Teaching Performance and Turnover:
A Study of School Teachers in Singapore

Yongqing FANG (PhD)
Nanyang Business School
Nanyang Technological University
Singapore 639798
(65) 6790-5731 (Office)
(65) 6791-3561 (Fax)
ayfang@ntu.edu.sg

and

Yuan Wang (PhD)
( for correspondence)
School of Management
University of Technology, Sydney
City campus, Haymarket
PO Box 123 Broadway
NSW 2007 Australia

July 15, 2005
Conference Track of ANZABA: International HRM/IR and labour issues

1 The authors wish to thank Prof A. Zhang for valuable contribution to the preparation of the earlier draft of this paper. Prof S. Ang, C.H. Lee, K.Y. Ng, S.S. Wong, V.T. Ho, Y. Chua for their constructive comments and suggestions.
Teaching Performance and Turnover:

A Study of School Teachers in Singapore

Abstract

How to improve performance and reduce turnover of teachers is two crucial issues for the education administrators. This study addressed these under-explored issues with a focus on stress and commitment, based on an investigation of 164 school teachers in Singapore. The findings of the study indicate that organizational commitment predicts both self-rated and supervisor-rated performance. Stress and stress-square are also the significant predictors of self-rating performance. Stress, organizational commitment, professional commitment, alternative employment opportunities are found to be significant predictors of turnover intention. The results suggested that administrators in education sector should pay attention to teachers’ commitment and stress.

Teaching has been recognized as a particularly stressful occupation (Brown & Ralph, 1992; Mwamwenda, Monyooe & Glencross, 1997). School teachers face enormous problems in their daily job, such as students’ disciplinary problems and misconducts or poor technical and administrative support of school (Brown & Ralph, 1992; Horn, Schaufeli, Greenglass & Burke, 1997). A large proportion of high school teachers are reported to feel a high level of occupational stress (Kyriacou, 1987) and develop an intention of turnover which readily leads to low performance. How to improve teachers’ performance related to their turnover is a crucial issue for education administrators. However, although many studies in this area have been done, how commitment, stress and job satisfaction have impact on teachers’ turnover and performance in high school is under explored. Specifically, questions remain unclearly answered in the education area: whether job stress, commitment and job satisfaction influence the rate of turnover and performance level of school teachers. We in this study, therefore, focus on the extent which professional and organizational commitment, stress and
job satisfaction affect the development of turnover and performance of school teachers in Singapore.

Singapore students are from an environment of well-developed economy and widely exposed diverse cultural and advanced technology. These students are expected for high achievement by their families and the society at large. The pressure for student high achievement is eventually amounted to the school teachers. The government and school administration are also demand superb teaching performance. In addition to regular teaching load, they are also required to shoulder extra curriculum activities, certain administrative responsibilities. Furthermore, they have to undertake one hundred hours training to improve themselves.

What are the teachers' psychological states? How do their attitudinal responses affect their teaching performance and turnover intention? The current study contributes to understanding of the relationships between teaching performance and some crucial factors of teaching job, with empirical evidences. It provides insights into the human resource management in Singaporean high schools.

THEORETICAL BACKGROUND AND HYPOTHESES

Turnover is a phenomenon in organizations that involves high cost in both monetary and non-monetary aspects. This is particularly true when those experienced workers are leaving companies, as companies have invested substantial amount in them from a perspective of human capital. Management, therefore, makes constant effort to identify symptoms potentially causing turnover of workforce (Weisberg, 1994) and reduce it.

Turnover is influenced by various factors in relation to policies and practices of human resource management that lead to the levels of employee job dissatisfaction (Heneman, Schwab, Fossum & Dyer, 1989). What interests us is what factors have a positive
impact on reduction of voluntary turnover and what factors have a negative impact on turnover within the context of Singapore’s education system.

March and Simon (1958) argued that general labor-market conditions influenced voluntary turnover through perceived ease of movement, which interacted with perceived desirability of movement to influence turnover. Their model suggested that certain factors (e.g. dissatisfaction) may “push” the employee to look for alternative employment, whereas other factors (e.g. the perception of attractive alternative job opportunities) may “pull” the employee to consider alternative employment. Steers and Mowday (1981) and Michaels and Spector (1982) argued that an intention to quit was more likely to result in voluntary turnover when alternative jobs were more generally available.

Studies have shown that intention to resign is an effective predictor of actual turnover than are other attitudinal measures (Krausz, Koslowsky, Shalom & Elyakim, 1995; Steel & Ovalie, 1984). Shore, Newton and Thornton (1990) have argued that studies using intentions as the criterion have distinct advantages over those with actual behavior as the dependent variable. First, behaviors are often influenced by a host of other variables (e.g. company policies, economic conditions) that cannot be controlled by the investigator but may have influence on the research findings. Second, turnover research has shown that a person’s self-expressed intention is the best indicator of turnover. Turnover intention can be used as the dependent variable and an assumption can be made that some action of employee is likely to follow. Hence, in our project, turnover intention is used for testing teachers’ voluntary turnover intention. Voluntary turnover intention is found related to job attitude (Trevor, 2001; Mitchell, Holtom, Lee, Sablynski, and Erez, 2000), including all forms of commitment, and stress.

**Job Performance** is defined as a worker’s effective execution of tasks or job and useful contribution to the social work environment (Abramis, 1994). There are three primary
theories of the mechanisms by which job stress may affect job performance, motivator theory, interference theory, and combination theory, each predicting a different type of relationship (Abramis, 1994).

Researchers had difficulty determining the relationship between job satisfaction and performance. From the 1930s to the mid-1950s, the views on the job satisfaction – performance relationship can be summarized in the statement “a happy worker is a productive worker”. As a result of the Hawthorne studies, managers generalized that if their employees were satisfied with their jobs, that satisfaction would be translated into high productivity (Robbins & Coulter, 1999). However, by the mid-1950s, a number of studies had failed to establish a clear link between job satisfaction and performance. Researchers have started to assume an alternative view – performance leads to job satisfaction. If employees do a good job, they intrinsically feel good about it (Lussier, 1996). Some other researchers have suggested that the reason for the apparently uncertain relationship between job satisfaction and performance is that other variables intervene, of which rewards are the most prominent. Whether job satisfaction is going to be improved depends on whether the rewards match the expectations, needs and desires of the employees (Werther & Davis, 1996).

Subsequently, practitioners and researchers turn a great deal of attention to other factors including stress, organizational commitment and occupational commitment (Turner & Chelladurai, 2005; Lin & Chan, 2005). Results of Becker, Billings, Eveleth, Gilbert’s (1996) study indicate that commitment based on internalization of supervisory and organizational values was related to performance. Meyer et al. (2002) found correlations between performance and commitment, in their meta-analysis of studies, though the relationship is not very strong. However, the impact of stress and commitment on teaching job has not received adequate attention, in terms of both academic research and managerial effort. To fill this gap,
this study will examine the extent to which stress, organizational commitment and professional commitment are related to job performance and the intention of turnover of high school teachers.

**Turnover and Stress.** Stress is found to be one of the most influential variables for both performance and turnover. It is defined as a person’s responses to some threatening or disturbing stimuli (Travers & Cooper, 1996). Some have defined stress as an interaction between the person and the environment. It is not the environment that is stressful, but the relationship between the person and the environment, which may result in the experience of stress. Stress is essentially the degree of fit between the person and the environment (Travers & Copper, 1996). It is a mental and physical condition which affects an individual’s productivity, effectiveness, personal health and quality of work (Comish, 1994).

Stress is supposed to manifest in various forms: *emotional manifestations* – feelings of undefined anxiety, dissatisfaction, depression, fear and frustration and low self-esteem; *physiological manifestations* – heart disease, psychosomatic illness, fatigue and depleted energy reserves; and *behavioural manifestations* – behavioural problems such as appetite disorders, excessive smoking and alcohol and/or drug abuse, violence or inability to sleep, plus possible displays of withdrawal symptoms (Travers & Cooper, 1996). These consequences of stress are exhibited among teachers (Cherniss, 1980; Punch & Tuettemann, 1991; Horn et al., 1997).

Stress may also lead to employee turnover. Most literature believed such linkage to be indirect, i.e., excessive stress would cause low job satisfaction and organizational commitment, which in turn lead to the propensity to leave (Bedeian & Armenakis, 1981; Netemeyer, Johnston & Burton, 1990; Sager, 1994). On the other hand, researcher has also found that, in addition to being mediated by job satisfaction, stress directly caused turnover.
intention among nurses in Canada and USA (Fang & Baba, 1993) and in Singapore (Fang, 2001).

The level of stress may affect job performance. There are three primary theories on stress-performance linkage (Abramis, 1994). Motivator Theory proposes that stress is an activator or challenge that motivates individuals to perform better. Therefore, it presents a positive relationship between stress and performance. Interference Theory suggests that stress interfere with performance, thus generate a negative relationship between stress and performance. Combination Theory suggests that a low to moderate level stress would be motivating but a high level stress would be demotivating, thereby it would be an inverted U-shaped relationship between stress and performance.

Various stressors cause teachers to suffer from stress and high levels of stress are detrimental to the health and performance of teachers. Teachers may become so stressed to a point that they think of quitting of quit school job. They are likely to feel that they are unable to take it anymore and wish to give it all up. On the other hand, there may be some teachers who are fed up with the school they are in, but they still love the profession of teaching. These teachers may think of only changing the school but remain their occupation of teacher. Either scenario would suggest:

*Hypothesis 1: Higher level of stress would lead to stronger turnover intention of school teachers.*

**Turnover and Organizational Commitment.** Organizational commitment has been a subject of interest for some time. The past decades have seen a broadening of the domain within which commitment is studied. Becker (1992) suggested that there are different foci of commitment. Individuals can feel committed to the organization, top management, supervisors, or the work group. Some of the earliest work within the organizational behavior literature (Porter et al., 1974; Mowday, Steers & Porter, 1979; Mitchell, Holtom, Lee,
Sablynki, Chris & Erez, 2001) examined employees’ commitment to their employers, commonly referred to as organizational commitment. Then, there has been an increase in research examining commitment to unions (Fullagar & Barling, 1989), employment (Morrow & Wirth, 1989), careers (Blau, 1989). Voluntary turnover intention is found to negatively correlate with all forms of commitment (Meyer & Allen, 1991; Cohen, 1993) as well as across organizational and professional domains (Meyer, Allen, & Smith, 1993). Again, however, these links have been found to be much stronger between turnover intentions and affective commitment than other correlations (Meyer, Allen & Smith, 1993; Hackett, Bycio & Hausdorf, 1994).

In this study, both organizational commitment and professional commitment are to be examined. There are two different approaches to define Organizational commitment (Steers & Porter, 1983). In the first approach, organizational commitment is referred to as a behavior; the individual is viewed as committed to an organization if he/she is bound by past actions of “sunk costs” (fringe benefits, salary) as a function of age or tenure. Thus an individual becomes “committed” to an organization because it has become too costly for him/her to leave (Blau & Boal, 1987). In the second approach, organizational commitment is referred to as an attitude. Organizational commitment has also been viewed as an attitude with three components: (a) Belief in and acceptance of organization’s goals and values, (b) Willingness to exert effort on behalf of the organization and (c) Strong desire to maintain organizational membership (Porter et al., 1974; Mowday, Steers & Porter, 1979, 1982; Johnston & Snizek, 1991; Gregson, 1992). Meyer and Allen (1991) described three forms of organizational commitment: commitment as an affective attachment to the organization; commitment as a perceived cost associated with leaving the organization; and commitment as an obligation to remain in the organization. These three forms are termed as affective (i.e. individuals stay in the organization because they want to), continuance (i.e. individuals stay in the organization
because they need to), and normative commitment (i.e. individuals stay in the organization because they feel they should), respectively.

Empirical research on organizational commitment generally has shown commitment to be a significant predictor of turnover (Porter et al., 1974; Blau & Boal, 1987). A study was conducted by Aryee, Wyatt & Ma (1991) regarding the antecedents of organizational commitment and turnover intentions. Their results indicated that organizational commitment and job satisfaction were the main predictors of turnover intentions, which contradicted Lachman & Aranya's (1986) findings that role orientations and attitudes toward the organization or the job had little effect on turnover intentions among certified public accountants. The results of their study are supported by other research (Mathieu & Zajac, 1990; Meyer & Allen, 1997; Meyer et al., 2002; Turner & Chelladurai, 2005), with evidence that organizational commitment components are related to intention to leave the organization. That is, those who were more committed to the organization for affective and normative reasons and those who had invested much in the organization were less likely to leave the organization.

Teachers who are committed to the school are likely to have strong desires to maintain membership in the school. They may believe and accept the school’s mission and values, and are willing to put in their best effort for the school. A sense of belongingness is deeply rooted in them. Thus, they cannot bear to leave the school where they have invested so much effort, time and affection. It is difficult for them to part from a school that they have painstakingly helped to build. These lines of argument suggest a reverse relationship between organizational commitment and turnover intentions:

*Hypothesis 2: Higher level of organizational commitment would lead to weaker intention of turnover of school teachers.*
As research has proliferated in the area of organizational commitment, there has also been considerable interest in professional commitment (Meyer, Allen & Smith, 1993). Professional commitment is referred to as “a person’s belief in and acceptance of the values of his or her chosen occupation or line of work, and a willingness to maintain membership in that occupation” (Vandenberg & Scarpello, 1994). Professional commitment is characterized by an acceptance of the goals and values of the profession, willingness to extend effort on its behalf and desire to remain in the profession (Lachman & Aranya, 1986). It is also referred to as career or occupational commitment.

It is found that learning experience and job meaningfulness contribute to professional commitment (Lin & Chan, 2005) and that people who are embedded in their jobs have less intent to leave (Mitchell, Holton, Lee, Sablenski, Chris & Erez, 2001). Teachers who are committed to the profession are likely to have a strong desire to remain in their current job, as they love to be teachers, to be able to impart their knowledge and values to their students, and to be able to communicate with students. The career is seen as intrinsically rewarding. These teachers are unlikely to leave the profession because they see it as the most wonderful profession. They feel that teaching is a special, meaningful and significant occupation because teachers help to nurture the next generation. Therefore, it is proposed that

Hypothesis 3: Higher level of professional commitment would lead to weaker intention of turnover of school teachers.

Teachers who think of leaving the profession may reconsider their decisions when they perceive that there are not many alternative employment opportunities. For example, when economic conditions in the external labor market are unfavorable and there are many people who are unemployed, the supply of jobs is far less than the demand for the jobs. Teachers having turnover intentions at this point tend to consider their decisions carefully because they are unsure whether they can find other jobs if they leave. On the other hand, if
economic conditions are favorable and the supply of jobs is more than the demand for them, teachers may be more apt to leave the profession, as they perceive that there are more alternative employment opportunities available. The above line of arguments would lead to the following hypothesis,

Hypothesis 4: Perceived availability of alternative employment opportunities would lead to more turnover intentions of school teachers.

Performance and Stress. It is argued that reaction to the experience of stress that, for expatriates, includes psychological withdrawal cognitions and poor performance (Bhaskar-Shrinivas, Harrison, Shaffer & Luk, 2005). A study also reveals that job-stress related burnout is negatively to in-role and extra-role performance in account managers (Demerouti, Verbeke & Bakker, 2005). The purpose of this study is to find out which of the various antecedent factors would affect a teacher’s performance and intention to quit from a teaching position.

The impact of stress on job performance has been depicted as a reversed U-shape curve. That is, stress could be a booster to performance when it increased from a low level up to a moderately high level. Beyond that point, the performance begins to deteriorate (Jahn & Byosiere, 1992; Jex, 1998). As such, a level of stress between low to moderate is seen as a necessary challenge to motivate teachers to work hard and put in their best. Without stress, they may feel that life is boring and things are going too slowly. The school teachers view the moderate levels of stress as “just enough” motivation to put effort on work for their best performance. However, beyond that “optimal point”, stress may become unbearable for the teachers. They would feel not to be unable to cope with the stress. Consequently, the high level of stress is not viewed as motivating anymore, instead that it is likely to be seen as hazardous and interfere with performance.
Based on the above viewpoint, for our sample of teachers, we would like to test for a curvilinear relationship between stress and performance, such that stress at low to moderate levels produces a motivating effect on the teachers, thus enhancing performance, but stress at high levels demoralize the teachers and affect their performance.

Hypothesis 5: There is an inverted U-shape relationship between stress and performance of school teacher.

Performance and Organizational Commitment. As indicated in the literature, organizational commitment is found to explain the raise of performance in organization (Turner & Chelladurai, 2005). It is suggested that performance is positively associated with affective and normative commitment and negatively associated with continuance commitment (Meyer et al., 1989; Shore & Wayne, 1993; Hackett, Bycio & Hausdorf, 1994; Angle & Lawson, 1994). Teachers who are committed to their profession demonstrate a strong acceptance of the profession’s values, tasks, and working manner. Teaching as a profession encompasses values such as imparting knowledge and values to the next generation, and molding the students to be useful citizens. Teachers who firmly believe in these values are likely to manifest them in the performance. They keep these values in mind when preparing their lesson plans, when giving students projects, when thinking of examination questions. These teachers are also more conscious of their conduct and work attitudes, as they want to set good examples for their students. The above reasoning would support the following hypothesis:

Hypothesis 6a: Higher level of professional commitment would lead to better performance.

Hypothesis 6b: Higher level of organizational commitment would lead to better performance.
Performance and Job Satisfaction. The relationship between job satisfaction and employee performance has always been controversial. After meta-analyzed a large amount of empirical evidence, Petty, McGee, and Cavender (1984) concluded that productivity leads to satisfaction rather than the other way around. Yet, new research found that employee satisfaction leads to higher customer satisfaction (Heskett, Sasser, & Schlesinger 1997; Koys, 2001). In schools, teacher job satisfaction could help to foster a more pleasant learning environment, more positive learning attitude, and happier education experience.

Hypothesis 7: A higher teacher job satisfaction would lead to better teaching performance.

Turnover and Job Satisfaction. Research has generated supportive evidence that dissatisfied employees skip work more often and are more likely to resign than satisfied ones (Fang & Baba, 1993). Thus, if the school job is appraised as fulfilling or facilitating, it leads to satisfaction and the teacher is likely to stay on the job. On the contrary, if the teaching job is appraised negatively, dissatisfaction results and the teacher may seek to withdraw. In such a situation, turnover will likely be the consequence.

Hypothesis 8: Lower level of job satisfaction would lead to higher teacher turnover.

METHOD

Sampling and Procedure.

This study took place in Singapore, which is a small urbanized state. It has four million population; among them, over 75% are ethnic Chinese. All public schools were under unified administrative policies, compensation packages, curriculum and extra-curriculum activities, and similar working conditions.

Each set of the survey contains two separate questionnaires, one for the participating teacher and the other for his/her supervisor. Approval was first sought from the principals or vice-principals of the various schools to conduct the survey on the teachers in their schools.
After permissions were obtained, questionnaires were distributed randomly to the teachers. These teachers responded to the teacher's version of the survey and passed the supervisor version to their immediate superior who could be department heads, vice-principals or principals. Completed questionnaires were either personally collected by the researchers or mailed back to the researcher's university in stamped, self-addressed envelopes.

Over two hundred sets of questionnaires were personally delivered to 26 randomly selected schools spread over the country. A total of 164 useable questionnaire sets were returned, at a response rate of 76%. There were 135 (82.3%) females and 29 males. The average age was 35. The majority of the teachers were Chinese (76.4%). More than half (56.5%) of the teachers were married. A majority of them were teaching in primary schools (62.6%).

With reference to highest qualification, 55.5% of the sample had tertiary education and 83.8% had a certificate in education. About 55.6% sample has non-teaching experience, for example, clerical work (17.4%), administrative and management (16.3%), professional and technical areas (11.8%), and sales (10.1%). The respondents had been in the teaching profession for an average of approximately 12 years.

The principal subject teaching areas by the highest number of teachers were languages (36.0%), mathematics (25.7%), and science (18.9%). As for extra-curricular activities, more than 40% (41.3%) of the teachers were in-charge of clubs.

**Measures**

*Stress* was measured using a modified 8-item scale of Parker and De Cottis (1983). Sample items included ‘I have often felt fidgety or nervous as a result of my job’, and ‘there are lots of times when my job drives me right up a wall’. Respondents were asked to rate on a 5-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The reliability was .84.
Organizational commitment was measured by 15 items from Organizational Commitment Questionnaire (OCQ) (Porter, Steers, Mowday & Boulian, 1974). Sample items included ‘I am willing to put in a great deal of effort beyond that normally is expected in order to help this school to be successful’, ‘I talk up this school to my friends as a great school to work for’, and ‘I feel very little loyalty to this school’. The reliability is .85.

Professional Commitment was measured by (Fang, 2001)’s 4-items scale), assessing the feelings toward teaching profession. The range was from 1 (strongly disagree) to 5 (strongly agree). Sample items included ‘I would volunteer to recruit students to my profession at “career fairs” ’, ‘I would not switch to another profession, even if the switch was easy and the income somewhat higher’ and ‘I feel proud to be a teacher’. The reliability is .78.

Performance was measured using two methods. First, the teachers were asked to self-evaluate his/her performance through 2 items from (self-citation, 2001), using a 5-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree). A sample item was ‘I believe that my job performance is well above average’. In addition, the teacher was to give himself/herself an overall performance rating on a scale of 1 (much worse than most people) to 5 (much better than most people). Second, the teacher’s supervisor was asked to assess the teacher’s performance in a separate questionnaire using 15 items which was used in annual performance appraisal (Ministry of Education, Singapore, 1998), with a 5-point scale ranging from 1 (excellent) to 5 (not adequate). Areas of evaluation included knowledge in subject area(s) taught, delivery of lessons, and classroom management, etc. In addition, the supervisor was asked to give an overall rating for the teacher’s performance in the school, also using a 5-point scale, ranging from 1 (much worse than most people) to 5 (much better than most people). The reliability is .78 for self-evaluation and .98 for supervisor rating.
In this paper, turnover intentions and not actual turnover will be the focus of the study (Cohen, 1998). *Turnover intention* was measured using three items from Cummann, Fichman, Jenkins, and Klesh (1979). A sample item was ‘I often think of quitting’. The reliability is .83.

*Alternative employment opportunities* were measured by three items from Peters, Jackofsky, and Salter (1981). A sample item was ‘It is possible for me to find a better job than the one I have now’. The reliability is .70.

*Demographic data* were gathered at the end of the questionnaire, including gender, age, race, marital status, academic qualification, professional qualification, other non-teaching experience, number of years in the teaching profession, principal subject teaching area, extra-curricular activities presently in-charge of.

**RESULTS**

Table 2 presented the regression analysis result. The column one showed that 54% of the variance in turnover intention were predicted by the proposed antecedents ($F=36.336$, $p<.001$). The significant predictors included professional commitment ($b=-.287$, $p<.001$), organizational commitment ($b=-.301$, $p<.001$), stress ($b=.200$, $p<.01$), and employment opportunities ($b=.162$, $p<.01$). Similar result was obtained when stress-square in stead of stress was used in the analysis. Thus Hypotheses 1, 2 and 3 were supported.

Table 2 also showed that employment opportunity was a significant predictor of turnover intention regardless how the effect of stress was assessed. The $b$'s were .162 ($p<.01$) and .159 ($p<.01$), respectively.

Performance analysis was divided into two parts, self-rating and supervisor-rating. Both parts tested the impact of stress on performance in terms of its monotonic and U-shaped effects. Table 3 presented the results.
It showed that organizational commitment was a significant predictor of performance. Its positive impact on performance was observable from both self-rating and supervisor rating, and regardless how the impact of stress was assessed. And for supervisor ratings, organizational commitment was the only significant predictor. On the other hand, professional commitment was not found to be significant in any of the four tests. Thus, Hypothesis 5a was rejected, while Hypothesis 5b was supported.

The effect of stress was only observed in self-rating test and when both its first order and second order effects were assessed. Specifically, both stress and stress-square were significant predictors ($b=-1.519, p<.001$, and $b=-1.740, p<.001$, respectively).

Job satisfaction was a significant predictor ($b=-.200, p<.05$) of self-rated performance, when only first order effect of stress was assessed. It was no longer significant when both first and second order effects of stress were analyzed.

**PRACTICAL IMPLICATION**

Teachers' performance and turnover are among the most important issues in education sectors. Extending the understanding of employee behavior in other sectors to education fields, this paper examined the ways a few commonly recognized influencing factors affect teaching performance and teacher turnover. They were professional commitment, organizational commitment, job satisfaction, stress, and alternative employment opportunities.

It was found that there was a wide range of factors that could lead to teacher turnover. Among them, two factors require more attention. The first is stress. Teaching is a very stressful profession. Most literature emphasized the mediation effect of attitudinal variables, such as job satisfaction and organizational commitment. The negatively direct impact of
stress on teaching job has not received adequate attention, in terms of both academic research and managerial effort.

Stress is proved to be a double edge sword. It would produce high productivity when at optimal level. In reality, the teaching profession is very stressful. In addition to traditional stressors, a teacher now dates must face the consistent pressure to upgrade oneself to adapt information technology (IT) in teaching, etc. These could stretch a teacher to the limit. School administration should realize that excessive stress is a common occupational hazard. Although stress may increase performance in a short period, acute stress could further damage the mental and physical health. When stress leaves to higher teacher turnover, it would eventually reduce the overall performance of the school teaching.

The second crucial factor for teachers' turnover is commitment. Both low professional commitment and low organizational commitment were found to significantly contribute to high turnover. However, the implication would be different. The commitment to teaching profession is a teacher's belief in and acceptance of the teaching profession, and a willingness to maintain membership in the teaching profession. Thus when a teacher exhibits a low professional commitment, he/she would tend to leave the teaching profession and join other section. This would spell a lost to both the individual and the society. To be a qualified teacher, the individual has invested heavily in his/her pre- and early career, including formal education, personal learning curve, and professional development effort. In this process, the society also pours in vast resources, in the form of educational infrastructure building, financial assistance, professional development support, etc. All these will only be able to generate returns, if the person remains in the teaching profession and play his/her professional role well. When the person leaves the profession, he/she may have to forgo all personal investment, and pick up a new set of skills. At the same time, the society could not benefit from its prior investment, either. This problem becomes even more serious in the
labor shortage economy like Singapore or during economic period of growth in which alternative jobs in other sectors are plenty.

Organizational commitment of teachers takes the form of commitment to the school one teaches in. This factor deserves most attention. Firstly, a low commitment to the school would likely lead to the propensity of turnover. Secondly, it is the only variable consistently contributing to good performance rated by oneself and by the immediate supervisor. In the Singapore school context, the inter-school competition is stiff. There is an annual exercise of school ranking based on primary school leaving examination (PSLE) for primary schools or General Certificate of Education (GCE) “O” Level Examination for secondary schools. The ranking criteria include both absolute and value-added performance. The ranking results are made available to the public (“Performance indicators...” Straits Times, 14 Aug 1998). These add pressure on staff to produce better results every year and bear direct and indirect financial consequences. A highly committed teacher would try the best to perform well and make major contribution. Although part of the inner drive for a good performance may come from the commitment to the teaching profession, commitment to the school seemed to be much stronger motivation for excellent work.

The findings and conclusions of this study will also provide clues for administration in the education section and managers in other industries as well. Although the size of the r-square is not very substantial, the focal variables are significant predictors. As such they should be considered when performance-improvement programs are planned. To decrease the rate of turnover and enhance job performance of school teachers, the administrators in the education sector should work on how to strengthen teachers’ commitment to their schools and to help them to reduce and cope with job stress.

(Bibliography available upon request)
Table 1: Correlations between Antecedent Variables and Outcome Variables

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Job Satisfaction</td>
<td>3.667</td>
<td>.574</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Organizational Commit</td>
<td>3.360</td>
<td>.484</td>
<td>.602*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Professional Commit</td>
<td>3.742</td>
<td>.694</td>
<td>.437**</td>
<td>.514**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Stress</td>
<td>3.020</td>
<td>.708</td>
<td>-.430**</td>
<td>-.330**</td>
<td>-.475**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Self Rating Performance</td>
<td>3.762</td>
<td>.592</td>
<td>-.019</td>
<td>.218**</td>
<td>.124</td>
<td>.089</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Superior Rating Performance</td>
<td>2.389</td>
<td>.918</td>
<td>.285**</td>
<td>.350**</td>
<td>.322**</td>
<td>-.184**</td>
<td>.291**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Employment Opportunity</td>
<td>2.924</td>
<td>.790</td>
<td>-.235</td>
<td>-.271**</td>
<td>-.123</td>
<td>-.134</td>
<td>-.006</td>
<td>-.168</td>
<td></td>
</tr>
<tr>
<td>8 Turnover Intention</td>
<td>2.106</td>
<td>.852</td>
<td>-.503**</td>
<td>-.602**</td>
<td>-.589**</td>
<td>.495**</td>
<td>-.015</td>
<td>-.129</td>
<td>.334**</td>
</tr>
</tbody>
</table>

Table 2: Turnover Intentions and its Antecedents of School Teachers

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover Intention</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional commitment</td>
<td>-.287***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational commitment</td>
<td>-.301***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>-.072</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stress</td>
<td>.200**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment opportunities</td>
<td>.162**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>36.336***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>.540</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: *** p < .001; ** p < .01; * p < .05

Table 3: Performance and its Antecedents of School Teachers

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance (self-rating)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model I</td>
<td>.129</td>
<td>.159</td>
<td>.174</td>
<td>.171</td>
</tr>
<tr>
<td>Model II</td>
<td>.328***</td>
<td>.264**</td>
<td>.225*</td>
<td>.231*</td>
</tr>
<tr>
<td>Performance (boss-rating)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model I</td>
<td>-.200*</td>
<td>-.124</td>
<td>.080</td>
<td>.072</td>
</tr>
<tr>
<td>Model II</td>
<td>.173</td>
<td>-1.519***</td>
<td>.010</td>
<td>-.172</td>
</tr>
</tbody>
</table>

| F                | 4.652*** | 6.789*** | 5.970*** | 4.763*** |
| R²               | .107    | .180    | .159    | .160    |
| ΔR²              | .072*** | .001    |        |        |

Note: *** p < .001; ** p < .01; * p < .05
CONFERENCE THEMES

- The impact of multinational enterprises on the business-social environment
- Trade agreements in the Asian region
- International strategy
- Joint ventures and strategic alliances
- International business and the SMEs
- WTO - implications for international business
- International trade
- Multinationals and the state
- International business and human security
- International HRM/IR and labour issues
- Cross cultural issues in international business
- Regionalisation and international business
- International business education
- International education markets
- International management