IMPORTANCE OF SELF-EFFICACY OF WORKING IN TEAM ENVIRONMENT IN DETERMINING INDIVIDUAL SATISFACTION AND PERFORMANCE: DOES IT DEPEND ON THE TEAM PERFORMANCE?

SANJIB CHOWDHURY, East Central University
THOMAS LANIS, East Central University

ABSTRACT

Utilization of teams is increasingly becoming prevalent in high-tech entrepreneurial organizations. As the team approach is becoming popular, more and more employees are getting involved in teams. According to management literature, individual satisfaction is an important variable for long term organizational performance. Therefore, individual satisfaction of working in a team becomes an important consideration for the entrepreneurial organizations. This study provides an explanation of relationships between employees' self-efficacy of working in a team, their satisfaction with teams and individual performance. It suggests that the above relationships depend on overall team performance.

INTRODUCTION

In entrepreneurial businesses, where the name of the game is fast growth, important issues often ignored are individual performance and satisfaction. While small businesses try to achieve fast organizational growth, individuals within the organizations must remain satisfied and perform at the best of their abilities. Although the issue of individual performance and satisfaction is explained well in organizational literature, in order to comprehend individual satisfaction and performance in small businesses, it is important to focus on their contemporary work environment. Small businesses, especially small high-tech businesses where the pressure of growth is very high, are increasingly using teams in their quest to grow fast and yet remain flexible. Unfortunately, the organizational literature is not clear about the impact of the team environment on individual performance, satisfaction and their antecedents. Therefore, it is important to explain individual performance in a team environment.

Self-efficacy, a significant component in Bandura's social cognitive theory, has enormous effects on one's effort, interest, persistence and performance. Numerous organizational behavior literature focus on improving self-efficacy in order to improve both individual and organizational performance. Being a task specific construct (Gist & Mitchell, 1992), self-efficacy describes a judgment of perceived capability for performing a specific task (Bandura, 1988, Wood & Bandura, 1989).
Researchers have found strong relationship between self-efficacy and performance of a specific task (Taylor, Locke, Lee, & Gist, 1984; Lent, Brown, and Larkin, 1987). It is also established in organizational behavior literature that, although weak, job satisfaction has a positive influence on performance (Iaffaldano and Muchinsky, 1985; Ostroff, 1992). Job satisfaction is not a single dimensional construct, rather it is an emotional response toward various aspects of one's job. For example, researchers at Cornell University and University of Minnesota developed five and twenty dimensions of job satisfaction respectively. This study focuses satisfaction with team setting.

Teams are increasingly becoming integral parts of contemporary organizations (Cornwall and Perlman, 1990). This phenomena is especially important in small high tech organizations. It has been contended that new organizational models should consist of teams as they are conducive to innovation, creativity, and risk taking. Consequently, an increasing number of employees in entrepreneurial organizations are expected to work in a team setting. Therefore, examining various aspects of the team environment such as self-efficacy of working in teams, satisfaction of working in teams, individual and team performance becomes important.

Accordingly, this study is an attempt to examine how self-efficacy, job satisfaction and individual performance interact. To do so, it also identifies a moderating effect of team performance on the self-efficacy and satisfaction relationship. Focusing on the team environment, this study proposes that in a team environment relationships between individual self-efficacy, satisfaction, and individual performance vary according to team performance.

**Concept of Self-Efficacy**

Self-efficacy is a personal construct of Bandura's (1982) Social Cognitive Theory. The theory explains how behavior, cognitive and personal factors including self-efficacy, and environmental events interact and influence each other in a dynamic fashion. "Self-efficacy refers to beliefs in one's capabilities to mobilize the motivation, cognitive resources, and courses of action needed to meet given situational demands" (Wood and Bandura, 1989, p:408).

Four categories of experiences widely indicated in the literature, are very important in the development of self-efficacy. These categories are mastery experiences, modeling, social persuasion, and judgments of own physiological states (Bandura, 1982; Gist, 1987). An explanation of these categories is presented in the following paragraph.

The most effective way an individual develops self-efficacy is through mastery experience (enactive mastery). Enactive mastery indicates that repeated performance accomplishments enhance self-efficacy. Positive mastery experiences increase self-efficacy where as negative mastery (failures) tend to decrease self-efficacy. Modeling or vicarious experience is the second most effective way to develop self-efficacy. According to Bandura and Schunk (1989), people judge their self-efficacy by comparing with their similar others. Through observing someone similar to him/her succeed with sustained
effort, the observer develops his or her own self-efficacy. However, by observing a similar other fail with high effort, the observer diminishes his or her own self-efficacy. Verbal persuasion is the third most effective way to develop self-efficacy. According to Wood and Bandura (1989), people improve their self-efficacy when they receive realistic encouragements. More credible sources of encouragement will have a stronger effect on the development of self-efficacy. The fourth important determinant of self-efficacy is the perception of the individual's physiological state. In the animated state, people might feel strong and develop their self-efficacy, while in the depressed state, people might be vulnerable which might in turn diminish their self-efficacy.

It is evident in the literature that individual self-efficacy of performing a task is positively related to individual performance. Gist and Mitchell (1992) proposed a model to explain self-efficacy-performance relationship. The model provides a simplified display of the process of self-efficacy formation and its relation with performance.

Overall, this model implies that people directly and indirectly evaluate their experience and arrive at judgments about the extent of their abilities to perform a specific task (Gist & Mitchell, 1992). The model proposes that the four kinds of experience influence an individual's self-efficacy through his/her cognitive evaluation, which, in turn, affects the individual's performance. Individual performance is also found to be related to satisfaction.

Concept of Satisfaction and its relationship with performance

Job satisfaction research was initiated with a belief that a satisfied worker is a productive worker. Locke (1976, p. 1297) defined job satisfaction as "... a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences." Most instruments of job satisfaction measure emotional response toward various facets of one's job. Hence, it is important to capture one's satisfaction with the overall job experience in order to examine its true relationship with performance.

In organizational research, the relationship between job satisfaction and performance remains a controversial issue. Although many studies do not show a strong relationship between satisfaction and performance (Iaffaldano & Muchinsky, 1985), there are others that found positive relationships between these two variables (Östroff, 1992). Therefore, it can be argued that there is enough evidence to suggest a positive relationship between job satisfaction and performance.

As the relationships of prior self efficacy and satisfaction with individual performance are fairly established in organizational literature, it would be interesting to see if these relationships stay the same in a team environment. This study proposes that in a team environment, prior self-efficacy of working in a team would have a mediating effect through satisfaction with team environment on individual performance.
Self-efficacy, satisfaction, individual performance and team performance in a team setting

The increased prevalence of team-orientation in organizations necessitates that we pay greater attention to the existing organizational relationships in the light of team environment. The important questions that need to be answered is that whether suggested relationships in the traditional work environment hold true in the team environment, if not, how should they be adjusted. Accordingly, this study argues that, in a team environment, relationships of satisfaction and self-efficacy with individual performance call for further attention.

According to Hodson (1997), in a team setting, individual satisfaction is influenced by a variety of specific aspects of team environment. Satisfaction in a team environment assesses whether a member is satisfied or happy with his/her team environment. Organizational research shows that an individual's satisfaction with different aspect of his/her job has a positive influence on individual performance. Therefore, it can be argued that, if an individual is satisfied with the team environment, he/she will perform better. According to Landy (1989), however, team performance does not necessarily ensure individual satisfaction. In other word, there is a possibility that a team member of a poorly performing team might be satisfied with the team environment and visa versa. Moreover, as the satisfaction and individual performance is proposed to be related, it can be argued that, in poorly performing teams might have high performing members based on their individual satisfaction. Similarly, it can be argued that high performing teams might have low performing team members based on their individual satisfaction.

Nevertheless, depending on team performance, the relationships between self-efficacy, satisfaction and individual performance might vary. Members with high self-efficacy of working in a team represents those members who are highly confident that they can perform successfully in a team environment, whereas, member with low self-efficacy represents those who have low confidence. According to Gist & Mitchell's (1992) self-efficacy model, high self-efficacy of working in a team suggests previous successful experience with team environment. Arguably, a successful experience might lead to increased satisfaction with the same type of experience. Therefore, in a high performing team, individuals with high self-efficacy will be satisfied and perform well. In such teams, however, individuals with low prior self-efficacy will improve their self-efficacy due to the success of their experience with the current team might also be satisfied and perform well. Also, members of a high performing teams will be positively influenced by many internal and external factors, which might improve their satisfaction and their by individual performance. Therefore, it can be concluded that, in a high performing team, self-efficacy will not show any relationship with individual performance, rather individual satisfaction will show a significant relationship with individual performance.

H1: In high performing teams individual satisfaction will be positively related to individual performance.
However, if the current experience is perceived to be not a successful one then it might lead to a decreased satisfaction among most members. Also, people with low prior self-efficacy will end up with even lower self-efficacy and consequently their satisfaction with the current team environment will be very low. Moreover, in a low performing team, there will not be many positive internal and external factors, rather, there may be many negative factors that might influence one's satisfaction and their by performance.

Individuals with high prior self-efficacy of working in a team on the other hand, might be resilient enough to withstand the failure of one team experience, as they grew their self-efficacy based on many positive experiences. As discussed earlier, cognitive evaluation of an experience influence one's self-efficacy and that in turn affect his/her performance. Thus, people with high prior self-efficacy of working in a team environment might evaluate their team experience with a positive attitude as opposed to those with low prior self-efficacy and might be more satisfied than those with low prior self-efficacy. Therefore, it can be concluded that in a low performing team, higher self-efficacy of working in a team might indirectly influence individual performance through its influence on satisfaction. In other words, in a low performing team, self-efficacy of working in a team environment will have a mediating influence through individual satisfaction with team environment on individual performance.

H2: In a low performing team individual satisfaction with the team environment mediates the relationship between self-efficacy and individual performance.

The above hypothesis will be tested by using the general analytic considerations recommended by Baron and Kenny (1986). According to their recommendation the above hypothesis will be tested using four steps. The four steps are given below:
Step 1: There will be a positive relationship between self-efficacy and satisfaction.
Step 2: There will be a positive relationship between satisfaction and individual performance.
Step 3: There will be a positive relationship between self-efficacy and individual performance.
Step 4: There will be no relationship between self-efficacy and individual performance when satisfaction will be in the equation.

METHOD

The four variables in this study are operationalized based on current literature. We used established measurement instruments for measuring each of the variables. Based on Bandura's (1986) suggestion, self-efficacy will be measured by asking individual's level of confidence of being successful in different aspects team environment. This instrument generates numerical data from 0 (zero percent confidence) to 100 (one hundred percent confident). These data were collected before individuals were assigned to teams. Therefore, it measured the initial self-efficacy of working in a team setting. A seven point Likert type scale was used to collect data on individual's satisfaction on different aspects of his/her team. These data were collected after each individual had completed his/her team responsibility. A seven point Likert type scale was used to collect data on
individual performance. It is a fifteen item measurement instrument that is designed to measure how team members evaluate an individual member's performance on different aspect of team. Team members evaluated each of the members of their team. A seven point Likert type scale was used to collect data on team performance. This instrument was completed by the course instructor after the teams had completed their responsibility. The performance of each team was evaluated based on fifteen performance criteria. The course in which the team operated was treated as a control variable. As the team performance is evaluated by instructor of different courses, the course is used to control for the possible team performance evaluation bias.

**Data Collection**

Junior and senior level business students are used as subjects for data collection. These students were enrolled in business courses that required participation in a major team project. The team projects required the students to work in a team environment and make managerial decisions. The projects were simulations of a variety of real world teams. Team sizes varied from four member teams to six member teams. A total of twenty-three teams were involved in the study. Data on self-efficacy were collected at the beginning of the semester, before the students were assigned to teams. Data on satisfaction, individual performance and team performance were collected after the team projects were completed. Therefore, at least ordinal data were collected on self-efficacy of working in team in general, satisfaction of working with the current team, individual performance on the current team project, and current team performance.

**Reliability and Validity of the Measurement Instrument**

Bohrnstedt (1983) described the importance of establishing the reliability and validity of a measurement instrument. He recognized the importance of knowing whether or not items measure what they are intended to measure (Validity) and the degree to which items give a consistent or repeatable result (reliability).

Reliability is an evaluation of measurement consistency. Internal consistencies were measured for each instrument by measuring coefficient alpha, developed by Cronbach (1951). According to Nunnally, Cronbach's alpha value of 0.7 is adequate for internal consistency reliability. The reliability program in SPSS 8.0 was used for calculating Cronbach's alpha. All the measures used in this study showed a Cronbach's alpha above .85. The most important validity question is whether the test instrument measures the concept it was designed to measure. One way to do this is to see if the instrument has the convergent validity. We used factor analysis to check construct validity. High convergent validity means that the data from all items in the instrument load on one factor (Kim and Mueller 1978). The instruments used in this study showed factor analysis results where all items loaded on a single factor.
Data Analysis- Linear regression analysis is used to analyze data and test the hypotheses. Data on self-efficacy, satisfaction, and individual performance were divided into two sets based on two levels of team performance. This is done by dividing the subjects into two groups based on their team performance compared to the median team performance. These two sets of data was run on four regression model. The results of the analysis is presented in table 1. Model one tests the relationship between Self-Efficacy and Satisfaction. Only on low performing teams did we find a significant relationship (.001) between team members' Self-Efficacy with team environment and their satisfaction with team environment. As self-efficacy increases, the satisfaction also increases. However, this does not hold for the High Performance teams. The relationship between self-efficacy and individual performance, although not very strong, was also significant only for the low performing teams. But for high performing teams self-efficacy does not show any significant relationship with individual performance. Model 4 tests the relationship between satisfaction and individual performance. In both high and low performing teams, satisfaction is related to individual performance. Therefore, the data shows that for high as well as low performing teams, satisfaction is significantly related to individual performance in a group setting. Model 3 describes the relationship between self-efficacy, satisfaction and individual performance. In low performing teams, when self-efficacy and satisfaction are considered together, neither variable showed significant relationship with Individual Performance. On the other hand, in high performing teams, model 3 shows that only the satisfaction is significantly related to individual performance.

TABLE 1: Regression Analysis Results

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent Variable</td>
<td>Satisfaction</td>
<td>Individual Performance</td>
<td>Individual Performance</td>
<td>Individual Performance</td>
</tr>
<tr>
<td><strong>Low Performing Team</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R-Square</td>
<td>.251</td>
<td>.152</td>
<td>.219</td>
<td>.202</td>
</tr>
<tr>
<td>Beta Coeff</td>
<td>.487 (sig. at.01)</td>
<td>.298 (sig. at.05)</td>
<td>1).153 (n.s.) 2).300 (n.s.)</td>
<td>.340 (sig. at .01)</td>
</tr>
<tr>
<td><strong>High Performing Team</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R-Square</td>
<td>.158</td>
<td>.013</td>
<td>.159</td>
<td>.157</td>
</tr>
<tr>
<td>Beta Coeff</td>
<td>.028 (n.s.)</td>
<td>.011 (n.s.)</td>
<td>1).051 (n.s.) 2).388 (sig.at.05)</td>
<td>.380 (sig at .05)</td>
</tr>
</tbody>
</table>
It becomes clear from the above finding that our result showed a positive significant relationship between individual satisfaction and individual performance in high performing teams. No other relationship was found in high performance teams. This finding supports hypothesis one (H1). It is also clear from the above finding that in low performing teams, (a) self-efficacy is significantly related to satisfaction; (b) satisfaction is significantly related to individual performance; (c) self-efficacy is significantly related to individual performance when considered as a single independent variable; and (d) self-efficacy is not significantly related to individual performance in presence of individual satisfaction in the model. According to Baron and Kenny (1986) the above findings regarding low performing team confirms the hypothesis two (H2).

DISCUSSION

The inevitable challenges that exists at the core of entrepreneurial businesses are the challenges of growth, innovation and risk. It is evident in organizational literature that a team environment is conducive for organizational flexibility, innovation, and growth. This might very well be the reason for the increasing prevalence of team-orientation in entrepreneurial businesses. As more and more small businesses use team environment in their work place, they should be aware of factors that make an individual good or bad performer in specific teams.

While existing literature suggests that an individual's self-efficacy is tied to his/her future performance, this study shows that in a team environment self-efficacy might not always predict one's performance. Rather, this study shows that depending on the overall performance of the team may or may not have an influence on the individual performance. In a high performing team, one's self-efficacy of working in a team does not influence one's performance or satisfaction. This implies, in high performing teams, managers do not need to consider improving individual's self-efficacy to improve their performance and satisfaction. Therefore, in high performing teams, members become satisfied and perform well not due to high self-efficacy, rather, due to internal and external rewards for high team performance.

In a low performing team, however, one's self-efficacy of working in a team does influence one's performance and satisfaction. This study also suggests that self-efficacy influences individual performance only by improving one's satisfaction with team environment. Therefore, it is important for managers to consider improving self-efficacy of low performing team members. This team members should receive training to improve team work. This might improve their self-efficacy of working in future teams. This could also be done by transferring members with low self-efficacy from low performing teams into high performing teams and visa versa. This will expose members with low self-efficacy to successful experience which in turn improve their self-efficacy.
Therefore, before assigning members to teams, managers need to know individual self-efficacy of each member. Moreover, it is important that managers select right combinations of individuals based on their prior self-efficacy of working in a team environment. Based on prior team performance data and prior self-efficacy data memberships must be assigned to teams for higher future performance.

Although used subjective data from business student, researchers believe that they were able to minimize some of the biases by using multiple source for collecting data. Also, as the study measures individual difference variable and suggests their influence on performance, it can be argued that student population (junior and senior business students) provides meaningful information that can be generalized to the real life business environment.

Future research in this area should be focused on the combination of individuals based on their self-efficacy that would produce a productive team. As suggested in this study, people with high self-efficacy of working in a team might not be satisfied even if team performance suffers, future research might focus on improving low performing team member's self-efficacy of working in teams.

REFERENCES


