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ABSTRACT

This paper reviews a number of studies that have tested Fiedler's (1964) Contingency Model and Least Preferred Co-Worker Scale of leadership style and effectiveness, focusing on studies that have examined the characteristics and stability of this scale across age, ethnicity, and gender. The Contingency Model is based on three determinants of situation favorability. They are, in order of importance: leader-member relations, task structure, and position power. These studies demonstrate that ratings of leadership style can be obtained at ages as young as 4 years (for females), and that for older adolescents these ratings have some stability over a long period of their lifetime. They also have shown that the Contingency Model itself has validity in educational settings across a range of age groups from the middle elementary years into late adolescence and adulthood. (Contains 13 references.) (MDM)

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Development and Socialization of Leadership in  
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The Assessment of Leadership Style and Effectiveness within  
Educational Settings: An Examination of Fiedler's  
Contingency Model Over a Twenty-Five Year Period

For the past thirty or more years Fiedler's (1964) Contingency Model has been researched in a variety of settings such as business, military, and education using different age groups. In these studies, leadership style has typically been measured by the Least Preferred Co-Worker Scale (LPC). This scale is a sixteen (eighteen in more recent studies) item bipolar adjective checklist in which the individual is asked to rate, on a scale of one to eight, the person with whom they have had the most difficulty completing some task or job. For example, if they thought their least preferred co-worker was unpleasant they would rate them one and if they thought they were very pleasant they would rate them eight. Possible scores range from sixteen to 128. The higher the score the more relation oriented the individual and the lower the score the more task oriented. Individuals with scores below fifty are considered to be task oriented while individuals with scores above sixty are considered to be relation oriented.

A number of studies have focused specifically on the characteristics and stability of this scale across different age groups, ethnicity and gender. This paper reviews a number of

studies conducted by Hardy and his associates which were primarily done in educational settings that both tested the model and examined the stability and factor structure of the LPC Scale.

According to Fiedler (1987), the three most important determinants of situation favorability, in order of importance, are leader member relations, task structure, and position power. These are each dicotomized into the most important and least important determinant of favorability. Thus, we have good and poor leader member relations, structured and unstructured tasks, and strong and weak power. By taking all combinations of these three determinants, taken two at a time, eight possible combinations result. By ordering these from the most favorable situation for a leader to the least favorable an eight cell model is generated. This can best be understood by examining Table 1. In this table Cell 1 (good leader member relations, structured task, and strong power) represents the most favorable situation for a leader while Cell 8 (poor leader member relations, unstructured task, and weak power) represents the most unfavorable situation for a leader.

By examing a large number of leadeship studies, Fiedler (1967) postulated that in the most favorable and unfavorable situations task oriented leaders are the most effective while in situations of moderate favorability relation oriented leaders are the most effective. More precisely, task oriented leaders are more effective in Cells 1, 2, 3, and 8, relation oriented leaders are more effective in Cells 4, 5, and 6 and the findings on Cell 7 are mixed. Thus, the most effective leadership style is

contingent upon the situation with task oriented more effective in very favorable and unfavorable situations and relationship oriented more effective in situations of moderate favorability.

Initially, Hardy (1971) tested the model using college sophomores and juniors in classroom group situations in which regular type classroom assignments were used as the dependent variables. Leadership style was measured in advance using the LPC scale. In each of seven classrooms four low LPC leaders and four high LPC leaders were selected. Group members were randomly assigned. Leader member relations were obtained near the end of data collection. All group leaders had good leader member relations. All groups did both a structured and an unstructured task which was based on a film that was shown previously to all students. The structured task was on objective test concerning the content of the film. Rather precise instructions were given to the leaders as to how the group should proceed to complete the assignment. Position power was manipulated. Groups with strong power were told by their instructor that the leader was selected because they thought they would do a good job. They were also given power to effect grades. Weak power groups were told that their leader was selected at random and for other projects they could select another leader. For the structured task the scores on the objective test were used as the dependent variable. The unstructured task was evaluated by three judges and scored on the basis of style, adequacy of recommendations, and persuasibility. These scores were converted to T-scores and the median T-score was used as the dependent variable on each of the measures plus a

total score. The results of this study supported cells 1, 3, and 4 of the model, but did not support cell 2. Cells 5, 6, 7, and 8 were not tested because leaders could not be found in undergraduate settings who had poor leader member relations.

A subsequent study was later designed by Hardy, Sack and Harpine (1973) in which leader member relations and task structure were manipulated. This study focused on ninth grade social studies students in a suburban junior high school using similar methodology as the initial study, but all groups had weak power. In this study, groups were formed in advance to have good and poor leader member relations by use of sociometric procedures. Thus, this study was designed to test the even cells of the model. Findings were similar to the previously cited study with strong support for cells 4 and 6, moderate support for cell 8 and no support for cell 2.

To determine whether leadership effectiveness could be assessed at younger age groups and to replicate the junior high study at a younger age group, a study was designed for fourth graders in which the last four cells of the model were tested. As in past studies actual group classroom situations were utilized. A modification of the LPC scale was used and was individually administered to all students. Power was manipulated somewhat similarly to the previous studies. The structured task was a dot to dot task in which the groups were to draw an old fashion school house. There were no numbers with the dots and groups were given very precise information as to how many dots had two, three or four lines connected to them. In the

unstructured task groups were told that their principal was thinking of shortening recess to five minutes, but before he did this he wanted the students to give him input in the form of a letter. The group was to write this letter to the principal. Leader member relations were assessed in advance using sociometric techniques. This study only used groups with poor leader member relations and thus tested the last four cells of the model. Cells 5 and 6 received strong support, cell 7 moderate support, favoring high LPC leaders, and cell 8 limited support. This study, however, also validates the notion that leadership style and effectiveness can be assessed at the fourth grade level.

Chemers (1970) found, using white middle class undergraduates, that firstborns were more likely to be task-oriented (low LPC) while later borns were more likely to be relation-oriented (high LPC). Hardy (1972) replicated these findings using undergraduates, but in addition expanded the population to black elementary children in a large Eastern city and found similar results. It was believed that first borns respon more to authority and being older and bigger probably get what they want from their younger sibling by use of authority. Later borns, who do not have the physical power to typically get what they want from their older siblings use social relationships and techniques to get what they want. In a subsequent study, using a modification of the LPC scale, termed the least Preferred Playmate Scale, Hardy, Hunt, and Lehr (1978) were able to identify the same relationship among female nursery school

children. No relationship was found among the males. In this study the scale was individually administered to each child using a three point scale. This study would seem to indicate that leadership style has not yet emerged among males at age four, but that it has emerged among females.

In a different type of study, Hardy, Carey, Eberwein, and Eliot (1976), investigated how task oriented and relation oriented leaders performed on a spatial task. In this particular task, individuals were placed in front of a square board with three mountains on it (An adaptation of Piaget's three mountain task). They were shown a toy man and asked to place the man where they believed each of seven different pictures (shown as slides) were taken. The accuracy of perception was determined by an angle score computed as the absolute angular separation (in radians) between the selected position of the subject and the actual location from which the picture was taken. It was believed that the ability to perceive relationships of feelings and attitudes between or among people is related to the ability to take different viewpoints of object arrangements and therefore that relation oriented individuals should perform more accurately on this task. In this study, male and female undergraduates were used as subjects. Students were classified as task oriented and relation oriented by use of the LPC scale. The hypothesized main effect was supported indicating that relation oriented individuals performed better in their ability to take the viewpoint of others in a spatial situation. It was further postulated that the ability of a leader to better perceive the



feelings, attitudes and opinions of the group members requires the possession of a complex cognitive structure for that particular capability and that this same structure enables her/him to take the viewpoint of others in a spatial task. Further, that it is this structure that enables the relation oriented individual to function more effectively in moderately favorable situations as described in the Contingency Model.

Using data from previous studies plus those of Shiflett (1974), Hardy (1977) found stability of the LPC scale, using a factor analytic approach, across different age groups ranging from junior high school children to college students and military trainees. In the Shiflett (1974) study with military trainees, he found two factors he labeled as 1. "relation LPC" and 2. "task LPC". In this study for the college students three factors were identified. The first two corresponded greatly with Shiflett's factors. The third factor seems to be one associated with extraversion. The high school and junior high school populations both yielded a single strong factor. This factor was found to be very similar to the first factor "relation LPC" in the Shiflett study and the first factor in the college student's data. These comparisons were made from an inspection of the data and by use of program "Relate" developed by Veldman (1967). To investigate the stability of the scales at each age group, the population of each group was randomly divided into two sub-populations. Factor analyses were run on each of these sub-populations and the factor structures were compared. Results yielded similar structures to the original analyses and demonstrated relatively high agreement

among the factor structures thus giving added support to the stability of the LPC scale.

In a newly completed study, Hardy and Davis (1995) re-administered the LPC scale to individuals who primarily as undergraduates took the LPC scale in the early 1970's. Recent addresses were obtained from alumni records and a short letter requesting them to complete the scale and a brief demographic questionnaire. A telephone call was placed to each individual as a follow up to the mailing. One hundred and thirty responded. No relationship was found for females, but a significant correlation of .39 was found for males. Other relationships were also identified that were related to recent supervisory experiences. Those with no supervisory experiences had a correlation of .456 and those who supervise from one to five individuals had a correlation of .392. It is interesting to note that in this category females had a correlation of .872. Those who had been in a supervisory role for more than seven years had a correlation of .448, however experiences for less than seven years did not yield significant values. The gender differences that were found might be related to the changing role of women in regard to leadership issues over the past twenty years in which women have been more encouraged to seek out leadership positions than in the past. Even though a correlation of .39 is not that particularly high, it is a rather significant value when obtained on an instrument of this type taken over a twenty year interval.

In summary, it seems that leadership style, as measured by Fiedler's Least Preferred Co-worker scale or modifications of it,

can be obtained at early ages as young as four for females and that for older children in their late adolescence these values have some stability, particularly for males over a long part of their life. Further, the Contingency Model itself, has validity in educational settings, across a range of age groups from the middle elementary years into late adolescence and adulthood. However, a persistent problem in these studies done in educational settings and many of those done in military settings, has been the inability to support Cell 2 of the model. Studies done in business environments seem to support this aspect of the model. It could well be that the power manipulations in the educational settings or the inherent power in military settings is perceived as far more important in determining situation favorability, from the leaders point of view, and might require a slightly different model with position power as the second variable in determining situation favorability. This would cause cells two and three to reverse positions and correspondently Cells six and seven to reverse positions. Such a change would be more consistent with my findings.

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Table 1.

Fiedler's Contingency Model

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Cells	Leader Member Relations	Task Structure	Position Power
1	Good	Structure	Strong
2	Good	Structured	Weak
3	Good	Unstructured	Strong
4	Good	Unstructured	Weak
5	Poor	Structured	Strong
6	Poor	Structured	Weak
7	Poor	Unstructured	Strong
8	Poor	Unstructured	Weak

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