, this is not the norm.

Widespread satisfaction with projects works against the adoption of new team technologies. If there is no strong perceived benefit deficiency, then there is no strong incentive to adopt new technologies that are both expensive and might disrupt the successful behaviors of individuals and teams.

In addition, this widespread satisfaction may be reducing project team performance. Satisfied team members are not likely to rock the boat, either consciously or unconsciously. This lack of substantive conflict could reduce both information sharing for potentially conflict-laden information and also the general desire of team members to push themselves and other team members to raise their work to a higher level.

The implications for experiments, such as the one proposed by Vick, may lie in focusing on the kinds of information sharing that take place in experimental groups. It may not be so much the sharing of information in general as the willingness to challenge the groups to consider information contrary to their consensus beliefs that will determine performance. In addition, it seems critical to measure satisfaction and see the extent to which it is related to information sharing and to objective performance.

The implications for the real world are less clear.

If project team members are wrong about the extent to which their teams are performing at high levels already, then they need to have this illusion pierced, both to increase technology adoption and to increase performance in general by engendering more substantive challenges to other group members. However, it is difficult to measure real-world team performance, so it is difficult to know if current satisfaction is a self-protective fantasy or if real-world workers really are quite good at teamwork. (They obviously have a great deal of practice with teamwork.) Here, we need field studies in which team performance is measured by outside sources, even subjective ones, to see if the negative relationship between satisfaction and performance seen in the laboratory holds in the field.

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