

Leader-subordinate Communication and Leadership Style in a Project Team

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ABSTRACT

The relationships between leader-subordinate interpersonal communication and performance were examined in conjunction with leadership for small project teams of six research institutes funded by Korean Government.

The official communication was more positively related to consideration than initiating structure of leader behavior. The non-official communication was positively related to consideration but not significantly related to initiating structure. Each dimension of the performance was positively related to the official and non-official communication for total sample and related differently to the communications according to leadership types for given leadership style.

INTRODUCTION

This study examines relationships between leader-subordinate communication in terms of official and non-official communication, and performance in conjunction with leadership style for small project teams of research institutes sponsored by the Korean Government. Consideration and initiating structure of leader behavior are used as leadership dimension, and subordinate job satisfaction and project success are used as dimension of performance in a project team.

Consideration is relationships-oriented leader behavior and initiating structure is task-

oriented leader behavior. Four types of leadership style can be classified by two-by-two categorization of leader behavior.

The official communication means formal, vertical, personal and instrumental communication, and the non-official communication means informal, vertical, personal and expressive communication.

Subordinate satisfaction with supervision and with work are considered as dimensions of subordinate satisfaction in a project team because it is expected that the two dimensions are much influenced by leadership of the project leader and leader-subordinate communication in a project team. Subordinate satisfaction with supervision includes supervisory style and influence, technical adequacy, human relations and administrative skills. Subordinate satisfaction with work includes intrinsic interest, variety, opportunity for learning, difficulty, amount, chances for success and control over work flow (Locke, 1976).

Project success is defined as the extent that the subordinate himself perceived the efficacy of the project which his team has undertaken recently, based on the argument that the bottom-line indicator of project success is whether key personnel associated with the project are satisfied with the overall results, and that such factors as controlling costs and meeting the schedule ultimately take a back seat to this global appraisal.

The basic premise of this study is that leader behavior will influence directly the communications and performance; and the official communication will directly influence the performance in a project team; and the non-official communication will influence directly not only the performance but also the official communication, and hence will indirectly influence the performance through the official communication. These relationships are depicted in Figure 1.

The following five questions are addressed to investigate the relationships among leadership, the communications and performance in a project team.

Question 1. What are the relationships between leadership and the official communication?

Question 2. What are the relationships between leadership and the non-official

communication?

Question 3. What are the relationships between the official communication and performance in a project team? More specifically, under a given leadership style, how does the official communication influence the performance in a project team?

Question 4. What are the relationships between the non-official communication and performance in a project team? More specifically, under a given leadership style, how does the non-official communication influence the performance in a project team?

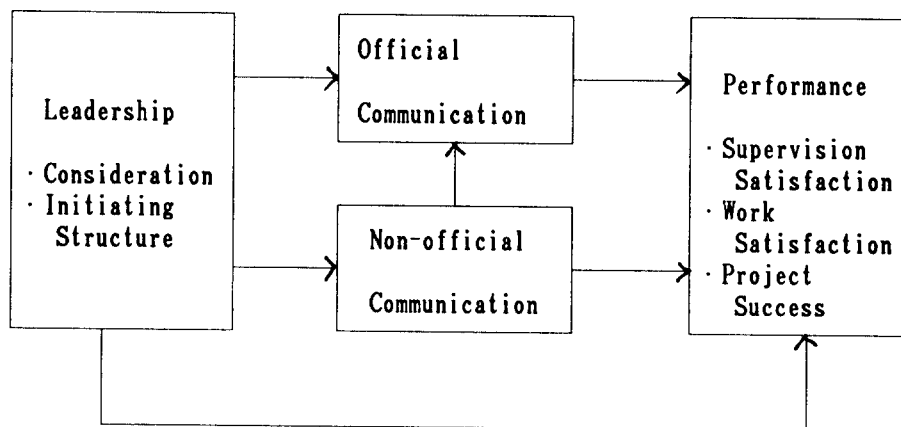


Figure 1. Hypothesized Basic Relationships among Leadership, Official and Non-official Communication, and Performance in a Project Team

METHOD

Hypothesis

Based on the aforementioned discussions, the following hypotheses are proposed:

Hypothesis 1. Official communication between a leader and his subordinates is positively related to the two dimensions of leadership - consideration and initiating structure.

Hypothesis 2. Non-official communication between a leader and his subordinates is positively related to consideration of leader behavior.

Hypothesis 3. Official communication between a leader and his subordinates is positively related to each dimension of performance in a project team.

Hypothesis 4. Non-official communication between a leader and his subordinates is positively related to each dimension of performance in a project team.

Sample

The data for the study were collected from 199 individuals of small project teams at six research institutes funded by the Korean Government. The number of cases for each institute was determined considering the number of its researchers and project teams. The subjects of each institute were randomly selected from as many project teams as possible and all respondents were assured of anonymity.

Instrument

To measure the communication variables, a scale modified from the instrument developed by Penley & Hawkins (1985) was prepared. Sixteen items from the Leader Behavior Description Questionnaire (LBDQ) Form X II (Stogdill, 1963) were used to measure consideration and initiating structure of leader behavior. Subordinate satisfaction with supervision and with work were measured by the scale of four items modified from the instrument developed by Brayfield & Rothe (1951). Project success was measured by a scale consisted of eight items indicating the extent to which subordinates themselves perceived the efficacy of the project which their team conducted recently. All instruments to measure leadership, leader-subordinate communication and performance in a project team consist of the seven-point Likert scale items.

Analysis

To test the relationships between the official communication and leadership (Hypothesis 1), and the relationships between the non-official communication and leadership (Hypothesis 2), analysis of variance (ANOVA) was used. To examine the relationships between leadership style and the communications, ONEWAY analysis was applied. Consideration and initiating structure were split at their medians in order for them to be used as categorical variables. Leadership style was determined by employing a two-by-two categorization of leader behavior. Simple REGRESSION analysis was applied for total sample and for each category of leader behavior to test the relationships between the communications and each dimension of the performance in a project team (Hypothesis 3&4).

RESULTS and DISCUSSION

Table I, which reports the results of the ANOVA analysis of the relationships between leadership, and the official and non-official communication includes two main effects of consideration and initiating structure as well as an effect that is due to interaction of the two variables. The two main effects accounted for significant differences in the official communication among the four groups defined by the possible combinations of high and low consideration and initiating structure (Hypothesis 1). The non-official communication was significantly associated with consideration but not significantly related to initiating structure of leader behavior (Hypothesis 2).

Table I also reports the results of ONEWAY analysis of the relationship between leadership style and the communications. High consideration of leader behavior (Type III&IV) had higher official communication than low consideration of leader behavior (Type I & II), and higher initiating structure had higher official communication under same consideration group, that is, consideration was more positively related to the official communication than initiating structure of leader behavior was. High consideration of leader behavior (Type III&IV) had higher non-official communication than low consideration of leader behavior (Type I & II), and no significant difference between the groups under same consideration group (Type I & II or Type III&IV), that is, initiating structure of leader behavior did not make any significant difference in the non-official communication.

Table I. Results from ANOVA and ONEWAY Analysis of the Relationships between Leadership and Communication

Dependent Variable	Cell Means						Two-way ANOVA (F)			ONEWAY	
	Low C Low S Type I (n=71)	Low C High S Type II (n=29)	High C Low S Type III (n=27)	High C High S Type IV (n=72)	C	S	C x S	F Value	Scheffe	Results ^a	
Total Communication	3.43 (0.91)	3.77 (0.95)	4.60 (0.80)	5.13 (0.76)	88.8**	10.6**	0.5	52.2**		I, II < III < IV	
Official Communication	3.60 (1.05)	4.20 (0.90)	4.90 (0.93)	5.51 (0.72)	83.6**	17.9**	0.0	55.8**		I < II < III < IV	
Non-official Communication	3.26 (1.09)	3.34 (1.23)	4.30 (1.15)	4.75 (1.05)	49.0**	2.4	1.1	25.5**		I, II < III, IV	

a : Significant differences between pairs of group means at the .05 level.

n : Number of Cases

() : Standard Deviation

** : P < .01

C : Consideration

S : Initiating Structure

C x S : Interaction of Consideration (C) and Initiating Structure (S) of Leader Behavior

Table II reports the results of REGRESSION analysis of the relationship between the official communication and each dimension of the performance in a project team. Each dimension of the performance is positively related to the official communication for total sample (Hypothesis 3).

For given leadership style, the official communication is positively related to subordinate satisfaction with supervision under any given leadership type, and positively related to subordinate satisfaction with work under Leadership Type III (High C, Low S), and positively related to project success under Leadership Type I (Low C, Low S).

Table II. Regression Results of the Relationships between Official Communication and Performance under given Leadership Types

Dependent Variable	Leadership Type	Official Communication	
		β	R ²
Supervision Satisfaction	Total Sample	0.74**	0.55
	Type I (Low C, Low S)	0.43**	0.19
	Type II (Low C, High S)	0.70**	0.43
	Type III (High C, Low S)	0.54**	0.30
	Type IV (High C, High S)	0.52**	0.27
Work Satisfaction	Total Sample	0.31**	0.10
	Type I (Low C, Low S)	0.22	0.05
	Type II (Low C, High S)	0.32	0.10
	Type III (High C, Low S)	0.38*	0.15
	Type IV (High C, High S)	0.09	0.01
Project Success	Total Sample	0.46**	0.21
	Type I (Low C, Low S)	0.32**	0.10
	Type II (Low C, High S)	0.12	0.01
	Type III (High C, Low S)	0.36	0.13
	Type IV (High C, High S)	0.20	0.04

* : P < .05

** : P < .01

C : Consideration of Leader Behavior

S : Initiating Structure of Leader Behavior

Table III reports the results of REGRESSION analysis of the relationships between the non-official communication and each dimension of the performance in a project team. Each dimension of the performance is positively related to the non-official communication for total sample (Hypothesis 4).

For given leadership types, the non-official communication is positively related to subordinate satisfaction with supervision under Leadership Type I, II & IV and positively related to subordinate satisfaction with work under Leadership Type II.

Table III. Regression Results of the Relationships between Non-official Communication and Performance under given Leadership Types

Dependent Variable	Leadership Type	Non-official Communication	
		β	R ²
Supervision Satisfaction	Total Sample	0.55**	0.30
	Type I (Low C, Low S)	0.30*	0.09
	Type II (Low C, High S)	0.45*	0.20
	Type III (High C, Low S)	0.08	0.01
	Type IV (High C, High S)	0.32**	0.10
Work Satisfaction	Total Sample	0.27**	0.07
	Type I (Low C, Low S)	0.21	0.05
	Type II (Low C, High S)	0.51**	0.26
	Type III (High C, Low S)	-0.08	0.01
	Type IV (High C, High S)	0.23	0.05
Project Success	Total Sample	0.35**	0.12
	Type I (Low C, Low S)	0.18	0.03
	Type II (Low C, High S)	0.17	0.03
	Type III (High C, Low S)	0.11	0.01
	Type IV (High C, High S)	0.30	0.09

* : P < .05

** : P < .01

C : Consideration of Leader Behavior

S : Initiating Structure of Leader Behavior

CONCLUSION

The results of the study show that the official and non-official communication between a leader and his subordinates are closely related to leadership, and the communications are differently associated with each dimension of the performance in a project team according to leadership style.

This study suggests that performance in a project team can be made better by improving the official and/or non-official communication even under given leadership style, and not only the official communication but also the non-official communication between a leader and his subordinates is important to improve the performance in a project team.

For a long time, there have been little concern for non-official communication between

a leader and his subordinates. But the results of this study suggest that it is necessary to have much concern for the non-official communication as well as the official communication for better organizational performance in any organization.

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