THE EFFECT OF TEAM-LEADERSHIP MODES ON TEAM PERFORMANCE: A PRELIMINARY STUDY

Peter Markulis
SUNY Geneseo
Markulis@geneseo.edu

Avan R. Jassawalla
SUNY Geneseo
Jassawal@geneseo.edu

Hemant Sashittal
St. John Fisher College
sashi@sjfc.edu

Daniel R. Strang
SUNY Geneseo
Strang@geneseo.edu

Paul Scipione
SUNY Geneseo
Scipione@geneseo.edu

ABSTRACT

A quasi-experimental research study was conducted based on a 2004 ABSEL workshop on team leader selection. The study found that there was no statistically significant difference in the three team-leader modes (rotating, emerging and designated) and team project performance. The study also found that while most students (80%) felt that all students should have an opportunity to lead a group, only half felt it was not the responsibility of the business school to train them as leaders. The study discusses the implications of the results, particularly for instructors who use the team format.

INTRODUCTION

At the 2004 annual ABSEL conference, a workshop was conducted on team-leadership (Markulis, et al. 2004). According to the workshop presenters, the workshop had several objectives:

1. to review the literature on team leadership as used in the classroom,
2. to have the workshop participants “experience” various team-leader modes and to discuss their experiences,
3. to have the workshop participants assist in the partial design of a classroom experiment which could be conducted on the subject of team-leadership.

This paper focuses on the third objective of the 2004 ABSEL workshop. The authors designed and implemented an educational experiment using some of the suggestions given at the 2004 team-leader workshop.
Developments in Business Simulation and Experiential Learning, Volume 33, 2006

METHODOLOGY

A quasi-experimental design of team leadership using (Campbell & Stanley, 1963) was developed. The experiment used a within subjects, post-test format. The experiment took place at a medium sized university with undergraduates, most of whom were business majors. The authors located an instructor who taught three sections of an Organizational Behavior class. The instructor agreed to allow her classes to be used for the experiment, although she was not involved in the experiment per se (control for instructor bias). In each section, there were 6 student teams with between 5-6 students randomly selected for each team (for a total of 18 teams and 77 students). One can assume that the students chose their class section based on convenience or some criteria other than their knowledge that they would be assigned to a specific team-leader mode. There is no reason to assume that there was any bias in the course selection (randomization). The researchers acknowledge that the students in the classes may have interacted with each other in terms of discussing their team modes. Nonetheless, experimenters assume that there is no reason to believe that students were overly concerned about the team-leader modes and their interactions in this area were minimal and casual (experimental control).

The instructor gave each team the same semester long team-based project. At the end of the semester, the instructor graded the semester long team projects for each team. On the last class day, the authors then asked each student to complete a short questionnaire on their team-related experiences during the semester (Appendix 1). The instructor provided to the authors the team grades and these-along with the survey results--were analyzed.

RESULTS

A major objective of the study was to determine if team-leader mode affected project performance. Table 1 indicates the grade distribution for the teams in each of the classes. Project grade was determined by the instructor of the course, who was not part of the original research project.

An ANOVA (team leader mode as factor, team grades as dependent variable) shows no statistically significant difference (see Table 2) among the three team-leader modes and project performance.

A second area of concern raised by the participants of the 2004 ABSEL workshop on team-leader modes was the issue of school’s (or instructor’s) responsibility to help

Table 1: Grade Distribution of Teams for Final Team-base Project

<table>
<thead>
<tr>
<th>TEAM-LEADER MODE</th>
<th>TEAM 1</th>
<th>TEAM 2</th>
<th>TEAM 3</th>
<th>TEAM 4</th>
<th>TEAM 5</th>
<th>TEAM 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designated</td>
<td>87</td>
<td>88</td>
<td>93</td>
<td>85</td>
<td>90</td>
<td>84</td>
</tr>
<tr>
<td>Emerging</td>
<td>84</td>
<td>85</td>
<td>93</td>
<td>88</td>
<td>82</td>
<td>87</td>
</tr>
<tr>
<td>Rotating</td>
<td>87</td>
<td>85</td>
<td>93</td>
<td>90</td>
<td>80</td>
<td>87</td>
</tr>
</tbody>
</table>
Table 2: ANOVA Results of the Team-leader mode on Team Performance
(Actual final grade)

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>.010</td>
<td>2</td>
<td>.005</td>
<td>.040</td>
<td>.961</td>
</tr>
<tr>
<td>Within Groups</td>
<td>9.062</td>
<td>74</td>
<td>.122</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9.072</td>
<td>76</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Is it the responsibility of the Business School to train students to be leaders?

<table>
<thead>
<tr>
<th></th>
<th>Observed N</th>
<th>Expected N</th>
<th>Residual</th>
<th>Chi-Square (1 degree of freedom) = 2.922</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>46 (59.7%)</td>
<td>38.5 (50%)</td>
<td>7.5</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>31 (40.3%)</td>
<td>38.5 (50%)</td>
<td>-7.5</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>77</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The minimum expected cell frequency is 38.5.

Table 4: Should everyone have had a chance to lead a group?

<table>
<thead>
<tr>
<th></th>
<th>Observed N</th>
<th>Expected N</th>
<th>Residual</th>
<th>Chi-square (1 degree of freedom) = 28.688</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, everyone</td>
<td>62 (80.5%)</td>
<td>38.5 (50%)</td>
<td>23.5</td>
<td></td>
</tr>
<tr>
<td>No, only qualified people</td>
<td>15 (19.5%)</td>
<td>38.5 (50%)</td>
<td>-23.5</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>77</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The minimum expected cell frequency is 38.5.

“train” students to be leaders or offer the opportunity for students to serve in a leadership capacity. Several of the workshop participants felt that only students who “showed” leadership skills or desires should be given the opportunity to lead a group, while others believed that it was only “fair” to let all students have the opportunity, if for no other reason than they could experience what it would be like to serve in some leadership capacity.

All students participating in the team-leader mode research project were asked about these issues. (See Appendix A: survey questions 19 & 20). Nearly sixty percent (59.7%) of students’ believe that it is the responsibility of the business school to train them to be leaders (40.3% disagree with the statement in question 19), while 80% feel that all students should have a chance to lead. Tables 3 & 4 show the chi-square values for these results.

The chi-square test (with expected proportion = 50%) is insignificant, suggesting that students do not favor one answer to the other (see Table 3). Over eighty percent (80.5%) of the students feel that everyone should have had a chance to lead the group. The associated chi-square test (with expected proportion = 50%) shows that this belief is significantly held in the sample (see Table 4). There is no apparent linkage between leadership modes, and student responses to questions about the responsibility of business schools to train students to be leaders, and whether or not everyone should have a chance to lead a group (Q 19, 20 on the survey); i.e., the chi-square test of association is insignificant. Similarly, cross-tabulation of responses to questions 19, and 20 show an insignificant linkage in the responses to these two questions. So, students feel strongly about the school’s responsibility to allow all students to lead a team, but they do not think the school has a responsibility to “train” them to be leaders.

Additional findings, particularly those on team dynamics, will be reported in a forthcoming article in the Journal of Education in Business.

DISCUSSION

A major objective of this study was to determine if team-leader mode *ipso facto* affected project performance. Based on the results of this study, it is clear that there is no difference. Of course, this study needs to be replicated elsewhere to see if this finding is upheld in different settings with more diverse student teams. That being said, it is an important finding in that it encourages instructors who use teams to think clearly about how to organize and structure their teams. Is there a specific pedagogical purpose which the instructor has for the team (teleological or process or both?) and the team project? If team-leader mode does not affect the team’s project performance, instructors must consider other relevant variables, like homogeneity, size, experience, task-type and many other variables spelled out in the literature. Instructors must also determine what
interventions they may want to provide to the teams. For example, if the instructor wants to teach the team about team dynamics or processes, s/he may want to manage the team carefully and intervene when necessary.

On a related observation, it is interesting to note that many organizations seem to be moving toward the self-managing team format (Manz and Sims 1987, Taggar, Hackett and Saha 1999, Wolff, Pescosolido, and Druskat 2002, Seers, Petty, and Cashman 1995, O’Brien and Buono 1999, Seers et al 1995). Given this, instructors may want to consider how best to equip students for this eventuality. It would almost seem like the emerging mode would be best. One might hypothesize that this mode may have produced better team performance had the instructor in our experiment “intervened” with training, counseling etc. However, given the nature of this limited experiment, we asked the instructor not to intervene or manage any of the modes, unless a very serious problem arose. One major shortfall in the classroom is the range of skills among the students. Often work teams are selected precisely because members possess a special or unique skill from which the entire team project can benefit. In most undergraduate classes though, there is considerable homogeneity, particularly in terms of student experiences (this may not be true in masters level courses). So, using the emerging mode may present a real challenge to instructors.

LIMITATIONS & FUTURE RESEARCH

One limitation of the study is the university in which the experiment was conducted. The student population of the university is fairly homogeneous and therefore, the authors of this study encourage other researchers to try and replicate this study in more diverse undergraduate settings. A second limitation of the study is the use of the project team grades to measure team performance. One could argue that there are many factors which make up team performance. The authors also are seeking ways to refine the measurement of team projects. The grades in Table 1 probably are indicative of what happens to the grading of most team-based projects, i.e., there is not a lot of grade discrimination among the team grades. Also, the authors are not sure if the instructor modified the grades for each individual on the team based on peer evaluations. Finally, there are the team-leader modes themselves and the ability to tightly control their implementation over the course of a semester. No one can be sure the students actually used the modes in a careful, consistent and reliable way throughout the semester.

In terms of the team-leader modes, the authors are presently engaged in a research project to ascertain what team-leader modes business school instructors are currently using—if any—in their classes as well as to solicit their views on the range of questions and issues regarding the team-leader mode concept.

REFERENCES


250


Schneider, C. E., & Goktepe, J.R. (1983) "Issues in emergent leadership: The contingency model of leadership, leader sex, leader behavior". In H.H. Blumberg, A. P. Hare, V. Kent, & M.F. Daview (Eds.), Small Groups and Social Interactions (Vol. 1), Chichester, England: Wiley.


Thacker, Rebecca A. and Yost, Christine (2002) "Training students to become effective workplace team leaders." *Team Performance Management, 8*, 89-95.


APPENDIX A

Survey (of team leader modes)

Team Number ________ (to determine which team leader mode the student team was assigned to use)

Using the scale below, write the appropriate number next to the questions 1-18.
1=Never   2=Almost Never   3=Rarely   4=Sometimes
5=Frequently  6=Most of the time  7=Always

_____1. Our group worked on all the parts of the project as a team.
_____2. In general, all group members contributed to the project.
_____3. There was a balance of workload among team members.
_____4. Our team meetings were well organized.
_____5. There was conflict in our group.
_____6. Our meetings had written agendas.
_____7. There was a clear leader present at our group meetings.
_____8. There was good communication among our team members.
_____9. The leader/facilitator of our group positively affected team communication.
_____10. Group members were accountable for how they performed.
_____11. Our group had penalties and/or rewards for member contributions/behaviors.
_____12. Our team leader/facilitator was effective.
_____13. Our team was highly competitive.
_____14. Team members provided constructive feedback.
_____15. Communication was open and honest.
_____16. Our team leader/facilitator contributed to positive group dynamics.
_____17. Our team leader/facilitator contributed to positive group performance.
_____18. Our group had a high level of tension.

Circle the best answer for questions

19. Is it the responsibility of the School of Business to train students to be leaders?
   A. Yes.       B. No.

20. Do you feel everyone should have a chance to lead a group?
    A. Yes, everyone should.       B. No, only qualified people should.