The manner in which job attitudes and organizational commitment are related to personal attributes and organizational environment was studied for 588 secondary school teachers from Hong Kong. Instruments used to measure these variables are summarized in a table, which also gives psychometric characteristics and validity information. Confirmatory factor analyses and a test of the homogeneity of covariance matrices between the groups preceded the main analysis, which involved 12 organizational measures and 2 personal attribute measures as exogenous variables and 7 commitment and attitude measures as endogenous variables. Findings are summarized as: (1) organizational commitment and job attitudes are multiple attributes, with their own sensitivities to organizational environment; (2) the impacts of aspects of organizational environment on organizational commitment and job attitudes can be very different in terms of the number of variables affected; (3) leadership style may have positive effects on some aspects of commitment and negative effects on other aspects of commitment; (4) locus of control is closely related to organizational commitment and attitudes and mediates the relationship between these variables and organizational environment; and (5) the length of teaching experience relates to organizational commitment and job attitudes and mediates the relationship of these variables to organizational environment. Four tables complement the study. A 63-item list of references is included. (SLD)
THE RELATIONSHIP OF JOB ATTITUDES AND ORGANIZATIONAL COMMITMENT TO DIFFERENT ASPECTS OF ORGANIZATIONAL ENVIRONMENT

Yin-Cheong Cheng
The Chinese University of Hong Kong

Annual Meeting
The American Educational Research Association
Boston, U.S.A.
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THE RELATIONSHIP OF JOB ATTITUDES AND ORGANIZATIONAL COMMITMENT
TO DIFFERENT ASPECTS OF ORGANIZATIONAL ENVIRONMENT

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INTRODUCTION

Employees' job satisfaction and motivation and their commitment to their organizations are often the key elements in organizational analyses. Maslow (1943) and Alderfer's (1972) human need theories, Herzberg's (1966) two-factor theory, McGregor's (1960) theory X and theory Y, Vroom (1964) and Lawler's (1973) expectancy theory, Hackman and Oldman (1976) and Hackman and Lawler's (1971) job design theory, the participative management studies (Likert, 1961, 1967; Tannenbaum, 1968) and the "Quality of Work Life" (QWL) studies (Cammann et al., 1983) are all concerned very much with people's satisfactions, motivations, and commitment in their working situation. Most of them assume that these attitudes are a determining factor of their performance. This suggests that, if we want to improve the quality of education provided in our schools, we must study the factors that influence teachers' working attitudes and organizational commitment.

The literature shows that four theoretical frameworks have been used to explain how organizational factors affect employees' job attitudes and behavior. The structural framework focuses on the role of organizational structure and contends that it influences job characteristics, participation in decision making and finally job attitudes and commitment (Herzberg, 1968; Oldham and Hackman, 1981; Hackman, 1983; Likert, 1961, 1967). The social norms framework argues that the social relationships dominate teachers' perceptions and commitment to the school organization (Roethlishberger and Dickson, 1939; Mock and Seashore, 1981; Hackman, 1976). The leadership framework emphasizes the role of leadership in establishing organizational characteristics, shaping
subordinates' values and beliefs and influencing their job attitudes and organizational commitment (Halpin, 1966; Stogdill, 1974; Bennis, 1984; Bass, 1985; Sergiovanni, 1984). Recently, the cultural framework focuses on the impact of shared beliefs and values on employees' commitment, motivation and performance (Ouchi, 1981; Deal and Kennedy, 1982; Peters and Waterman, 1982; Sathe, 1985; Schein, 1985; Millikan, 1985). All of these frameworks have their roots in the traditions of the management movement but have very different emphases and perspectives. Up to now, there seems to be no single framework that is clearly superior to the others even though the cultural framework and leadership framework have been more popular in the last few years.

No single study has integrated these four theoretical frameworks together and investigated how they work together. Recently, Glisson and Durick (1988) have tried to include a wide range of predictors suggested by several theoretical frameworks to study the effect on job satisfaction and organizational commitment in human service organizations. They proposed three sets of predictors that included personal characteristics, organizational characteristics (work group size, budget, organization age, work group age, leadership, residential services, residential/walk-in), and job-task characteristics but did not include predictors measuring organizational culture and social norms. Although job-task characteristics may be indirect predictors of organizational structure, other important predictors such as centralization, formalization, authority of hierarchy, and participation were ignored.

Getzels and Thelen's (1960) model suggested that environmental culture, institutional expectations, group norms and individual attributes contribute to teachers' working attitudes and behavior. Sathe's (1985) model contended that leadership, organizational culture, and other organizational systems (such as formal structure, social systems, and political systems) can affect
employees' job attitudes. Furthermore, as highlighted by Lewin's (1943) model in which an individual's attitudes and behavior are influenced by personal attributes and environment, we can hypothesize that the organizational factors as the critical parts of an organizational environment* interact with personal attributes to affect job attitudes and organizational commitment. This conception is consistent with the tradition of organizational climate research and provides an "Environmental Model" for this study.

The model assumes that organizational culture, organizational structure, leadership style, social norms, and organizational effectiveness are critical factors of organizational environment in schools. This model also assumes that these five inter-related organizational factors constitute an organizational environment in the school and that the organizational environment, in combination with the teacher's personal attributes, influences his or her perception, job attitudes and organizational commitment.

Based on the above model, this study investigates how teachers' job attitudes and organizational commitment are related to personal attributes and organizational environment including organizational factors such as principal's leadership style, organizational culture, organizational structure, social norms, and perceived organizational effectiveness in schools.*

* The term "organizational environment" may have two different meanings: one refers to the environment outside the organization (i.e. external environment) and the other refers to the environment inside the organization (i.e. internal environment). In this study, the term refers only to the internal environment.
METHODOLOGY

A cross-sectional sample survey design was used in this study. The data were taken from an ongoing research project started in 1988.

SAMPLING

The sample of teachers was drawn from aided secondary schools in Hong Kong. Since the aided secondary schools in Hong Kong are established and operated on the basis of the Codes of Aided issued by the Education Department of the Hong Kong Government, the sample of schools is relatively homogeneous in terms of salary structure, professional qualification of teachers and administrators, promotion structure, teacher-class ratios, school facilities, formal curricula to be completed, public examination system, supporting personnel (such as technical, clerical, cleaning staff), formal opportunities of professional training and development, and supervision by the Hong Kong Education Department (Education Ordinance, 1971).

Sixty-five of these schools were randomly selected and invited to participate in the study. But, finally only 54 schools agreed to participate. Within each sampled school, 12 teachers were randomly selected and asked to complete the measuring instruments. The final number of respondents within each school ranges from 6 to 12 with average 10.89 and mode 12. The total number of involved teachers in this study is 588.

INSTRUMENTS

Most of the instruments used in this study were adapted from the previous studies.

Environmental measures: Since the organizational environment is constituted by the organizational factors, measures of organizational environment are simply indicators of the several organizational factors. These organizational factors are the exogenous variables measured by single or multiple indicators. Principal's leadership style is described by three...
indicators -- initiating structure, consideration (Halpin, 1966) and charisma (Bass, 1985), organizational structure by three indicators -- formalization (Oldham and Hackman, 1981), hierarchy of authority, and participation in decision making (Hage and Aiken, 1967); social norms by four indicators -- esprit, intimacy, disengagement, and hindrance (Halpin and Croft, 1963); and perceived organizational effectiveness by one indicator -- Mott's (1972) index. Organizational culture is assessed in terms of organizational ideology (Alvesson, 1987). Based on Price and Mueller (1986), an index of organizational ideology has been developed in a pilot study and is used to describe the strength of organizational culture.

Attitudes and Commitment measures: Teachers' job attitudes and organizational commitment are the endogenous variables, and measured by several indicators. Mainly based on the Michigan Organizational Assessment Questionnaire (MOAQ) studies (Cammann et al., 1983), teachers' job attitudes are described by six indicators -- Internal work motivation, Intrinsic satisfaction, Extrinsic satisfaction, Social Satisfaction, Role clarity, and Job challenge. Organizational commitment is described by a single indicator developed by Mowday, Steers and Porter (1979).

Personal Attributes: Teacher's personal attributes provide control variables. From the insight of previous studies such as Salancik (1977), Steers (1977), Weiner (1982), Reichers (1985), Luthans et al. (1987), Oldham and Hackman (1981), Cammann et al. (1983) and Glisson and Durick (1988), the following demographic variables are measured in this study: sex, age, education level, professional training, working position, marital status, and teaching experience. Luthans et al. (1987) found that internal-external locus of control is one important personal attribute related to an individual's organizational commitment. It is also included in this study and measured by Rotter (1966).
The instruments were tested and adapted in a pilot study before they were used in the main study. From current and prior studies, the reliability and validity of all the instruments has been documented. The psychometric properties of each instrument such as source of the instrument, number of items, number of response categories, potential range of scores, documented reliability and validity are summarized in Table 1.

DATA ANALYSIS

Unit of Analysis

In this study, the unit of analysis is the individual teacher. The use of individual level instead of school level as unit of analysis is based on the following theoretical consideration: In the conception of this study, it is assumed that organizational factors interacting with personal attributes influence individual teachers' job attitudes. Therefore, the study is interested not only in the relationship between attitudes and organizational factors but also in how individuals' personal attributes mediate this relationship. The aggregation of some personal attributes (e.g. locus of control or sex) to school level, on one hand may not make any sense and on the other hand may neglect the subtle interactions between personal attributes and organizational factors. Based on this theoretical consideration, the individual teacher is the more appropriate unit of analysis than the school when individuals' personal attributes have to be involved in the analysis.*

The main analyses were performed using the LISREL VI statistical package.

* note: The use of the teacher as the unit of analysis has its strengths. But we should also be aware of its limitation in this study. Because the teachers were sampled randomly within each of the sampled schools but not from the whole teacher population, there may be clustering effects on the statistical estimates. Since the interest of this study is mainly in the relative relationships (or good fit of the models) but not in the precise coefficients of prediction for the whole population, the study has assumed that clustering effects have not made significant differences to the estimated relationships. This assumption is supported by the considerable consistency of the findings when the results of individual level and school level were compared.
<table>
<thead>
<tr>
<th>INSTRUMENT</th>
<th>SOURCE</th>
<th>NO. OF ITEMS</th>
<th>NO. OF RESPONSE CATEGORIES</th>
<th>POTENTIAL RANGE OF CATEGORIES SCORES</th>
<th>ESTIMATED RELIABILITY (CRONBACH ALPHA) (a)</th>
<th>VALIDITY</th>
</tr>
</thead>
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<tr>
<td>Org. Ideology (IOI)</td>
<td>Price &amp; Mueller(1986)</td>
<td>10</td>
<td>5</td>
<td>10-50</td>
<td>NA</td>
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<tr>
<td>Org. Structure (OSQ)</td>
<td>Formalization Oldham &amp; Hackman(1981)</td>
<td>4</td>
<td>5</td>
<td>4-20</td>
<td>0.52</td>
<td>0.68</td>
</tr>
<tr>
<td></td>
<td>Participation Hage &amp; Aiken(1967)</td>
<td>4</td>
<td>5</td>
<td>4-20</td>
<td>0.92-0.95</td>
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<td>5</td>
<td>4</td>
<td>5-20</td>
<td>0.70-0.96</td>
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<td>Hierarchy</td>
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<tr>
<td>Leadership Style (LSQ)</td>
<td>Initiating Halpin(1966)</td>
<td>15</td>
<td>5</td>
<td>15-75</td>
<td>0.93</td>
<td>0.81</td>
</tr>
<tr>
<td></td>
<td>Structure</td>
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<td></td>
</tr>
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<td>Consideration ....</td>
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<td>15</td>
<td>5</td>
<td>15-75</td>
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<td>Intimacy Croft(1963)</td>
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<td>6</td>
<td>4</td>
<td>6-24</td>
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<td>0.65</td>
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<td>Esprit Halpin &amp;</td>
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<td>8</td>
<td>4</td>
<td>8-32</td>
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<td>0.82</td>
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<tr>
<td>Hindrance</td>
<td></td>
<td></td>
<td>5</td>
<td>4</td>
<td>5-20</td>
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<tr>
<td>Disengagement</td>
<td></td>
<td></td>
<td>7</td>
<td>4</td>
<td>7-28</td>
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</tr>
<tr>
<td>Perceived Effectiveness (IOE)</td>
<td>Mott (1972)</td>
<td>8</td>
<td>5</td>
<td>8-40</td>
<td>0.86-0.90</td>
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<td>Rotter(1966)</td>
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<td>2</td>
<td>0-23</td>
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<td>0.68</td>
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<tr>
<td>Org. Commitment (OCQ)</td>
<td>Mowday,Steers, Porter(1979)</td>
<td>15</td>
<td>7</td>
<td>15-105</td>
<td>0.82-0.93</td>
<td>0.90</td>
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<td>Job Attitudes (JAQ)</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Satisfaction Cammann etal</td>
<td>Extrinsic (1983)</td>
<td>3</td>
<td>7</td>
<td>3-21</td>
<td>0.63</td>
<td>0.57</td>
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<td></td>
<td>Intrinsc</td>
<td>3</td>
<td>7</td>
<td>3-21</td>
<td>0.87</td>
<td>0.77</td>
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<td></td>
<td>Social</td>
<td>3</td>
<td>7</td>
<td>3-21</td>
<td>0.87</td>
<td>0.81</td>
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<td></td>
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<td>7</td>
<td>3-21</td>
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<td>0.67</td>
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<td></td>
<td>Job challenge ....</td>
<td>4</td>
<td>7</td>
<td>4-28</td>
<td>0.81</td>
<td>0.70</td>
</tr>
<tr>
<td></td>
<td>Role clarity Rizzo etal(1970)</td>
<td>6</td>
<td>7</td>
<td>6-42</td>
<td>0.80</td>
<td>0.77</td>
</tr>
</tbody>
</table>

Note: NA-not available; Tested-tested and validated in previous studies; *Tested-tested and validated in the pilot study; (a)-provided by the previous studies; (b)-in this study; # the reliabilities for this scale were estimated by Kuder-Richardson (KR-20) reliability coefficients
Preliminary Analyses

Before doing the main analysis, two sets of preliminary analyses were carried out: Confirmatory Factor Analyses and Testing the Homogeneity of Covariance Matrices between demographic groups.

The results of confirmatory factor analyses of the organizational variables suggested that in the teachers' perceptions of organizational environment, there are not four clear-cut latent factors (as leadership, structure, social norms, and ideology) underlying the organizational measures. Taking this finding into consideration, it was deemed inappropriate to fit structural regression models by specifying a few latent factors underlying the organizational measures. Instead, all the organizational measures were taken as separate descriptors of the school organizational environment in the main analyses.

The results of confirmatory factor analyses of the commitment and job attitudes measures also showed that these measures cannot be factored into a small number of latent factors. There, all these measures were taken as individual constructs in the later main analysis.

The findings of the testing of homogeneity of covariance matrices between demographic groups suggested that the effects of categorical variables such as sex, position, education level, professional training, and marital status on the relationship between the organizational variables and the commitment variable can be ignored in the analysis of the research question. Locus of control, teaching experience, and age do affect the relationship between the commitment and attitudes variables and the organizational variables. Furthermore, since age and teaching experience are highly correlated (estimated correlation = 0.906), only teaching experience is included in the later analysis because it may make more sense in the interpretation of findings. Therefore, of the eight personal attributes only teaching experience
and locus of control remain in the main analysis.

Data-analytic Strategy for the Main Analysis

Based on the above preliminary analyses, the main analysis of this study involves 12 organizational measures and 2 personal attribute measures for a total of 14 exogenous variables, and 7 commitment and attitude measures as the endogenous variable.

Fitting a structural regression model with 14 exogenous variables and 7 endogenous variables in one structural model was technically very difficult. Good fit was impossible to achieve due to problems of non-positive definiteness and non-convergence (Joreskog and Sorbom, 1988). Therefore, in the main analysis, regression of each of the 7 endogenous variables on the 14 exogenous variables was performed using LISREL. In addition, using LISREL to fit the regression models permits the estimated measurement error variances of all the variables to be incorporated in the analysis, and avoids biases due to errors in the predictors -- a problem that bedevils ordinary least-squares regression.
RESULTS AND DISCUSSION

DESCRIPTION OF THE PRINCIPAL VARIABLES

Descriptive statistics for each of the variables and their estimated reliabilities and measurement errors are summarized in Table 2. For all variables, the estimated standard deviations range from 14% (for Work Motivation) to 69% (for Teaching Experience) of the sample means. Most of them are within the range 20% to 35%. In general, the estimated Cronbach Alpha reliabilities of the measures are satisfactorily high, ranging from 0.654 (Intimacy) to 0.953 (Charisma). But, it should be noted that the estimated reliability of Extrinsic Satisfaction is low, only 0.571. One reason for this low reliability may be the smaller number of items in this measure (three). From the estimated reliabilities and standard deviations, the measurement error variance of the variables were estimated and have been incorporated in all the regression analyses.

THE MAIN ANALYSIS

Regression analysis by LISREL modeling with automatic modification was used to analyse the data. The results of the model-fitting are presented in Tables 3 and 4. From Table 3, regression models for each of the endogenous variables fit well. In each case, the chi-square statistic is small (except for "work motivation"); the goodness of fit index is very close to 1 (over 0.99); the root mean square residuals are sufficiently small when compared with the sizes of the estimated variances and covariances in the observed covariance matrix; and the slope of the plotted points in the normalized residual Q-Q plot is larger than 1.
### TABLE 2
DESCRIPTIVE STATISTICS FOR THE PRINCIPAL VARIABLES

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>SAMPLE MEAN</th>
<th>ESTIMATED RANGE</th>
<th>ESTIMATED RELIABILITY</th>
<th>ESTIMATED MEASUREMENT ERROR VARIANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>&lt; Independent Variables &gt;</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Leadership Style</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Initiating structure</td>
<td></td>
<td></td>
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<tr>
<td>Consideration</td>
<td>43.76</td>
<td>8.09</td>
<td>20.0</td>
<td>64.0</td>
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<tr>
<td>Charisma</td>
<td>45.74</td>
<td>13.43</td>
<td>18.0</td>
<td>89.0</td>
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<td><strong>Organizational Structure</strong></td>
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<tr>
<td>Formalization</td>
<td>12.82</td>
<td>2.85</td>
<td>5.0</td>
<td>20.0</td>
</tr>
<tr>
<td>Participation</td>
<td>9.03</td>
<td>2.57</td>
<td>4.0</td>
<td>18.0</td>
</tr>
<tr>
<td>Authority</td>
<td>12.22</td>
<td>2.91</td>
<td>4.0</td>
<td>20.0</td>
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<tr>
<td><strong>Organizational Culture</strong></td>
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<td></td>
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</tr>
<tr>
<td>Ideology</td>
<td>26.13</td>
<td>5.42</td>
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<td>48.0</td>
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<td><strong>Social Norms</strong></td>
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<tr>
<td>Intimacy</td>
<td>11.92</td>
<td>2.53</td>
<td>6.0</td>
<td>21.0</td>
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<td>Esprit</td>
<td>18.29</td>
<td>3.67</td>
<td>9.0</td>
<td>31.0</td>
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<td>Hindrance</td>
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<td>7.0</td>
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<tr>
<td>Perceived organizational</td>
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<td>4.36</td>
<td>8.0</td>
<td>35.0</td>
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<tr>
<td>effectiveness</td>
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<td><strong>Personal Attributes (control variables)</strong></td>
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<td>Locus of control</td>
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<td>Teaching experience</td>
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<td>5.19</td>
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<td>33.0</td>
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<td><strong>&lt; Dependent Variables &gt;</strong></td>
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<td><strong>Organizational Commitment</strong></td>
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<td>Organ. Commitment</td>
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<td>21.0</td>
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<tr>
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<td>12.83</td>
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<td>3.0</td>
<td>20.0</td>
</tr>
<tr>
<td>Intr. satisfaction</td>
<td>13.29</td>
<td>3.69</td>
<td>3.0</td>
<td>21.0</td>
</tr>
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<td>Social satisfaction</td>
<td>15.90</td>
<td>3.08</td>
<td>3.0</td>
<td>21.0</td>
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<td>Work motivation</td>
<td>17.12</td>
<td>2.42</td>
<td>6.0</td>
<td>21.0</td>
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<td>Job Challenge</td>
<td>18.47</td>
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<td>4.0</td>
<td>28.0</td>
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<td>Role Clarity</td>
<td>30.03</td>
<td>5.30</td>
<td>12.0</td>
<td>42.0</td>
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</table>

* : These reliabilities are estimated by my study.
**: The measurement error variance is estimated by $(1$-reliability)$x(s.d.)^2
# : The reliability for Locus of Control is Kuder-Richardson(KR-20) reliability.
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<tr>
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<td>1.42</td>
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<td>d.f.</td>
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<td>11</td>
<td>5</td>
<td>10</td>
<td>10</td>
<td>6</td>
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<td>0.998</td>
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<td>0.996</td>
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<tr>
<td>Root mean square residual</td>
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<td>0.049</td>
</tr>
<tr>
<td>Slope in Q-plot</td>
<td>&gt; 1</td>
<td>&gt; 1</td>
<td>&gt; 1</td>
<td>&gt; 1</td>
<td>&gt; 1</td>
<td>&gt; 1</td>
<td>&gt; 1</td>
</tr>
</tbody>
</table>
### TABLE 4
FITTED REGRESSION MODELS (on the whole sample, N=588)

<table>
<thead>
<tr>
<th>EXOGENOUS VARIABLES</th>
<th>ENDOGENOUS VARIABLES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Organiz.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Initiating structure</td>
<td>-0.584*</td>
</tr>
<tr>
<td></td>
<td>(-3.34)</td>
</tr>
<tr>
<td>Consideration</td>
<td>0.242</td>
</tr>
<tr>
<td></td>
<td>(1.06)</td>
</tr>
<tr>
<td>Charisma</td>
<td>0.538*</td>
</tr>
<tr>
<td></td>
<td>(3.25)</td>
</tr>
<tr>
<td>Formalization</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Participation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Authority</td>
<td>0.147</td>
</tr>
<tr>
<td></td>
<td>(0.54)</td>
</tr>
<tr>
<td>Ideology</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Intimacy</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Esprit</td>
<td>1.190**</td>
</tr>
<tr>
<td></td>
<td>(5.99)</td>
</tr>
<tr>
<td>Hindrance</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Disengagement</td>
<td>-1.372**</td>
</tr>
<tr>
<td></td>
<td>(-6.89)</td>
</tr>
<tr>
<td>Perc. organ.</td>
<td></td>
</tr>
<tr>
<td>effectiveness</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Locus of control</td>
<td>-0.742**</td>
</tr>
<tr>
<td></td>
<td>(-4.05)</td>
</tr>
<tr>
<td>Teaching experience</td>
<td>0.201*</td>
</tr>
<tr>
<td></td>
<td>(2.44)</td>
</tr>
<tr>
<td>R² Statistic</td>
<td>0.721</td>
</tr>
</tbody>
</table>

Note: t-values in the parentheses; * for t-value > 2, ** for t-value > 4.
THE ESTIMATED EFFECTS OF THE EXOGENOUS VARIABLES  The estimated effects of the exogenous variables on each of the endogenous variables (Organizational commitment and Job attitudes) is represented by the LISREL gamma coefficients (Joreskog and Sorbom, 1988, p.3), as shown in Table 4. From the magnitudes of these estimates, we can interpret how the endogenous variables are related to the exogenous variables even though we cannot confirm these are causal effects. In order to handle the complexity of the findings, the discussion is focused on two questions:

(1) How is each of the commitment and attitude variables related to the 14 organizational and personal variables? This concerns the "column findings" in Table 4.

(2) What overall patterns can be identified in the findings? This concerns not only the "column findings" but also the "row findings" in Table 4.

Question 1--Column Findings in Table 4:

Organizational Commitment -- From Table 4, only leadership's initiating structure and charisma, social norms' esprit and disengagement, personal locus of control and teaching experience have strong effects (i.e. t-values > 2) on teacher's organizational commitment. A substantial portion of the variance in organizational commitment is predicted by these effects (R² statistic = 0.721).

These results suggest that both teacher's own personal attributes and perceived organizational factors can contribute to their organizational commitment. It seems that whether teachers are committed to their schools by showing a strong belief in, and acceptance of, school goals and values, a strong willingness to exert considerable effort on behalf of the school and a
strong desire to maintain membership in the school organization, is related to the following factors:

1. Teaching Experience -- Teachers who stay longer in their teaching positions tend to be more committed to their schools. This finding is consistent with past studies (Salancik, 1977; Steers, 1977; Luthans, et al., 1987). As contended by Steers (1977), Exchange Theory may be used to explain how organizational commitment is related to teaching experience. When teachers feel that their invested time and efforts are rewarded appropriately, their commitment will increase over time. Therefore it is not surprising that teachers who have invested more time in their job show more commitment to their school. Of course, the reverse relationship is also possible.

2. Locus of Control -- Those teachers who tend to attribute the success or failure of an event to their own behavior rather than external uncontrollable factors seem more committed to their schools. The finding supports the findings of Luthans et al. (1987). According to these authors, the strong relationship between organizational commitment and locus of control can be explained by three reasons. First, internals perceive that they have greater control over their working environment and therefore they report more commitment to the school that allows such control. Second, internals perceive a greater number of alternatives than do externals in a choice situation. Thus, when an internal joins a school, provided that other alternatives are perceived to exist, commitment related to this choice emerges. Third, internals may believe that membership in an organization is a matter of choice and self-determination. If they were not committed to the school, they would be likely to leave. But, when they remain, they tend to be committed to the school. On the other hand, the externals perceive that they cannot control the school environment and have fewer alternatives and that membership in the school is matter of chance or fate. Therefore, their organizational commitment
is lower than that of internals.

3. Principal's Initiating Structure and Charisma -- Among the three dimensions of leadership style, only initiating structure and charisma have a strong relationship to organizational commitment while consideration does not. Even though the traditional wisdom suggests that leadership of high initiating structure and high consideration should have a positive effect on followers' attitudes and working performance (Halpin, 1966; Kerr et al., 1974; Stogdill, 1974), the finding tells another story. For teachers' organizational commitment, the effect of consideration may be negligible and that of initiating structure may be adverse. When the principal is perceived as emphasizing the separation between the leader and subordinates and establishing defined patterns of organization, channels of communication, and methods of procedure, teachers tend to be less committed to their school. Perhaps the stronger the initiating structure behavior of principal, the more passive the teachers' behavior. Then, the passive behavior leads to lower organizational commitment.

The leader's charisma plays an important role in shaping the teachers' organizational commitment. The more the principals can provide the teachers with inspiration, encouragement, and more meaning for their work, the more committed to school the teachers are. This finding supports Bass's (1985) work. Since charismatic leadership enhances a teacher's faith and respect in the principal, it is perhaps not surprising that the teacher becomes more committed to the principal and so to the school.

From the above findings, we can see that the classical leadership framework that emphasizes the duality of leadership (i.e. initiating structure and consideration) (Halpin, 1966; Kerr et al., 1974) is not sufficient to explain the impact of leadership style on teachers' organizational commitment. The contribution of charismatic or cultural leadership suggested by the
alternative leadership framework (Conger et al., 1988; Bass, 1985; Sergiovanni, 1984b; Zaleznik, 1977) cannot be ignored in describing the relationship between leadership style and follower's organizational commitment.

4. Social Norms' Esprit and Disengagement -- Among the four dimensions of teachers' social norms, esprit and disengagement have a strong relationship with teacher's organizational commitment. When a teacher perceives that other teachers are in high working morale and deeply involved in achieving the goals of the school, the teacher tends to be more committed to the school's goals and values, more willing to exert effort on behalf of the school, and more desiring to maintain membership in this school. This finding reinforces a belief of social norms framework which contends that individual members' attitudes and behavior are often shaped by the peer group (Moch and Seashore, 1981; Hackman, 1976).

**Extrinsic Job Satisfaction** -- Teachers' extrinsic job satisfaction is strongly related to principal's consideration, social norms' disengagement, locus of control and teaching experience. A moderate portion of the variance in extrinsic job satisfaction can be predicted by this model ($R^2$ statistic = 41.9%).

Whether teachers are satisfied with extrinsic rewards such as salary, received fringe benefits and career security depends upon their own personal attributes and some organizational factors:

1. Teaching Experience -- In Hong Kong aided secondary schools, teachers' salaries are increased yearly and also promotion to senior positions often depends on seniority. Thus, the longer the teaching experience, the greater the extrinsic rewards and the more the teachers are satisfied with these rewards, as demonstrated here. The reverse relationship is also possible.
2. Locus of Control -- Teachers who tend to believe in external control are less satisfied with the extrinsic rewards. Perhaps, they believe that extrinsic rewards depend mainly on chance and fate but not on their own behavior or effort. They may feel powerless to achieve greater extrinsic rewards and consequently, may be unsatisfied with what they have. On the other hand, teachers who believe in internal control tend to find the received extrinsic rewards match their efforts and they feel satisfied. If they were not satisfied, perhaps they would leave the school because internals often perceive a greater number of available alternatives and tend to take action on their beliefs more frequently than do externals (Spector, 1982).

3. Principal's Consideration -- Among the three dimensions of principal's leadership style, only consideration shows a strong relationship with teachers' extrinsic satisfaction. The finding indicates that the more the principal is perceived as one whose behavior suggests friendship, trust, warmth, interest, and respect in the relationship between teachers and principal, the more teachers feel satisfied with the received extrinsic rewards. A considerate principal may arrange more fringe benefits for teachers and help them feel secure in their career, even though salaries cannot be raised very easily in the Hong Kong aided school system.

4. Social Norms' Disengagement -- Teachers' perceptions of whether other teachers tend to be uninvolved in work seems to be related to their satisfaction with extrinsic rewards. If a teacher reports other teachers disengaged, she/he tends to be unsatisfied with received salary, fringe benefits, and career security. This finding can be explained in two ways. First, other teachers as well as this teacher are unsatisfied with the extrinsic rewards and therefore all of them are disengaged. Second, when teachers find themselves in disadvantageous working situations characterized by other teachers' disengagement, they may psychologically demand more
extrinsic rewards to compensate for the perceived disadvantage.

Intrinsic Satisfaction -- Intrinsic job satisfaction is the extent to which a teacher is satisfied with the opportunities for personal growth and development on her/his job. Table 4 shows that in addition to teachers' own locus of control, principal's charisma and other teachers' esprit have substantially strong relationships with teachers' intrinsic job satisfaction. The model has moderate explanatory power ($R^2=0.400$). These relationships can perhaps be explained as follows:

1. Locus of Control -- Teachers who believe in internal control tend to be more intrinsically satisfied with the growth and development opportunities. Since internals believe that the success or failure of an event is mainly determined by their own behavior, they will emphasize control of the environment and value the opportunities for personal growth and development. If they remain in the school, they will be satisfied with their opportunities and will believe that they can control the environment. Otherwise, they will leave this school because internals often take action on what they believe (Spector, 1982). On the other hand, externals tend to believe that they cannot control the environment and they may feel that opportunities for personal growth and development are out of their control, depending on chance and fate. Therefore, they may be unsatisfied with the opportunities they currently have.

2. Principal's Charisma -- The more charismatic the perceived principal's leadership style, the more the teachers' intrinsic satisfaction. The finding suggests that the principal's behavior to win teachers' faith and respect and provide them with inspiration and encouragement may have a great impact on teachers' satisfaction with opportunities for personal growth and development. It seems that if teachers can feel more inspired, they will be more intrinsically satisfied with their work. It is interesting to note that the
classical components of leadership -- initiating structure and consideration are not related to teachers' intrinsic satisfaction. This finding may provide evidence to support the importance of cultural or charismatic leadership to followers' growth satisfaction (Conger et al., 1988; Sergiovanni, 1984; Bass, 1985).

3. Social Norms' Esprit -- The perception of other teachers' working morale is strongly related to individual teacher's intrinsic job satisfaction. The more that other teachers are perceived to be committed to their work, the higher the individual teacher's satisfaction with opportunities for growth and development. This finding suggests that positive group norms may themselves enhance opportunities or provide a facilitating and supportive human environment for individual teacher to learn and develop on the job. Of course, it is also possible that those teachers who are intrinsically satisfied tend to perceive others as committed to their work.

Social Satisfaction -- Social satisfaction is the extent to which a teacher is satisfied with the relationships with colleagues. Table 4 shows that teacher social satisfaction is strongly related to principal's initiating structure, charisma, structure's formalization, social norms of hindrance and disengagement, and locus of control. In the fitted model, more than half of the variance in teacher social satisfaction is predicted ($R^2 = 0.541$).

The above relationships can be elaborated as follows:

1. Locus of Control -- Once again, teachers' own locus of control plays a critical role in their job attitudes. Teachers who believe in internal control, tend to be more satisfied with their colleagues. They believe that they can contribute to a good relationship with their colleagues and therefore it may be easier for them to feel satisfaction with this relationship. If they are not satisfied with their colleague relationships and are also unable to
change them, they will leave this school because they can perceive more other alternatives and take action on it (Spector, 1982). On the other hand, teachers who believe that they cannot control the environment and that their relationships with colleagues are determined by fate or chance, are more likely to be socially unsatisfied.

2. Leadership’s Initiating Structure and Charisma -- Teachers’ social satisfaction is positively related to principal’s initiating structure behavior but negatively related to principal’s charismatic expression. The more the principal’s behavior emphasizes the "leader and follower" relationships, regulations and procedures in school, the more teachers feel socially satisfied with their colleagues. On the other hand, the more the principal can provide encouragement, inspiration, meaning for teachers’ work and win their faith and respect, the less teachers are satisfied with their colleagues. This is a very interesting finding. One possible explanation may be given as follows:

Strong initiating structure indicates that the leader’s behavior is task-oriented and organization-oriented, which may result in teachers’ feelings and interests being ignored. As argued by the studies of the human relations movement, there may be informal social organizations formed among teachers to protest against the formal leader and the perceived arbitrary management decisions. Therefore, teachers may enjoy their social relationships more and feel more satisfied with their colleagues as the principal’s leadership style is task-oriented.

Strong charismatic leadership suggests that the principal can substantially win teachers' faith by providing encouragement, inspiration and meaning. High faith and respect of teachers for their principal may suggest a kind of loyalty of teachers for their principal. Then, perhaps the social relationships between teachers and their peers are perceived as less
satisfactory when compared with the high loyalty to the principal.

Even though one potential interpretation has been given above, further exploration on this interesting relationship may be needed to determine whether there are any alternative explanations.

3. Structure's Formalization -- School's formalization is the extent to which rules, procedures, instructions and communications in the school are formalized (Pugh et al., 1968). More formalized structure lessens the degree to which teachers are free from observing rules. The more formalized the organizational structure in school, the less teachers are socially satisfied with their colleagues. This finding supports the general criticisms of formalized bureaucratic organizational structure; bureaucratic organizational structure may hinder the development of human relationships in organizations (Gouldner, 1964). As argued by Hage (Hage, 1965), an organization that is too formal will tend to be mechanistic and associated with low job satisfaction.

4. Social Norms of Hindrance and Disengagement -- Teachers' social norms have two different relationships with social satisfaction. First, there is a positive relationship between social satisfaction and hindrance. The higher the teachers are perceived to be burdened with "unnecessary busy work" in the school, the more the individual teacher is socially satisfied with his colleagues. Perhaps because teachers are feeling burdened with "unnecessary busy work" by the school, they tend to form stronger social relationships and informal organizations to protect themselves from the school's "unreasonable" management. Therefore, they may feel more social satisfaction as they experience higher hindrance in school.

Second, there is a negative relationship between social satisfaction and disengagement. When teachers perceive that teachers in the school are uninvolved in achieving the school's goals and mutually disengaged from each other, they tend to be less satisfied with their colleagues. This finding
supports the social norms framework that emphasizes the importance of social norms to individual members' job attitudes.

**Internal Work Motivation** -- Internal work motivation is the extent to which a teacher is self-motivated to perform on his/her job. Teachers' internal motivation is strongly related only to principal's initiating structure, consideration and charisma (negative), and their own locus of control. The explanatory power of this model is a little low, only 20.6%. The relationship of internal work motivation to locus of control and leadership style is discussed below:

1. Locus of Control -- Teachers who believe that the success or failure of an event is mainly dependent on their own behavior tend to be more self-motivated to perform on their jobs. On the other hand, teachers who believe in external control tend to be less self-motivated because they perceive that they cannot control the environment; the success or failure of an event is determined by the external factors but not by the teachers. These findings are consistent with the past literature on locus of control (Rotter, 1966).

2. Principal's leadership style -- Perceptions of principal's leadership style have a very interesting relationship with teacher internal work motivation. On one hand, high initiating structure and high consideration in principal's leadership is strongly associated with high teacher work motivation. It seems that a good balance in principal's task-oriented behavior and his/her respect for the relationship between principal and teachers can facilitate teachers' self-motivation with their work. This finding supports the traditional emphasis of duality of leadership style in promoting teacher work motivation (Kerr, et al., 1974; Stogdill, 1974).

On the other hand, my findings also suggest that the more charismatic the leadership, the less teachers' work motivation. This finding provides an
example challenging the alternative leadership framework (Conger et al., 1988; Bass, 1984; Sergiovanni, 1984b). Even though a principal can win teachers' faith and respect, teachers may not show high internal work motivation as the alternative leadership framework promises. Furthermore, the greater the inspiration and meaning provided by the principal and the greater teachers' faith and respect for the principal, the greater may be their dependence on the principal's leadership. This dependence may hinder teachers' self-motivation on their jobs. If we believe this finding, it may reveal a potential drawback of the charismatic leadership that has recently been emphasized by some leadership scholars (Conger et al., 1988).

**Feeling of Job Challenge** -- Job challenge is the extent to which a teacher experiences challenges from the job. It is strongly related to the perception of teachers' esprit and locus of control but not to leadership style and organizational structure. The model has a \( R^2 \) statistic of 22.4%.

Internals tend to have a stronger feeling of challenge from their jobs. In order to achieve success and avoid failure at work, they try to make greater efforts and therefore they are likely to experience more demands in ability and skill. On the other hand, externals tend to have lower feelings of job challenge because they do not believe that their performance can change the results of an event. This finding is consistent with the past studies in locus of control (Rotter, 1966; Spector, 1982).

Teacher's feelings of job challenge have a positive relationship with their perception of other teachers' working morale. The higher in esprit other teachers are perceived to be, the stronger the job challenge experienced by the teacher. From the social norms framework, the perception of high working morale among teachers may be itself a kind of social pressure pushing individual teachers to work hard and perform better.
Role Clarity -- Role clarity is the extent to which a teacher knows clearly and certainly about his/her duties, authority, allocation of time, and relationships with others in the organization. Teacher role clarity seems to be strongly related to principal's initiating structure, consideration and charisma, participation, organizational ideology, hindrance, locus of control, and teaching experience. The model has moderate explanatory power ($R^2=0.410$). The relationships of role clarity to these exogenous variables can be discussed as following:

1. Locus of Control -- Once again, locus of control is a critical predictor of role clarity. Teachers who hold a belief in internal control, tend to know more clearly what roles they are taking in the school organization. As people believe that they can control the environment and can make a difference in the success or failure of an event, they are more likely to make sure what duties and authority they have, how time can be allocated, and what relationships with other members can be expected in the school, because they want to succeed in what they are doing. On the other hand, if teachers believe that their efforts cannot make any significant change in the results of their jobs, they tend not to be sure of their roles in the organization.

2. Teaching Experience -- The longer the teaching experience, the more clearly teachers know their roles in school. Experience may itself be the means by which teachers clarify and learn their roles in the organization.

3. Leadership Style -- All the three dimensions of leadership style, initiating structure, consideration, and charisma, are strongly associated with teachers' role clarity. First, the finding supports the classical leadership framework (Halpin, 1966; Kerr et al., 1974; Stogdill, 1974). Balanced leadership with high initiating structure and high consideration seems to be an effective style that facilitates teachers' role clarity on
their jobs. When a principal not only can establish appropriate patterns of organization, channels of communication, and methods of procedure, but can also show personal consideration and respect for his/her staff, teachers will know more clearly their duties, authority, and role in the school.

Charismatic leadership has a negative relationship with teacher role clarity. The more the principal can win teachers' faith and respect by providing inspiration and meaning for teachers' work, the less teachers know clearly their role in the school. As argued previously in the discussion of the relationship between internal work motivation and leadership style, charismatic leadership may generate psychological dependence of teachers on the principal by winning their faith and loyalty. This dependence may on one hand facilitate teachers' commitment to the school and the leader, but on the other hand, may hinder teachers' self-motivation and search for role clarity. If we believe this interpretation, the finding may provide an example to question the hypotheses of charismatic leadership.

4. Participation -- Participation in organizational decision making is the extent to which the staff participate in decisions about the allocation of resources and the determination of organizational policies. My results show that perception of organizational participation may have a negative relationship with teachers' role clarity. The more the teachers participate in organizational decision making, the less they know clearly their roles in the school. The finding reveals a subtle but interesting relationship that may be discussed as following:

Undoubtedly, participation in decision making about school policies is a complicated and uncertain task that requires skills and time resources other than ordinary teaching skills. Greater involvement in organizational decision-making may load the teacher with a complicated and uncertain burden. This may result in less role clarity.
5. Organizational Ideology -- Organizational ideology is the extent to which the staff in the school have a set of shared ideas and beliefs about the school's role and mission, the nature of teaching task, and the technology used to achieve educational goals. This result suggests that the stronger the perceived organizational ideology, the more the teacher feels role clarity. This finding seems rather natural because the shared ideas and beliefs about the goals, task, and technology among teachers can provide a cognitively consistent environment that facilitates teachers' cognition of their role, duties, and authority.

6. Hindrance -- The more the teachers are reported to be burdened with "unnecessary busy work", the more the individual teacher feels role ambiguity. If teachers feel burdened and busy in what they perceive as unnecessary work, perhaps they are not sure what their teaching role and duties are and how their time is allocated.

Summary

From the above results, we can see that each of the seven commitment and attitude variables is related to a different combination of the fourteen organizational and personal variables. Even though we may assume the existence of organizational impact on teachers' attitudes, there seems no universal combination of organizational variables that is effective in predicting all the commitment and job attitude variables. On one hand, most of the findings are consistent with the literature and with what we might expect. But, on the other hand, some findings may reveal subtle relationships between the attitude measures and organizational factors and provide some interesting examples to question the contribution of classical leadership theory and charismatic leadership theory to all aspects of working attitudes.
Question 2 -- The Overall Patterns in the Findings:

In addition to the above column findings, inspection of the row findings in Table 4 can help summarize some important characteristics of the relation between the twelve organizational factors and the seven commitment and attitude variables.

For instance, we can categorize the exogenous organizational variables by how many commitment and attitude variables they are strongly related to, as follows:

a) Negligible Organizational Variables -- Those variables that have negligible relationships with all the commitment and attitude variables are authority hierarchy, intimacy, and teachers' perceptions of organizational effectiveness.

b) Weak Organizational Variables -- Those variables that have relationships with only one or two commitment and attitude variables are formalization, participation, organizational ideology, and hindrance.

c) Strong Organizational Variables -- Those variables that have relationships with three or more commitment and attitude variables are the three leadership's dimensions (i.e. initiating structure, consideration, and charisma) and esprit and disengagement from the battery on social norms.

In addition to the above organizational factors, teacher's own locus of control is the only exogenous variables strongly related to all of the seven commitment and attitude variables. Teaching experience is a moderately strong exogenous variable.
From the column and row findings, we can discuss the following important points:

1) **Multiple Psychological Attributes**: Organizational commitment and job attitudes are really multiple psychological attributes which teachers bring to their school and jobs. Since these psychological attributes are different from each other, it is not surprising that they are sensitive to different organizational elements. For example, teachers' extrinsic satisfaction is sensitive to principal's consideration and other teachers' disengagement, but their intrinsic satisfaction is more sensitive to principal's charisma and other teachers' esprit.

2) **Strength of the Organizational Impacts**: Even though there are four frameworks suggesting different organizational factors that can have an impact on organizational commitment and job attitudes, the effects of these organizational factors may be quite different. If we use the number of commitment and attitude variables strongly related to an exogenous organizational variable to indicate the strength of its effect, it seems that the structural factors (i.e. formalization, participation, and authority hierarchy) and organizational ideology have weak or negligible effects; the leadership's three factors (initiating structure, consideration, and charisma) have rather strong effects; and some of social norms (i.e. esprit and disengagement) have moderately strong effects and some (i.e. intimacy and hindrance) have weak or negligible effects. If we have to choose only one from the four frameworks (i.e. leadership, structural, cultural, and social norms) to explain teachers' commitment and job attitudes, the leadership framework may be preferable because leadership factors are strongly related to more measures of teachers' commitment and attitudes. But, unfortunately, this is not the end of the story. There may be some potential dilemmas in the leadership framework.
3) Dilemma in Leadership: It is very interesting to note that the relationships of leadership's initiating structure and charisma to the commitment and attitude variables are not consistent, even though those of all other organizational factors are. For example, initiating structure is negatively related to organizational commitment but positively related to social satisfaction, work motivation, and role clarity; charisma is positively related to organizational commitment and intrinsic satisfaction but negatively related to social satisfaction, work motivation, and role clarity. This inconsistency in relationships may cause dilemmas in leadership style. It can be expected that a leadership style of high initiating structure may result in high social satisfaction, work motivation, and role clarity but unfortunately in poor organizational commitment at the same time. Also, it can be expected that highly charismatic leadership style may lead to high organizational commitment and intrinsic job satisfaction but at the time to poor social satisfaction, work motivation, and role clarity. If we believe these findings, the dilemma may suggest that no one leadership style can maximize effectiveness in all aspects of teachers' working attitudes and behavior.

4) Environmental Influence: Organizational impacts on teachers' commitment and attitudes may come from different aspects of the school organization such as leadership style, social norms, organizational structure, and organizational culture. Some may be stronger and some weaker. Even though the impacts of leadership style may be stronger, there are still considerable effects from social norms and weak effects from organizational structure and ideology. This finding supports the environmental approach used in this study which suggests that organizational influences on teachers' commitment and attitudes form an environment, coming from different aspects of the organization simultaneously.
5) **Locus of Control Plays a Critical Role:** Among all the exogenous variables, locus of control is the only one that has a very strong relationship with all the commitment and attitude variables. This finding indicates one important notion. It supports the conception of the study that personal attributes together with organizational environment critically influence teachers' commitment and job attitudes. It is not surprising that teachers' beliefs of external or internal control shape the way they perceive and interpret the organizational influences and how they show their commitment and attitudes to school and job.

**THE ANALYSES OF THE TWO LOCUS OF CONTROL GROUPS**

Recall that the covariance matrices of the observed measures were inhomogeneous when internals and externals were compared. This suggests that locus of control mediates the relationships between the endogenous and exogenous variables. In order to investigate how teacher's locus of control influences the relationship between the organizational factors and the commitment and attitude variables, the sample of teachers was divided into two groups: one is called "the external locus of control group" (N=321) with scores on locus of control higher than, or equal to, the sample mean 10.913; the other is called "the internal locus of control group" (N=267) with scores below the sample mean. Then the proceeding analysis was repeated on these two groups separately. Comparing the results of the new analyses for these two groups, we can summarize the following interesting findings:

1) **Sensitivity and Resistance:** Teachers of external locus of control are more sensitive to organizational impacts (i.e. tend to be affected more strongly by different organizational factors) and those of internal locus of control show resistance to them. Since externals believe that they cannot control the environment and the success or failure of an event, perhaps they
weight the contribution of the external organizational factors more than their own behavior in contributing to what happens in their school. Therefore, their working attitudes and performance tend to be more sensitive to, or more dependent on, organizational factors. On the other hand, since internals perceive that the events that follow their behavior are contingent upon their own behavior, organizational factors are less important. Correspondingly, their working attitudes seem to be resistant to organizational impacts.

2) Impact of Organizational Ideology: Currently, the cultural framework emphasizes the importance of shared beliefs and values in school to teachers' commitment and job attitudes. In this study, the findings show that the importance is not so universal. For those who have a belief in internal control, the relationships of shared organizational ideology to their organizational commitment and job attitudes are negligible. But for those who have a belief in external control, the relationships are moderately strong, associated with their organizational commitment, feeling of job challenge, and role clarity. In other words, the relationship of organizational ideology to teachers' commitment and attitudes seems to be contingent upon locus of control.

3) Impact of Leadership: Comparatively, in terms of the number of commitment and attitude variables strongly predicted, the effects of principal's leadership are larger than other organizational factors for both groups. It is interesting to note that all of the three leadership factors have effects on the external group's job challenge but have none on the internal group. This provides one typical example showing how internal locus of control provides a resistance to leadership impact. As pointed out previously, there are dilemmas in leadership style. For example, for both groups, the higher the principal's initiating structure, the higher the work motivation and role clarity but at same time the lower the organizational
commitment.

4) **Impact of Social Norms:** There is no effect of social norms on teachers' feeling of job challenge and role clarity for either group. Except on organizational commitment and social satisfaction, the internal locus of control group is insensitive to the impact of other teachers' social norms. In contrast, the external locus of control group is more sensitive to the effects of social norms. The social norms framework is more applicable to those believing in external control than to those with internal locus of control.

5) **Impact of Organizational Structure:** In terms of number of the commitment and attitude variables strongly related, the effects of every structural factor seem to be weak, predicting at most only two commitment and attitude variables, for both groups. In other words, no matter what the locus of control, the structural framework is not so powerful in explaining the organizational impacts on teachers' attitudes and behavior, when compared with the leadership framework or the social norms framework.

**THE ANALYSES OF THE TWO TEACHING EXPERIENCE GROUPS**

Recall that the covariance matrices of the observed measures were inhomogeneous when more experienced teachers and less experienced teachers were compared. This suggests that teaching experience mediates the relationships between the exogenous and endogenous variables. In addition to locus of control, teaching experience is another important personal attribute which may mediate the relationships between teachers' organizational commitment and job attitudes and the organizational factors. In order to investigate how teaching experience influences these relationships, the sample of teachers were divided into two groups: one is called "the long teaching experience group" (N=237) with scores on teaching experience higher than, or equal to, the sample mean 7.5; the other is called "the short teaching
experience group" (N=351) with scores below the sample mean. Then the proceeding analysis was repeated on these two groups separately. The comparison of the results of the new analyses for these two groups can summarized as following:

1. **Negligible Impact of Organizational Ideology and Organizational Structure** -- For both groups, the impact of organizational ideology and organizational structure is either weak or negligible. This finding is consistent with that of the whole sample.

2. **Interaction with Social Norms** -- Social norms interact with teaching experience when they are used to predict teachers' commitment and attitudes. For teachers with long teaching experience, intimacy is an important factor predicting teachers' intrinsic satisfaction, social satisfaction, and job challenge and for those of short teaching experience, the effects of intimacy are negligible. On the other hand, for teachers with short teaching experience, esprit, instead of intimacy, becomes an more influential factor. It seems that length of teaching experience plays a role in shaping teachers' sensitivity to the impact of social norms. Teachers with long teaching experience tend to be more sensitive to intimacy but those with short teaching experience to be more sensitive to esprit.

3. **Interaction with Leadership Style** -- Principal's leadership style interacts with teaching experience in predicting teachers' commitment and attitudes. Teachers with different teaching experience are sensitive to different leadership styles. Those with short teaching experience tend to be more sensitive to the influence of the principal's consideration but less to his/her initiating structure behavior. For teachers with long teaching experience, the relationship is reversed.
The findings of this study may be summarized by the following statements:

**STATEMENT 1: Multiplicity and Difference**

Organizational commitment and job attitudes are multiple and different attributes that individually have their own sensitivity to different aspects of the organizational environment.

If we believe this statement, some important implications may be advanced. Perhaps this is an important lesson for administrative practice. There seems to be no universal set of organizational factors that can predict effectively all the commitment and attitude measures simultaneously. Particularly, the effects of leadership style on different aspects of teachers' working attitudes may be oppositely different. For example, the effect of leader's charisma may be positive for organizational commitment and intrinsic satisfaction but negative for social satisfaction, work motivation, and role clarity. It seems that the use of one specific set of organizational factors to maximize the effectiveness of all aspects of teachers' working behavior and attitudes at the same time may be very difficult, if not impossible. Further studies are encouraged to explore this issue.

Furthermore, any discussion or study of organizational commitment and job attitudes should take their different and multiple natures into consideration. The ignorance of their difference may lead to useless, if not meaningless, conclusions. For example, the findings from some studies which assume that job satisfaction is one construct and study how it is related to organizational impacts (Glisson and Durick, 1988; Bagozzi, 1980) may not be as useful as those differentiating job satisfaction as multiple constructs (Oldham and Hackman, 1981; Cammann, et al., 1983), because these constructs are sensitive to different organizational impacts.
STATEMENT 2: Different Strength of Organizational Impacts

The strength of impacts on teachers' organizational commitment and job attitudes from different aspects of organizational environment may be very different in terms of the number of the commitment and attitude variables strongly affected.

There are four frameworks competing to explain the relationship of organizational factors to working attitudes and behavior. In this study, the findings provide a rough comparison. In terms of the number of the commitment and attitude variables that can be predicted, the leadership framework and social norms framework are preferable to the cultural framework and structural framework. In order to enhance the efficiency of administrative practice, it is necessary to understand the strength of impacts from different aspects of the organizational environment. The findings of this study provide a preliminary picture of the strength of the organizational impacts on different aspects of teachers' work attitudes. Perhaps, school administrators may get some insights from this picture for organizing administrative practice or an organizational environment to improve teachers' working behavior and attitudes. But even so, it should be pointed out that this cross-sectional picture should not be over-emphasized and over-generalized unless it is further confirmed by future studies. There is still a need for case studies to explore longitudinally how the organizational factors affect on different aspects of teachers' working attitudes and why the strength of these effects is different. Furthermore, how these organizational impacts are related to school outcomes such as students' academic achievement and moral development is also an important question that needs investigation.

STATEMENT 3: Dilemma in Leadership Style

A leadership style may have positive effects on some aspects of teachers' working commitment and attitudes as well as negative effects on other aspects.
It seems that no one leadership style is optimal for all aspects of teachers' organizational commitment and job attitudes. Even though there is a recent movement emphasizing the importance of leader's charisma to effective organizations (Conger, et al., 1988; Bass, 1985; Sergiovanni, 1984, 84b), the findings of this study question the contribution of charisma leadership to teachers' working attitudes. On the one hand, it is positively related to organizational commitment and intrinsic satisfaction but on the other hand, it may have a negative relationship with social satisfaction, work motivation, and role clarity. The adoption of one fixed leadership style to manage a school may lead to improvement of some aspects of teachers' attitudes but also to adverse effects on the other aspects. Therefore, we should be aware of the side-effects of any leadership style when it is adopted to achieve some expected results on teachers' behavior and attitudes.

STATEMENT 4: Impact of Locus of Control

Locus of control may not only greatly relate to a teacher's organizational commitment and job attitudes but also mediate the relationship of these variables to the different aspects of organizational environment.

a) Internals tend to be more committed to school, more satisfied with the extrinsic and intrinsic rewards, and social relationships with their colleagues, more self-motivated in their work, more sure about their role and duties and also having a stronger feeling of job challenge, than externals.

b) Internals tend to be more resistant to the organizational impacts than externals.

In terms of self-reported organizational commitment and job attitudes, teachers with internal locus of control seem more positive than those with external locus of control. It suggests that internals are preferable in selection of teachers. Even though locus of control seems to a reasonably stable personality dimension (Rotter, 1966; Robinson and Shaver, 1973), it is...
still possible to change it through different learning processes (Kelly and Michela, 1980; Phares, 1976; MacDonald, 1972). How to organize a learning environment to facilitate change in teacher's locus of control in the direction of internality in a teaching training program or in a school is still an unknown area that needs further exploration. This study provides an illustrative example of the importance of the interaction between personal attributes and organizational environment in studying organizational impacts and behaviors. Ignorance of the interaction may lead to meaningless or misleading research conclusions. Inclusion of other important personality attributes such as self-concept and extroversion may be worthwhile in future studies.

STATEMENT 5: Impact of Teaching Experience

Length of teaching experience may not only relate to a teacher's organizational commitment and job attitudes but also mediate the relationship of these variables to the different aspects of organizational environment.

a) Teachers with longer teaching experience tend to be more committed to school, more satisfied with the extrinsic rewards, and more sure about their role and duties.

b) Teachers with long teaching experience tend to be more sensitive to social intimacy and principal's initiating structure. But teachers with short teaching experience tend to be more sensitive to colleagues' working esprit and principal's consideration.

In addition to statement 4, this statement provides further evidence to support the importance of personal attributes in studying the relationships between organizational factors and work attitudes. First, whether administrative practice can be adapted to the difference in teachers' sensitivity to the organizational factors is an interesting and important issue, relating to the effectiveness of this practice. Second, the notion from
this statement reinforces the implications advanced from statement 4 for research. Studies of organizational behavior should not ignore the interaction between personal attributes and organizational environment.

Obviously, this study has its limitations. First, no causal relationships can be concluded because this study is based on a cross-sectional observational design. The identified relationships are "correlational" but not "causal". In other words, the findings of this study can provide evidence to support its conception but cannot confirm any causal relationships among the variables. Also, the causal relationships (if any) between the organizational factors have been ignored in this study. Since my study has this drawback, it is suggested that the above statements of the findings may be taken as hypotheses (or used to generate hypotheses) for further exploration.

Second, the use of perceptual data in organizational studies is often controversial because perceptions are not objective and vary with observers. However, this study assumes that the impact of organizational environment on a teacher's attitudes and behavior must occur first through a teacher's perceptions of this organizational environment. The organizational data collected for this study are therefore mainly based on teachers' perceptions. In other words, this study assumes that "objective" data are not so important; the important element is that teachers' perceptions, which affect their attitudes and behaviors. One research tradition supports the contention that teachers' perceptions are a valid source of data and that, as active members, they are uniquely qualified to describe the work environment (Halpin, 1966; Cammann, et al., 1983). Nevertheless, the application of the findings from this study to a practical situation may be limited by concern about the consistency between perceptions and realities of organizational environment. If teachers' perceptions are consistent with the realities of an
organizational environment, we can directly improve the realities in order to improve teachers' working attitudes and behaviors, according to the suggestions of the findings. But if there is a gap between perceptions and realities, the application of the findings may not be so easy. At least, we have to make sure what kind of change in realities of organizational factors may result in the kind of change in perceptions that we expect for improving teachers' organizational commitment and job attitudes. But even so, how to define "realities" is rather problematic and controversial, often depending on perceptions.

Suffering from the limitations, the nature of the findings is more exploratory than conclusive. The findings show a very interesting pattern that is consistent with what we conceptualized and also provide examples to question some of our beliefs in leadership theory. The above five statements have summarized the observed complex relationships of teachers' organizational commitment and job attitudes to personal attributes and organizational factors. To some extent, the implications advanced from these statements may provide alternative ideas for administrative practice, training, ongoing policy discussion, and future research in the field of educational administration and organizational behavior.
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