

Relationship among Job Characteristics, Job Satisfaction, and Turnover Intention within Kindergartens: An Empirical Study in Taiwan

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Abstract

Turnover of kindergarten teachers is detrimental to teaching quality and the continued enrollment of students. This study investigated job characteristics, job satisfaction, and the influence of these variables on turnover intentions in the kindergartens of Taiwan. Two stepwise multiple regressions were used to explore relationships among variables. The results can be summarized as follows: (1) teacher responses showed little variance when sorted by age and tenure; (2) the job characteristics and job satisfaction scales only overlapped on one factor; (3) job characteristics and job satisfaction negatively and significantly predicted turnover intention, but job satisfaction was the most significant predictor. Kindergarten administrators can use the findings and implications of this study to increase job satisfaction and decrease turnover.

Key words: job characteristics, job satisfaction, turnover intention, kindergarten teacher, Taiwan



Introduction

Contemporary educational theory (Ingersoll, 2001) holds that one of the pivotal causes of inadequate school performance is the inability of schools to adequately staff classroom with qualified teachers. The theory also holds that these school staffing problems are primarily due to shortages of teachers. Moreover, the data show that the amount of turnover retirement accounts for is relatively minor when compared to turnover associated with other factors, such as job dissatisfaction and pursuing other jobs (Ingersoll, 2001). Concern over teacher shortage has also created the impetus for empirical research on teacher supply and demand. In particular, over the past two decades a substantial body of empirical analysis has focused on teacher turnover: the departure of teachers from their teaching jobs (Grissmer & Kirby, 1987, 1997; Ingersoll, 2001).

While contemporary educational theory was developed based on phenomena in the United States, the findings and implications still have credence in Far East Asia Taiwan. With shrinking birth rates amplifying competitive pressure, kindergarten administrators face management issues such as how to improve job characteristics and how to ensure employee job satisfaction so as to lower turnover rates. If employee satisfaction is high and turnover rates are low, kindergarten administrators can create competitive advantages and reach the ultimate goal of establishing a reputable and long-standing educational institution.

Literature Review

Contemporary Education in Taiwan

The problem of turnover, however, has little to no effect on Taiwan's primary and secondary education systems. This is because in Taiwan, elementary school, junior high school, and senior high school teachers must maneuver a grueling gauntlet of government exams before securing the position of teacher. Commonly dubbed the "iron rice bowl" (*tie-fan-wan*) by the locals, a primary and secondary school teacher's tenure is for as long as they choose to work. Retirement packages are considered cushy and summer vacations are paid.



Most kindergartens, however, are privately owned. Unless the kindergarten is a large-scale corporation, and there are several such schools populating Taiwan, private kindergartens feel the effects of economic shifts more than public kindergartens. When the economy is bad, bosses of private kindergartens forget all notions of goals and aspirations and focus on doing what it takes to survive. Because private kindergartens have to worry about survival, they tend to be run more like business enterprises than educational institutions; the focus tends not to be on how much and how well the students learn, but rather what activities can be conducted to serve as advertisements for the school.

In recent years, with the birth rate decreasing and an economic decline, Taiwan's bosses have gained the upper hand. Because so many college graduates are looking for work, bosses can give low pay, few to no benefits, and demand long work hours of arduous labor from their employees. Bosses can also be disrespectful, demeaning, degrading, and can even sexually harass their employees, and the employees will still work for fear that they won't be able to find a job elsewhere. Sadly, kindergartens have met the same fate. And obviously, the kindergartens affected greatest by turnover are private owned.

Turnover

It has been observed that employee turnover is especially consequential in organizations that have uncertain and non-routine technologies and production processes requiring extensive interaction among participants. Such organizations are often unusually dependent upon commitment and cohesion among employees and management and, hence, are vulnerable to employee turnover (Turner & Lawrence, 1965; Ingersoll, 2001).

Kindergartens are such organizations because both student-teacher and parent-teacher relationships need cohesion. In addition, teaching experience and teaching skill are important because classrooms are dynamic environments: the learning atmosphere changes with each lesson, student, question, and reply (Black, Harrison, Lee, Marshall, & Wiliam, 2004). Thus high rates of teacher turnover are of concern not only because they may be an outcome indicating underlying problems in how well schools function, but



also because they can be disruptive, in and of themselves, to the quality of the school community and the school's educational performance (Ingersoll, 2001).

The stability of teachers has considerable importance on the quality of teaching and the continuing enrollment of students. The longer a teacher stays within a kindergarten, the better relationship that teacher will have with the students and parents. Schools with good, stable teachers have a competitive edge for two reasons. First, parents feel safer if the same teacher cares for their child for the duration of kindergarten education (usually 3 years). Second, if these same parents are satisfied with the quality of education, they'll recommend their friends' children to the same school (and perhaps even the same teacher) via word-of-mouth advertising. Such advertising is important, especially for privately owned kindergartens, because low birth rates have prompted the necessity for teachers to go out and recruit students. The more students introduced to a kindergarten by satisfied parents, the less after-work hours teachers have to spend outside recruiting new students.

Turnover Intention

Turnover intention has been described as the last in a sequence of withdrawal cognitions, a set of cognitions including thinking of quitting and the intent to search for alternative employment (Mobley, Horner, & Hollingsworth, 1978; Tett & Meyer, 1993). Teacher turnover possibility factors, including factors tied to job characteristics, were investigated and when the characteristics of the working environment satisfied their needs, teachers reported low turnover intentions (Bright, 2008). Ingersoll (2001) suggested that after controlling for the characteristics of both teachers and schools, inadequate support from the school administration, student discipline problems, limited faculty input into school decision-making, and to a lesser extent, low salaries, were all associated with higher rates of turnover.

Job Satisfaction

Job satisfaction has been conceptualized as the difference between workers' subjective expectations of task natures, relationships, and environment, and the objective reality of the overall tasks and remuneration. This study uses the tri-dimensional model defined by the developers of the Minnesota Satisfaction Questionnaire (MSQ; Weiss, Davis, England, & Lofquist, 1967) defined three dimensions of job satisfaction: intrinsic satisfaction, extrinsic satisfaction, and global satisfaction.



Intrinsic satisfaction refers to the task natures (factors) that directly correlate with satisfaction from sense of achievement, self-esteem, autonomy, feedback, and sense of good control. Extrinsic satisfaction refers to the task natures that indirectly correlate with satisfaction from excellent work environment, affirmation and praise from superiors, esprit de corps, good benefits, high pay, and opportunities for advancement. Global satisfaction refers to employees' overall satisfaction towards their job and is measured as the combination of intrinsic and extrinsic satisfaction.

Job satisfaction has important economic effects because low employee efficiency will translate into low productivity for the organization; hours lost equates to money lost (Freeman, 1978). For teachers, low efficiency is manifested in disengaged teaching and less patience with students (Ingersoll, 2001). On the other hand, teachers appear able to integrate professional knowledge (subject matter and pedagogy), interpersonal knowledge (human relationships), and intrapersonal knowledge (ethics and reflective capacity) when they are satisfied with their job (Collinson, 1996). In addition, low job satisfaction is associated with higher rates of quitting (Clark, Georgellis, & Sanfey, 1988; Freeman, 1978; Gordon & Denisi, 1995; Mohr & Zoghi, 2008) and higher rates of absenteeism (Drago & Wooden, 1992). Thus it is hypothesized that job satisfaction will have a significant negative relationship with turnover intentions (Hypothesis 3a).

Job Characteristics

The definition of job characteristics for this study refers to the attributes of a job. Turner and Lawrence (1965) conjectured that employees prefer jobs with high complexity and challenges. Hackman and Oldham (1975) suggested that job characteristics influence personal job performance through individual psychological perceptions. They further asserted that jobs differ in the extent to which they involve five core dimensions: skill variety, task identity, task significance, autonomy, and task feedback.

Skill variety is the degree to which a job allows employees to undertake a wide range of options in their work. Task identity refers to whether a task yields a feeling of completeness and who is recognized for the achievement after a task is done. Task significance is the extent of influence a job's completion has on the employee's life or job. Autonomy is the extent to which employees have a say in scheduling their work and



freedom to do what they want on the job. Feedback refers to the extent to which completing a task provides understandable and timely performance feedback.

If jobs are designed to increase the presence of these five core characteristics, employees are more likely to experience three critical psychological states: (1) experienced meaningfulness of work, (2) experienced responsibility for work outcomes, and (3) knowledge of the results of work activities (Hackman & Oldham, 1975). In turn, these three critical psychological states may increase the likelihood of positive personal and work outcomes, which include high internal work motivation, high quality performance, high task-related satisfaction, low absenteeism, and low turnover. Further, when these three critical psychological states are experienced, work motivation and job satisfaction will be high (Hackman & Oldham, 1975). Thus it is hypothesized that job characteristics will have a significantly negative influence on turnover intentions (Hypothesis 3b).

Relationships among Variables

Predictors of Turnover Intention

In a study of the variables influencing turnover intention in Malaysia kindergartens, regardless of single variable predictions or multiple variable predictions, job satisfaction was the single best predictor of turnover intention. In single variable predictions of turnover intention, job satisfaction was the strongest predictor, with job characteristics in close second and organizational commitment in a distant third. All three variables explained a significant proportion of variance in turnover intention scores: job satisfaction explained 62% of variance, job characteristics explained 51% of variance, and organizational commitment explained 13% of variance (Chao, under review). In this study, it is anticipated that the results will be similar (Hypothesis 3).

Predictors of Job Satisfaction

Results from a rigorous meta-analysis implied that organizational commitment and job characteristics were strong predictors of job satisfaction (Tett & Meyer, 1991). To test this hypothesis, a study of kindergarten teachers' turnover intentions was conducted in Malaysia (Chao, under review). Organizational commitment and job characteristics were tested for their influence on job satisfaction. Perhaps due to confounds, organizational commitment was not found to be a significant predictor of job satisfaction even though it



did explain a significant proportion of variance (12%) in job satisfaction scores. Job characteristics, on the other hand, were found to be a significant predictor of job satisfaction and also explained a significantly large proportion of variance (71%) in job satisfaction scores (Chao, under review).

Individually, job satisfaction and job characteristics were strong predictors of turnover intention. When combined, however, the predictive strength of job characteristics failed but the predictive strength of job satisfaction did not. It's possible that due to the fact that job characteristics were the strongest predictor of job satisfaction, there may be similar underlying themes that are mitigated when the variables are combined. In that study, it was suggested that a factor analysis of the two scales combined could determine if such overlap is present (Chao, under review). Others have found that regarding the five core characteristics, task significance, autonomy and feedback were found to directly influence job satisfaction (Bhuiyan, Al-shammari, & Jefri, 1996), while skill variety and task significance merely had significant effects on job satisfaction (Bhuiyan, Al-shammari, & Jefri, 1996; Reiner & Zhao, 1999).

In total, the job satisfaction scale has three subscales: intrinsic satisfaction, extrinsic satisfaction, and global satisfaction (i.e., a combination of intrinsic and extrinsic satisfaction). The job characteristics scale has five subscales: skill variety, task identity, task significance, autonomy, and task feedback. Thus it seems logical that factor analysis will yield a total of 7 different factors (one for each subscale). However, due to results from the Malaysia study (Chao, under review), there is reason to suspect that there are overlapping factors between the 2 scales. If indeed there is overlap between the job satisfaction and job characteristics, it is expected that factor analysis will yield fewer than 7 factors (Hypothesis 2).

Taiwan's Kindergarten Teachers

In comparison with full-time primary school and secondary school teachers, the position of kindergarten teacher is not a well-respected position. During ten years of experience as a kindergarten administrator, the researcher of this study observed that in conservative Asian nations such as Taiwan, employees are afraid to offend their boss and thus rather than try to improve themselves, are satisfied with doing what they're told. Because employees work to obey, there is little consideration for self-improvement. Thus



it is expected that regardless of age or tenure, there will be little variation among the responses of kindergarten teachers (Hypothesis 1).

In the Malaysia study, this same hypothesis was supported because there was minimal variance among participant responding due to age and tenure. While initial results said that there was significant variance amongst means for age and tenure, the ensuing post hoc analyses dispelled all such notions. There was too much overlap among the means of the subpopulations, and thus none of the subscale means were found to be significant for any subpopulation of either age or tenure (Chao, under review).

Lack of variance among means suggests that employees are responding in a way that reflects not how they truly feel, but rather how they think they ought to respond. This can be taken as evidence of that fear to offend superiors and, by logical extension, little consideration for self-improvement or growth-need. Moreover, where growth-need is low, associated behaviors—such as high internal work motivation, high quality performance, and high task-related satisfaction—will be moderate at best (Mohr & Zoghi, 2008). Because of low growth-need, however, kindergarten teachers often fail to see merit in staying in one school for too long and turnover rates amongst kindergarten teachers are noticeably high.

Due to such high rates of turnover amongst kindergarten teachers, it is essential to understand how job characteristics and job satisfaction interact and how they (or which factors) contribute to the prediction of turnover intention. Past studies have rarely considered the relationship of these variables within the kindergartens. This study hopes to inspire further research exploring the relationships among perceived job characteristics, job satisfaction, and turnover intention for kindergarten teachers in Taiwan.

Methods

Participants

Participants in this study were teachers from kindergartens registered in Taiwan's Department of Education. Participation was voluntary and anonymous. There were 569 participants, all female; this is because in Taiwan, traditionally only females are accepted as applicants for the position of kindergarten teacher. The average age of participants was 38 years of age ($M = 38.27$; $SD = 6.32$). Participants were mostly of Chinese descent ($N =$



561) but a few were Malay ($N = 8$). Of the participants, 87% ($N = 495$) were college graduates, while the other 13% ($N=75$) had finished their Master's degrees. The average job tenure was 8.28 years ($SD = 6.41$), and more than half of the participants were licensed teachers (64.32%; $N = 366$).

Most participants (80.32%; $N = 457$) worked in privately owned kindergartens. Most were located in urban or suburban areas (62.04%; $N = 353$). Most participants worked in kindergartens with between 100 and 150 students (54.13%; $N = 308$), followed by kindergartens with between 50 and 100 students (20.04%; $N = 114$), then kindergartens with between 150 and 200 students (14.06%; $N = 80$), and finally kindergartens with less than 50 students (11.76%; $N = 67$). No participants came from kindergartens with more than 200 students. Table 1 gives a summary of the collected demographic information sorted by age and Table 2 gives a summary of demographic information sorted by tenure.

Procedure

Data was collected data from June 2008 to January 2009. Packages of 20 questionnaires were sent to 50 kindergartens randomly selected from the list of registered kindergartens provided by Taiwan's Department of Education. Of the 1000 questionnaires sent, 704 were returned yielding a response rate of 70.4%. However 135 questionnaires were discarded because they were either incomplete or the same response was given for each questionnaire item. This left a total of 569 questionnaires to be used in the final analysis. A copy of the demographic information survey can be found in Appendix B.

Research Measures

Three questionnaires were used to gather the quantitative data for this study: a job characteristics scale, a job satisfaction scale, and a turnover intention scale.

Job Characteristics Scale

This study used the Job Diagnostic Survey (JDS) developed by Hackman and Oldham (1975), which evaluates the five "core" dimensions: skill variety, task identity, task significance, autonomy and feedback. The JDS has 15 items on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree". The five dimension-based subscales have 3 items each. In this study, the scale had a coefficient alpha of .41. A copy of this form can be found in Appendix C.



Job Satisfaction Scale

This study used the briefer version of the Minnesota Satisfaction Questionnaire (MSQ; Weiss, Davis, England, & Lofquist, 1967). This briefer MSQ has 20 items on a 5-point Likert scale (“*strongly agree*” to “*strongly disagree*”) measuring intrinsic satisfaction (11 items), extrinsic satisfaction (9 items), and global satisfaction (all 20 items). In this study, the scale had a coefficient alpha of .89. A copy of this form can be found in Appendix D.

Turnover Intention Scale

This study used a briefer version of the turnover intention scale designed by Meyer et al. (1993). This scale used in this study has 3 items on a 5-point Likert scale (“*strongly agree*” to “*strongly disagree*”). In this study, the scale had a coefficient alpha of .73. A copy of this form can be found in Appendix E.

Statistical Analysis

Because few participants were of a race other than Chinese, race was not considered in statistical analyses. Because the entire population was female, sex was also not considered in statistical analyses. All statistical analyses were conducted using the SPSS version 17 software.

Hypothesis 1

To assess the variance among participant response, the sample was sorted by both age and tenure to create two data pools. Subscale scores of each research variable (i.e., job characteristics, job satisfaction, and turnover intention) within these two data pools were then compared with each other. A one-way analysis of variance of variance (ANOVA) was used to evaluate whether or not the means of these two data pools’ distributions were equal; if equal, then age and tenure have no significant influence on the variables. Yet if the means of the distributions were found to not be equal, then age and tenure do have significant influence on the variables. Because the sample size was different for each sub-population of age and tenure, the Scheffé post hoc criterion for significance was used.

Hypothesis 2



A simple factor analysis of the job satisfaction scale (MSQ) and the job characteristics scale (JDS) was performed to evaluate the number of factors and the loading of each individual subscale item.

Hypothesis 3

To assess the predictive strength of job characteristics and job satisfaction on turnover intention, 2 multiple regressions were plotted.

Regarding the multiple regressions, two stepwise regressions were plotted. The first multiple regression had job characteristics alone in the first step and with job satisfaction in the second step. Conversely, the second multiple regression had job satisfaction alone in the first step and with job characteristics in the second step.

Results

This study sought to investigate age and tenure as two potential influences of participant response variance. This study also sought to evaluate common factors between the job satisfaction and job characteristics scales. Finally, this study sought to investigate the influence of job satisfaction and job characteristics on turnover intention. Descriptive statistics for the research variables and their respective subscales can be found in Table 3.

Hypothesis 1: Response Variance

Age

A one-way between subjects analysis of variance (ANOVA) was conducted to compare the effect of age on the research variables and their respective subscales. Table 4 provides a summary of the ANOVA and further shows that there was a significant effect of age on most of the research variables and their respective subscales at the $p < .05$ level. Only items 4, 9, and 12 on the JDS and item 11 on the MSQ were not significant. When looking at between component variance, however, only one item (3) on the JDS, six items (12, 13, 14, 17, 18, 20) on the MSQ, and one item (1) on the turnover intention scale were significant.

Post hoc analyses were performed using the Scheffé test. Table 5 provides a summary of the Scheffé test results and clearly illustrates that age had minimal influence on participant responding. Only two of the subscale means were found to be significant



for age subpopulations: items 15 and 20 on the MSQ for the second age bracket (26-30 years).

Tenure

A one-way between subjects analysis of variance (ANOVA) was conducted to compare the effect of tenure on the research variables and their respective subscales. Table 6 provides a summary of the ANOVA and further shows that there was a significant effect of tenure on most of the research variables and their respective subscales at the $p < .05$ level. Only items 4, 5, 9, 12, and 14 on the JDS were not significant; all items on the MSQ and the turnover intention scale were significant. When looking at between component variance, however, only one item (3) on the JDS, five items (5, 12, 13, 17, 18) on the MSQ, and one item (1) on the turnover intention scale were significant.

Post hoc analyses were performed using the Scheffé test. Table 7 provides a summary of the Scheffé test results and clearly illustrates that tenure had minimal but evident influence on participant responding. Means of item 3 on the JDS, and items 12, 13, 17, and 18 on the MSQ were significant for the first tenure bracket (1-5 years). Means of items 8 and 13 on the JDS, and item 20 on the MSQ were significant for the second tenure bracket (6-10 years). Means of items 1 through 7, 9, 14, and 19 on the MSQ were significant for the third tenure bracket (11-15 years). Means of items 9, 10, 11 and 15 on the MSQ were significant for the fifth tenure bracket (21+ years). No means were significant for the fourth tenure bracket (15-20 years).

Hypothesis 2: Overlap between Job Satisfaction and Job Characteristics

Factor analysis showed that there were a total of 9 factors. Items on the job satisfaction scale loaded onto 4 different factors, and items on the job characteristics scale loaded onto 5 different factors. The factor analysis component matrix can be found in Table 8.

Most job satisfaction items fell into Factor 1; there were seven items from the intrinsic subscale (items 1, 2, 3, 4, 15, 16, 20) and seven items from the extrinsic subscale (items 5, 6, 8, 13, 14, 18, 19). Of the other 4 intrinsic subscale items, three (items 7, 9, 10) loaded onto Factor 5 and one (item 11) loaded onto Factor 7. The remaining two extrinsic



subscale items (12 & 17) loaded onto Factor 3 with one item from the job characteristics scale.

Regarding the job characteristics scale, only the autonomy (items 4, 9, 14) and feedback (items 5, 10, 15) subscales had all of their items load onto individual factors; all three autonomy items loaded onto Factor 6 and all three feedback items loaded onto Factors 4. Identity had one item (2) load onto Factor 8 and two items (7 & 12) load onto Factor 9. Variety had one item (6) load onto Factor 4 along with the feedback items. The other two variety items (1 & 11) loaded onto Factor 2 with two significance items (8 & 13). The other significance item (3) loaded onto Factor 3 with the two aforementioned job satisfaction items.

Hypothesis 3: Predicting Turnover Intention

Two multiple regressions were calculated to assess prediction of turnover intention. A summary of these regressions can be found in Table 9.

Multiple Regressions

Turnover intention was the dependent variable for all multiple regressions. The first stepwise multiple regression had job characteristics alone in the first step and with job satisfaction in the second step. The first step prediction was both negative and significant, the predictive strength of job characteristics alone: $\beta = -0.12$, $t(569) = -2.80$, $p < 0.01$. The second step prediction of job characteristics was insignificant, $\beta = 0.00$, $t(569) = .01$, $p < 0.99$; job satisfaction, on the other hand, was significant: $\beta = -0.46$, $t(569) = -11.86$, $p < 0.00$. The R^2 was 0.01 for step 1 and 0.21 for step 2 yielding an R^2 change (ΔR^2) of 0.20 ($ps < .05$).

The second stepwise multiple regression had job satisfaction alone in the first step and with job characteristics in the second step. The first step prediction was both negative and significant, the predictive strength of job characteristics alone: $\beta = -0.46$, $t(569) = -11.86$, $p < 0.00$. The second step prediction of job satisfaction didn't change, $\beta = -0.46$, $t(569) = -11.86$, $p < 0.00$; the prediction of job characteristics, however, was insignificant: $\beta = 0.00$, $t(569) = .01$, $p < 0.99$. The R^2 was 0.21 for step 1 and 0.21 for step 2 yielding an R^2 change (ΔR^2) of 0.00 ($ps < .05$).



Discussion

Findings

Influences of Participant Response

The initial results of the ANOVA for age and the ANOVA for tenure said that there was significant variance. Assessment of between component variance and the ensuing Scheffé test results, however, dispelled all such notions. The Scheffé test results showed that there was little variance on questionnaire items targeting the research variables and their respective subscales. If there was a significant influence on participant responding, there would have been more subsets—preferably one for each age or tenure subpopulation—rather than just two or three. There was too much overlap, however, among the subpopulations thus resulting in the small number of subsets.

Specifically, only two items on the MSQ were significant for age: item 15 (“*On my present job, this is how I feel about...The freedom to use my own judgment.*”) and item 20 (“*On my present job, this is how I feel about...The feeling of accomplishment I get from the job.*”). These two items, however, were significant for the second age bracket (26-30 years) which only had an *N* of 3. Consequently, no items on the JDS or turnover intention scale were significant.

For tenure, many items were significant for individual tenure brackets. All MSQ items (except for 8 & 16) were significant for at least one of the tenure brackets. On the JDS, however, only the task significance subscale items were significant for at least one of the tenure brackets. Furthermore, no items on the turnover intention scale were significant. Thus, Hypothesis 1 is supported in part because there was minimal variance among participant responding due to age. There was, however, significant variance among participant responding due to tenure.

Overlapping Factors

In total, job characteristics and job satisfaction have a combined total of 7 subscales. Overlap between the two scales was expected to reduce the number of factors (Hypothesis 2). Factor analysis, however, failed to support this hypothesis. Rather, factor analysis yielded a total of 9 factors: 6 for the job characteristics scale (JDS) and 4 for the job satisfaction scale (MSQ).



Items on the JDS factored mostly according to subscale, with all three autonomy items loading onto one factor, and all three feedback items loading onto another. Task significance almost loaded entirely onto one factor, and the one item that didn't was only 0.05 off. Task identity items also almost loaded entirely onto a single factor, but for a straggler (item 2: *“My job allows me the opportunity to complete the work I start.”*) that was off by 0.29 and loaded onto a factor all by itself. Skill variety items loaded highly on both the significance and feedback factors, but had no factor for itself.

The MSQ items occupied 4 factors, with most items—regardless of subscale—loading onto the same factor. In total, intrinsic satisfaction had 3 factor loadings and extrinsic satisfaction had 2. Regarding the overlap, it shouldn't be surprising that the job satisfaction items loading onto the same factor with job characteristics items were of the extrinsic satisfaction subscale. After all, extrinsic satisfaction depends heavily upon job characteristics. What is surprising, however, is that there was only overlap on one factor and with a total of just three scale items.

The two items from the MSQ were extrinsic satisfaction subscale items 12 (*“On my present job, this is how I feel about...the way company policies are put into practice.”*) and 17 (*“On my present job, this is how I feel about...the working conditions.”*). The item from the JDS was a task significance subscale item (3: *“My job is one that may affect a lot of other people by how well the work is performed.”*). Although these items loaded onto the same factor, face validity fails to show any connection between them.

Predictors of Turnover Intention

In the Malaysia study (Chao, under review), job satisfaction was the strongest predictor of turnover intention with job characteristics in close second. Thus it was anticipated that the findings from this study would yield similar results (Hypothesis 3); and to a degree, they did. As expected, both job characteristics and job satisfaction individually were significant negative predictors of turnover intention. Thus Hypothesis 3a and Hypothesis 3b were supported. When combined, however, the influence of job characteristics was negligible—similar to what had occurred in the Malaysia study (and consequently spurred the factor analysis conducted in this study). Both stepwise regressions clearly illustrated this phenomenon.



In the first stepwise regression, job characteristics alone in the first step were a significant predictor of turnover intention. But in the second step, after adding job satisfaction, its significance plummeted to almost zero. Likewise, in the second stepwise regression, job satisfaction alone in the first step was a significant predictor of turnover intention. And in the second step, when job characteristics were added, nothing changed—it was as if job characteristics hadn't even been added to the equation. Thus the results of this study suggest that job satisfaction is the strongest predictor of turnover intention.

Confounds

There were two potential confounds in this study. First, the questionnaires of this study were not backwards translated. Thus, there may have been some errors in the translation used that may have misled or confused participants. This may have resulted in the lack of variance amongst responses. Second, teachers may have felt strong social pressure to answer in the manner they did. Because the questionnaires were sent to their respective kindergartens, teachers may have felt pressure from their employers to reply to questionnaire items in a socially desirable way.

Limitations

There are several limitations of this study. First, the demographics of this study limit the external reliability of the findings. Specifically, due to the uniqueness of the kindergarten teacher population of Taiwan, demographic variables such as race and education may be endemic phenomena and thus caution should be used when extending this study's findings to other populations. Second, kindergarten teachers in Taiwan may have different working conditions than kindergarten teachers in other countries, and still further, the job specifics of a kindergarten teacher may vary with region, government, and culture. Thus the same caution should be exercised when extending the findings of this study to other occupations. Finally, factors such as years of kindergarten teaching experience and employee benefits were not considered. These two factors are particularly significant because experience may influence tenure while benefits tend to significantly influence job satisfaction.

Implications



Concerning response variance, it shouldn't be surprising that there was little variance among participant response on the JDS for either age or tenure simply because the responsibilities and duties of a kindergarten teacher are rather standard and constant around Taiwan. Regarding job satisfaction and the MSQ, it's logical that age would yield little variance and that tenure would yield greater variance; tenure as opposed to a person's age would influence one's subjective job satisfaction.

In particular, there were six items on the MSQ whose low means were significant for short tenure employees: item 7 (*"On my present job, this is how I feel about...Being able to do things that don't go against my conscience."*), item 9 (*"On my present job, this is how I feel about...The chance to do things for other people."*), item 12 (*"On my present job, this is how I feel about...The way company policies are put into practice."*), item 13 (*"On my present job, this is how I feel about...My pay and the amount of work I do."*), item 17 (*"On my present job, this is how I feel about...The working conditions."*), and item 18 (*"On my present job, this is how I feel about...The way my co-workers get along with each other."*). Kindergarten owners and administrators could think of ways to increase scores on those items and perhaps thereby decrease turnover intention.

Overall, the trend seen in this study, although subtle, is nothing new. Teachers with less tenure tended to express the least satisfaction and teachers with more tenure tended to express the most satisfaction. Whether or not the teachers of longer tenure are reporting honestly or out of fear of losing their jobs (as mentioned in the introduction) is unclear. Regardless, because satisfaction is lowest among the shortest tenures and turnover intentions the highest, kindergarten owners and administrators should focus on ways to increase the satisfaction of newer employees. Regression predictions only emphasize this point further as job satisfaction was the single best predictor of turnover intention—and because the relationship is negative, if job satisfaction is high, turnover intention will be low. Thus it is imperative for kindergarten owners and administrators to discover and devise ways of increasing job satisfaction.

Future Research

From the limitations of this study, much future research could be conducted to further evaluate and understand the influences on turnover intention in Taiwanese kindergartens. First, as mentioned in the introduction, there is a difference between public



and private kindergartens. Additional research could be conducted to see if kindergarten ownership has any influence on participant responses for job satisfaction and turnover intention. Second, because of low variance among participant response in this study (especially on the JDS), perhaps other measures need to be developed or other methods used to more accurately assess the opinions and values of kindergarten teachers in Asia. Further, specific job characteristics influences on job satisfaction—such as salary, pay raises, traditional red envelopes at holidays, year-end bonus, health insurance, retirement fund, no-absenteeism bonus, recruiting bonus—could be evaluated for the importance of each variables' influence on job satisfaction. Finally, the possibility of overlapping items on the job characteristics and job satisfaction scales could be further investigated with a larger and more diverse sample.

Conclusion

In closing, this study helps show the educational culture of Taiwan and the effects of job characteristics and job satisfaction on turnover intention. The results can be summarized as follows: (1) teacher responses showed little variance when sorted by age and tenure; (2) the job characteristics and job satisfaction scales only overlapped on one factor; (3) job characteristics and job satisfaction negatively and significantly predicted turnover intention, but job satisfaction was the most significant predictor. Although the findings of this study should be interpreted with caution by administrators of other kindergartens in other countries or managers of other occupations, kindergarten owners and administrators in Taiwan would do well to find ways to improve job satisfaction and thus decrease turnover intention.



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Appendix A: Tables and Figures

Table 1. Demographic Data Sorted by Age (in years)

Variables	26-30 (N = 3)	31-35 (N = 250)	36-40 (N = 116)	41-45 (N = 80)	46+ (N = 120)
Tenure					
1-5yrs	3	119	48	51	40
6-10yrs	0	46	25	3	26
11-15yrs	0	37	28	5	23
16-20yrs	0	37	11	16	24
>21yrs	0	11	4	5	7
Marital Status					
married	3	139	58	60	57
single	0	109	57	20	62
other	0	2	1	0	1
Education					
Bachelor's	3	219	105	66	102
Master's	0	31	11	14	18
Licensed					
yes	3	158	69	46	90
no	0	92	47	34	30
School Ownership					
public	0	40	22	20	30
private	3	210	94	60	90
School Location					
rural	0	81	56	18	61
urban/suburban	3	169	60	62	59
School Size (# of students)					
<50	0	30	11	10	16
50-100	0	52	24	10	28
101-150	3	129	65	53	58
151-200	0	39	16	7	18



Table 2. Demographic Data Sorted by Tenure

Variables	1-5 yrs (N = 261)	6-10 yrs (N = 100)	11-15 yrs (N = 93)	16-20 yrs (N = 88)	21+ yrs (N = 27)
Age					
26-30	3	0	0	0	0
31-35	119	46	37	37	11
36-40	48	25	28	11	4
41-45	51	3	5	16	5
46<	40	26	23	24	7
Marital Status					
married	218	8	35	56	0
single	43	102	54	32	27
other	0	0	4	0	0
Education					
Bachelor's	238	88	58	84	27
Master's	23	12	35	4	0
Licensed					
yes	130	92	49	84	11
no	131	8	44	4	16
School Ownership					
public	45	11	39	6	11
private	216	89	54	82	16
School Location					
rural	60	20	48	64	24
urban/suburban	201	80	45	24	3
School Size (# of students)					
<50	39	12	12	4	0
50-100	35	8	36	24	11
101-150	170	44	18	60	16
151-200	17	36	27	0	0



Table 3. Descriptive Statistics ($N = 569$)

Descriptive Statistics ($N = 569$)

Research Variables	Min	Max	M	SD
Subscale				
Job Characteristics				
Variety				
item 1	3	4	3.73	0.45
item 6	3	4	3.68	0.47
item 11	3	4	3.68	0.47
Identity				
item 2	3	5	3.61	0.54
item 7	1	5	3.65	0.68
item 12	2	5	3.54	0.62
Significance				
item 3	2	4	3.46	0.89
item 8	3	4	3.45	0.50
item 13	3	4	3.45	0.50
Autonomy				
item 4	1	4	2.75	0.94
item 9	1	4	2.61	0.89
item 14	2	5	3.38	0.67
Feedback				
item 5	3	4	3.94	0.24
item 10	3	4	3.95	0.22
item 15	3	4	3.95	0.23
Job Satisfaction				
Intrinsic				
item 1	3	4	3.24	0.43
item 2	3	4	3.24	0.43
item 3	3	4	3.24	0.43
item 4	3	4	3.31	0.46
item 7	3	4	3.84	0.37
item 9	3	5	3.93	0.32
item 10	4	5	4.02	0.14
item 11	3	5	3.93	0.32
item 15	3	5	3.29	0.50
item 16	3	5	3.61	0.53
item 20	2	5	3.45	0.65
Extrinsic				



item 5	3	4	3.19	0.40
item 6	3	4	3.23	0.42
item 8	3	5	3.36	0.52
item 12	3	4	3.61	0.49
item 13	2	5	3.15	0.85
item 14	2	4	3.11	0.76
item 17	3	4	3.52	0.50
item 18	3	4	3.32	0.47
item 19	3	4	3.24	0.43
Turnover Intention				
item 1	2	4	3.19	0.81
item 2	2	5	3.34	0.60
item 3	2	5	3.35	0.61



Table 4. Analysis of Variance for Age ($N = 569$)

Analysis of Variance for Age						
Research Variable						Component
Subscale	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i>	<i>p</i>	Variance
Job Characteristics						
Variety						
item 1	3.73	0.45	4.00	22.10	0.00**	0.04
item 6	3.68	0.47	4.00	20.96	0.00**	0.04
item 11	3.68	0.47	4.00	28.83	0.00**	0.05
Identity						
item 2	3.61	0.54	4.00	27.20	0.00**	0.06
item 7	3.65	0.68	4.00	4.34	0.00**	0.02
item 12	3.54	0.62	4.00	0.13	0.97	0.00
Significance						
item 3	3.46	0.89	4.00	42.43	0.00**	0.25
item 8	3.45	0.50	4.00	34.25	0.00**	0.07
item 13	3.45	0.50	4.00	33.75	0.00**	0.07
Autonomy						
item 4	2.75	0.94	4.00	0.87	0.48	0.00
item 9	2.61	0.89	4.00	1.63	0.17	0.01
item 14	3.38	0.67	4.00	3.61	0.01**	0.01
Feedback						
item 5	3.94	0.24	4.00	2.40	0.05*	0.00
item 10	3.95	0.22	4.00	6.92	0.00**	0.00
item 15	3.95	0.23	4.00	2.84	0.02*	0.00
Job Satisfaction						
Intrinsic						
item 1	3.24	0.43	4.00	37.86	0.00**	0.05
item 2	3.24	0.43	4.00	36.95	0.00**	0.05
item 3	3.24	0.43	4.00	36.95	0.00**	0.05
item 4	3.31	0.46	4.00	34.60	0.00**	0.06
item 7	3.84	0.37	4.00	26.75	0.00**	0.03
item 9	3.93	0.32	4.00	19.18	0.00**	0.02
item 10	4.02	0.14	4.00	11.23	0.00**	0.00
item 11	3.93	0.32	4.00	1.14	0.34	0.00
item 15	3.29	0.50	4.00	4.71	0.00**	0.01
item 16	3.61	0.53	4.00	21.38	0.00**	0.05
item 20	3.45	0.65	4.00	47.45	0.00**	0.15
Extrinsic						
item 5	3.19	0.40	4.00	74.12	0.00**	0.08



item 6	3.23	0.42	4.00	36.04	0.00**	0.05
item 8	3.36	0.52	4.00	17.49	0.00**	0.04
item 12	3.61	0.49	4.00	70.73	0.00**	0.11
item 13	3.15	0.85	4.00	62.73	0.00**	0.31
item 14	3.11	0.76	4.00	22.84	0.00**	0.11
item 17	3.52	0.50	4.00	89.14	0.00**	0.14
item 18	3.32	0.47	4.00	83.71	0.00**	0.11
item 19	3.24	0.43	4.00	37.86	0.00**	0.05
Turnover Intention						
item 1	3.19	0.81	4.00	49.49	0.00**	0.24
item 2	3.34	0.60	4.00	6.25	0.00**	0.02
item 3	3.35	0.61	4.00	30.50	0.00**	0.09

Note. *p < .05. **p < .01.



Table 5. Scheffé Post Hoc Tests for Analysis of Variance for Age ($N = 569$)

Scheffé Post Hoc Tests for Analysis of Variance for Age (in years)											
Research Variable Subscale	[2] 26-30 ($N = 3$)		[3] 31-35 ($N = 250$)		[4] 36-40 ($N = 116$)		[5] 41-45 ($N = 80$)		[6] 46+ ($N = 120$)		Scheffé
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Job Characteristics											
Variety											
item 1	3.33	0.58	3.78	0.42	3.91	0.29	3.78	0.42	3.43	0.50	[2,6,5,3][6,5,3,4]
item 6	3.00	0.00	3.72	0.45	3.88	0.33	3.71	0.46	3.40	0.49	[2,6][6,5,3,4]
item 11	3.33	0.58	3.74	0.44	3.88	0.33	3.78	0.42	3.33	0.47	[2,6,3,5][3,5,4]
Identity											
item 2	3.67	0.58	3.77	0.52	3.25	0.44	3.43	0.50	3.74	0.48	[4,5,2,6,3]
item 7	4.33	0.58	3.55	0.72	3.63	0.63	3.86	0.63	3.70	0.63	[3,4,6,5,2]
item 12	3.67	0.58	3.56	0.64	3.52	0.57	3.56	0.65	3.53	0.61	[4,6,3,5,2]
Significance											
item 3	4.00	0.00	2.99	1.00	3.93	0.37	3.58	0.82	3.88	0.47	[3,5,6][5,6,4,2]
item 8	3.33	0.58	3.30	0.46	3.87	0.34	3.46	0.50	3.36	0.48	[3,2,6,5][6,5,4]
item 13	3.33	0.58	3.30	0.46	3.87	0.34	3.46	0.50	3.36	0.48	[3,2,6,5][6,5,4]
Autonomy											
item 4	2.67	0.58	2.69	0.91	2.81	0.94	2.89	1.01	2.70	0.98	[2,3,6,4,5]
item 9	2.33	0.58	2.63	0.86	2.53	0.86	2.81	0.94	2.53	0.93	[2,4,6,3,5]
item 14	3.00	1.00	3.47	0.59	3.32	0.64	3.45	0.65	3.22	0.82	[2,6,4,5,3]
Feedback											
item 5	4.00	0.00	3.96	0.20	3.88	0.33	3.94	0.24	3.95	0.22	[4,5,6,3,2]
item 10	4.00	0.00	3.98	0.15	3.85	0.36	3.95	0.22	3.98	0.16	[4,5,6,3,2]
item 15	4.00	0.00	3.94	0.25	3.91	0.29	3.95	0.22	4.00	0.00	[4,3,5,2,6]
Job Satisfaction											
Intrinsic											
item 1	4.00	0.00	3.08	0.28	3.17	0.38	3.63	0.49	3.37	0.48	[3,4,6][6,5][5,2]
item 2	4.00	0.00	3.09	0.28	3.17	0.38	3.63	0.49	3.37	0.48	[3,4,6][4,6,5][5,2]
item 3	4.00	0.00	3.09	0.28	3.17	0.38	3.63	0.49	3.37	0.48	[3,4,6][4,6,5][5,2]
item 4	4.00	0.00	3.13	0.34	3.34	0.47	3.73	0.45	3.37	0.48	[3,4,6][4,6,5][5,2]
item 7	4.00	0.00	3.96	0.19	3.70	0.46	3.58	0.50	3.89	0.31	[5,4,6,3][4,6,3,2]
item 9	4.00	0.00	4.00	0.00	3.92	0.27	3.68	0.47	3.98	0.45	[5,4,6,2,3]
item 10	4.00	0.00	4.00	0.00	4.00	0.00	4.00	0.00	4.09	0.29	[2,3,4,5,6]
item 11	4.00	0.00	3.92	0.28	3.94	0.24	4.00	0.00	3.93	0.51	[3,6,4,2,5]
item 15	4.00	0.00	3.21	0.41	3.32	0.47	3.40	0.49	3.35	0.64	[3,4,6,5][2]
item 16	4.00	0.00	3.70	0.46	3.34	0.47	3.91	0.28	3.47	0.66	[4,6,3,5][6,3,5,2]
item 20	5.00	0.00	3.24	0.43	4.00	0.26	3.16	0.86	3.53	0.77	[5,3,6][6,4][2]
Extrinsic											
item 5	4.00	0.00	3.00	0.00	3.11	0.32	3.63	0.49	3.37	0.48	[3,4,6][6,5][5,2]
item 6	3.00	0.00	3.08	0.28	3.14	0.35	3.61	0.49	3.37	0.48	[2,3,4,6][6,5]
item 8	3.00	0.00	3.21	0.41	3.36	0.48	3.71	0.46	3.46	0.66	[2,3,4,6][3,4,6,5]
item 12	4.00	0.00	3.30	0.46	3.78	0.42	3.71	0.46	3.99	0.09	[3,5,4][5,4,6,2]
item 13	4.00	0.00	2.63	0.80	3.74	0.44	3.44	0.79	3.45	0.67	[3,5,6][5,6,4,2]
item 14	3.00	0.00	3.02	0.64	3.33	0.54	3.63	0.64	2.74	0.97	[6,2,3,4][2,3,4,5]
item 17	4.00	0.00	3.22	0.42	3.72	0.45	3.43	0.50	3.99	0.09	[3,5][5,4][4,6,2]
item 18	4.00	0.00	3.02	0.15	3.68	0.47	3.63	0.49	3.37	0.48	[3,6][6,5,4][5,4,2]
item 19	4.00	0.00	3.08	0.28	3.17	0.38	3.63	0.49	3.37	0.48	[3,4,6][6,5][5,2]



Turnover Intention

item 1	2.00	0.00	3.56	0.57	3.23	0.93	2.39	0.79	2.94	0.64	[2,5][5,6][6,4,3]
item 2	3.33	0.58	3.46	0.55	3.35	0.64	3.19	0.68	3.18	0.55	[6,5,2,4,3]
item 3	3.33	0.58	3.50	0.51	3.51	0.57	3.39	0.70	2.87	0.50	[6,2,5,3,4]

Note. Results of the Scheffé test are represented by subsets for $\alpha = 0.05$. Each subset is enclosed in brackets. The numbers in brackets are the age ranges as they appear on the demographic survey. Multiple age ranges in one subset bracket indicates that the means of those ages were not statistically significant at $p < 0.05$.



Table 6. Analysis of Variance for Tenure ($N = 569$)

Analysis of Variance for Tenure						
Research Variable						Component
Subscale	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i>	<i>p</i>	Variance
Job Characteristics						
Variety						
item 1	3.73	0.45	4.00	19.38	0.00**	0.03
item 6	3.68	0.47	4.00	19.40	0.00**	0.04
item 11	3.68	0.47	4.00	21.19	0.00**	0.04
Identity						
item 2	3.61	0.54	4.00	19.03	0.00**	0.05
item 7	3.65	0.68	4.00	2.66	0.03*	0.01
item 12	3.54	0.62	4.00	0.86	0.49	0.00
Significance						
item 3	3.46	0.89	4.00	38.73	0.00**	0.24
item 8	3.45	0.50	4.00	32.42	0.00**	0.06
item 13	3.45	0.50	4.00	31.96	0.00**	0.06
Autonomy						
item 4	2.75	0.94	4.00	1.12	0.35	0.00
item 9	2.61	0.89	4.00	1.06	0.38	0.00
item 14	3.38	0.67	4.00	1.98	0.10	0.00
Feedback						
item 5	3.94	0.24	4.00	1.28	0.28	0.00
item 10	3.95	0.22	4.00	4.95	0.00**	0.00
item 15	3.95	0.23	4.00	2.48	0.04*	0.00
Job Satisfaction						
Intrinsic						
item 1	3.24	0.43	4.00	55.36	0.00**	0.07
item 2	3.24	0.43	4.00	54.29	0.00**	0.07
item 3	3.24	0.43	4.00	54.29	0.00**	0.07
item 4	3.31	0.46	4.00	36.99	0.00**	0.06
item 7	3.84	0.37	4.00	19.78	0.00**	0.02
item 9	3.93	0.32	4.00	59.69	0.00**	0.04
item 10	4.02	0.14	4.00	92.34	0.00**	0.01
item 11	3.93	0.32	4.00	28.89	0.00**	0.02
item 15	3.29	0.50	4.00	12.08	0.00**	0.03
item 16	3.61	0.53	4.00	38.53	0.00**	0.08
item 20	3.45	0.65	4.00	20.62	0.00**	0.07
Extrinsic						
item 5	3.19	0.40	4.00	108.91	0.00**	0.10



item 6	3.23	0.42	4.00	40.54	0.00**	0.05
item 8	3.36	0.52	4.00	20.11	0.00**	0.05
item 12	3.61	0.49	4.00	87.90	0.00**	0.13
item 13	3.15	0.85	4.00	70.58	0.00**	0.34
item 14	3.11	0.76	4.00	18.80	0.00**	0.09
item 17	3.52	0.50	4.00	116.79	0.00**	0.16
item 18	3.32	0.47	4.00	156.32	0.00**	0.16
item 19	3.24	0.43	4.00	55.36	0.00**	0.07
Turnover Intention						
item 1	3.19	0.81	4.00	61.09	0.00**	0.28
item 2	3.34	0.60	4.00	8.20	0.00**	0.03
item 3	3.35	0.61	4.00	24.41	0.00**	0.07

Note. *p < .05. **p < .01.



Table 7. Scheffé Post Hoc Tests for Analysis of Variance for Tenure ($N = 569$)

Scheffé Post Hoc Tests for Analysis of Variance for Tenure

Research Variable Subscale	[1] 1-5 yrs. ($N = 261$)		[2] 6-10 yrs. ($N = 100$)		[3] 11-15 yrs. ($N = 93$)		[4] 15-20 yrs. ($N = 88$)		[5] 21+ yrs. ($N = 27$)		Scheffé	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Job Characteristics												
Variety												
item 1	3.77	0.42	3.94	0.24	3.73	0.45	3.45	0.50	3.44	0.51	[5,4][3,1,2]	
item 6	3.71	0.46	3.93	0.26	3.68	0.47	3.41	0.49	3.41	0.50	[5,4][3,1][1,2]	
item 11	3.74	0.44	3.89	0.31	3.70	0.46	3.39	0.49	3.33	0.48	[5,4][3,1,2]	
Identity												
item 2	3.75	0.53	3.27	0.45	3.47	0.50	3.68	0.49	3.78	0.51	[2,3][3,4][4,1,5]	
item 7	3.57	0.71	3.60	0.65	3.82	0.66	3.70	0.65	3.74	0.45	[1,2,4,5,3]	
item 12	3.53	0.64	3.63	0.56	3.47	0.62	3.57	0.62	3.52	0.64	[3,5,1,4,2]	
Significance												
item 3	3.03	1.00	3.92	0.39	3.57	0.83	4.00	0.00	3.70	0.72	[1][3,5,2][5,2,4]	
item 8	3.31	0.46	3.90	0.30	3.43	0.50	3.43	0.50	3.30	0.47	[5,1,3,4][2]	
item 13	3.31	0.46	3.90	0.30	3.43	0.50	3.43	0.50	3.30	0.47	[5,1,3,4][2]	
Autonomy												
item 4	2.72	0.93	2.76	0.90	2.91	0.99	2.65	0.95	2.63	1.04	[5,4,1,2,3]	
item 9	2.64	0.87	2.50	0.82	2.73	0.91	2.53	0.93	2.59	1.05	[2,4,5,1,3]	
item 14	3.46	0.62	3.34	0.57	3.35	0.73	3.24	0.80	3.33	0.78	[4,5,2,3,1]	
Feedback												
item 5	3.95	0.22	3.89	0.31	3.95	0.23	3.94	0.23	3.96	0.19	[2,4,3,1,5]	
item 10	3.97	0.18	3.86	0.35	3.96	0.20	3.97	0.18	4.00	0.00	[2,3,1,4][3,1,4,5]	
item 15	3.93	0.26	3.92	0.27	3.96	0.20	4.00	0.00	4.00	0.00	[2,1,3,4,5]	
Job Satisfaction												
Intrinsic												
item 1	3.11	0.31	3.08	0.27	3.72	0.45	3.27	0.45	3.41	0.50	[2,1][1,4][4,5][3]	
item 2	3.11	0.32	3.08	0.27	3.72	0.45	3.27	0.45	3.41	0.50	[2,1,4][4,5][3]	
item 3	3.11	0.32	3.08	0.27	3.72	0.45	3.27	0.45	3.41	0.50	[2,1,4][4,5][3]	
item 4	3.18	0.38	3.20	0.40	3.76	0.43	3.32	0.47	3.41	0.50	[1,2,4][2,4,5][3]	
item 7	3.91	0.28	3.80	0.40	3.57	0.50	3.91	0.29	4.00	0.00	[3][2,4,1][4,1,5]	
item 9	4.00	0.00	3.92	0.27	3.61	0.49	3.95	0.21	4.41	0.50	[3][2,4,1][5]	
item 10	4.00	0.00	4.00	0.00	4.00	0.00	4.00	0.00	4.41	0.50	[1,2,3,4][5]	
item 11	3.89	0.31	4.00	0.00	4.00	0.00	3.77	0.42	4.41	0.50	[4,1][1,2,3][5]	
item 15	3.28	0.45	3.12	0.33	3.38	0.49	3.27	0.45	3.81	1.00	[2,4,1][4,1,3][5]	
item 16	3.72	0.45	3.20	0.40	3.89	0.31	3.36	0.48	3.81	1.00	[2,4][1,5,3]	
item 20	3.28	0.45	3.92	0.27	3.35	0.95	3.55	0.84	3.41	0.50	[1,3,5,4][2]	
Extrinsic												
item 5	3.00	0.00	3.08	0.27	3.72	0.45	3.27	0.45	3.41	0.50	[1,2][4,5][3]	
item 6	3.11	0.31	3.08	0.27	3.63	0.48	3.27	0.45	3.41	0.50	[2,1,4][4,5][3]	
item 8	3.28	0.45	3.20	0.40	3.68	0.47	3.32	0.47	3.81	1.00	[2,1,4][3,5]	
item 12	3.28	0.45	3.88	0.33	3.83	0.38	3.91	0.29	4.00	0.00	[1][3,2,4,5]	
item 13	2.65	0.79	3.80	0.40	3.59	0.71	3.23	0.52	3.81	1.00	[1][4,3][3,2,5]	
item 14	3.11	0.67	3.12	0.52	3.57	0.68	2.68	0.93	2.81	1.00	[4,5][5,1,2][3]	
item 17	3.17	0.38	3.88	0.33	3.58	0.50	3.91	0.29	4.00	0.00	[1][3][2,4,5]	
item 18	3.00	0.00	3.80	0.40	3.72	0.45	3.27	0.45	3.41	0.50	[1][4,5][3,2]	
item 19	3.11	0.31	3.08	0.27	3.72	0.45	3.27	0.45	3.41	0.50	[2,1][1,4][4,5][3]	



Turnover Intention

item 1	3.46	0.65	3.52	0.81	2.30	0.69	3.14	0.63	2.59	0.50	[3,5][4,1][1,2]
item 2	3.39	0.58	3.56	0.56	3.15	0.68	3.18	0.58	3.26	0.45	[3,4,5,1][5,1,2]
item 3	3.46	0.51	3.64	0.56	3.22	0.78	2.99	0.42	2.89	0.58	[5,4][4,3][3,1][1,2]

Note. Results of the Scheffé test are represented by subsets for $\alpha = 0.05$. Each subset is enclosed in brackets. The numbers in brackets are the tenure ranges as they appear on the demographic survey. Multiple tenure ranges in one subset bracket indicates that the means of those tenures were not statistically significant at $p < 0.05$.



Table 8. Factor Analysis Component Matrix for Job Characteristics and Job Satisfaction

Factor Analysis Component Matrix for Job Characteristics and Job Satisfaction									
Research Variable	Component								
Subscale	1	2	3	4	5	6	7	8	9
Job Characteristics									
Variety									
item 1	0.17	(0.56)	-0.47	0.50	0.12	0.07	0.14	0.17	0.00
item 6	0.14	0.48	-0.38	(0.56)	0.09	0.11	0.14	0.22	-0.06
item 11	0.15	(0.51)	-0.47	0.44	0.08	0.09	0.05	0.15	0.01
Identity									
item 2	-0.41	-0.67	0.05	-0.01	-0.09	-0.10	-0.02	(0.20)	-0.09
item 7	0.07	-0.02	0.06	-0.21	-0.16	0.06	0.25	0.13	(0.72)
item 12	-0.08	-0.01	0.13	-0.01	-0.12	-0.24	0.28	0.14	(0.71)
Significance									
item 3	0.36	0.46	(0.51)	-0.39	0.04	-0.03	-0.20	-0.25	0.10
item 8	0.39	(0.85)	0.00	0.09	0.09	0.01	-0.06	-0.10	0.09
item 13	0.39	(0.85)	0.00	0.09	0.08	0.01	-0.06	-0.09	0.08
Autonomy									
item 4	0.21	0.02	-0.19	-0.34	0.01	(0.70)	-0.27	0.11	0.04
item 9	0.11	-0.07	-0.16	-0.32	0.02	(0.72)	-0.26	0.13	0.02
item 14	0.02	0.02	-0.28	-0.18	0.09	(0.62)	-0.12	0.17	0.19
Feedback									
item 5	0.04	-0.35	0.34	(0.57)	0.24	0.30	-0.03	-0.35	0.13
item 10	-0.01	-0.43	0.36	(0.54)	0.21	0.26	-0.03	-0.32	0.14
item 15	0.04	-0.27	0.47	(0.47)	0.24	0.26	-0.02	-0.32	0.13
Job Satisfaction									
Intrinsic									
item 1	(0.92)	-0.26	0.12	0.13	-0.06	-0.04	-0.07	0.18	-0.01
item 2	(0.91)	-0.26	0.11	0.13	-0.06	-0.05	-0.07	0.20	-0.01
item 3	(0.91)	-0.26	0.11	0.13	-0.06	-0.05	-0.07	0.20	-0.01
item 4	(0.77)	-0.13	-0.32	-0.25	-0.07	0.02	0.13	-0.32	-0.01
item 7	-0.47	-0.13	0.33	0.18	(0.49)	-0.09	-0.26	0.38	0.07
item 9	-0.37	-0.04	-0.10	-0.20	(0.80)	-0.23	-0.22	0.15	0.09
item 10	0.29	-0.21	-0.09	-0.23	(0.75)	-0.06	0.34	0.10	-0.06
item 11	-0.26	-0.02	-0.16	-0.24	0.33	0.24	(0.77)	-0.10	-0.12
item 15	(0.61)	-0.11	-0.34	-0.23	0.47	-0.26	-0.30	-0.12	0.11
item 16	(0.30)	-0.53	-0.69	-0.01	0.05	0.03	0.26	-0.11	0.00
item 20	(0.56)	0.27	0.00	-0.15	-0.02	-0.12	-0.12	-0.28	-0.01
Extrinsic									



item 5	(0.84)	-0.33	0.10	-0.02	-0.09	0.11	0.27	0.09	-0.09
item 6	(0.89)	-0.25	0.09	0.15	-0.07	-0.05	-0.08	0.19	0.00
item 8	(0.85)	-0.13	-0.31	-0.15	0.15	-0.12	-0.06	-0.18	0.05
item 12	0.44	0.24	(0.80)	-0.07	0.08	0.04	0.04	0.22	-0.08
item 13	(0.79)	0.29	0.33	-0.13	0.24	-0.04	0.02	-0.04	-0.01
item 14	(0.75)	-0.10	-0.54	0.08	-0.06	-0.11	-0.09	-0.15	0.08
item 17	0.19	0.27	(0.78)	-0.23	0.03	0.15	0.31	0.03	-0.17
item 18	(0.69)	0.13	0.26	0.01	0.03	0.12	0.35	0.13	-0.09
item 19	(0.92)	-0.26	0.12	0.13	-0.06	-0.04	-0.07	0.18	-0.01

Note. Values in parentheses represent factor loadings.



Table 9. Summary of Regression Analyses for Predicting Turnover Intention

Summary of Regression Analyses for Predicting Turnover Intention

Dependent Variable				
Independent Variable(s)	<i>B</i>	<i>SE B</i>	β	
First Multiple Regression (MR1)				
Step 1				
Job Characteristics	-0.07	0.02	-0.12*	
Step 2				
Job Characteristics	0.00	0.02	0.00	
Job Satisfaction	-0.13	0.01	-0.46*	
Second Multiple Regression (MR2)				
Step 1				
Job Satisfaction	-0.13	0.01	-0.46*	
Step 2				
Job Satisfaction	-0.13	0.01	-0.46*	
Job Characteristics	0.00	0.02	0.00	

Note. $R^2 = .01$ for MR1 Step 1; $\Delta R^2 = .20$ for MR1 Step 2 ($ps < .05$).

$R^2 = .21$ for MR2 Step 1; $\Delta R^2 = .00$ for MR2 Step 2 ($ps < .05$).

* $p < .05$.



Appendix B: Demographic Survey

Demographic Questions

- 1. Sex** (1) F (2) M
- 2. tenure**
 (1) 1-5 (2) 6-10 (3) 11-15 (4) 16-20 (5) 21 or older
- 3. age group**
 (1) 25 below (2) 26-30 (3) 31-35 (4) 36-40 (5) 41-45 (6) 46 above
4. Marital status
 (1) Married (2) single
- 5. What is your high level of education?**
 (1) Did not complete High School
 (2) High school degree/equivalent
 (3) Some college, no degree
 (4) Associate's/2-year degree
 (5) Bachelor's degree
 (6) Some master's credits, no degree
 (7) Master's degree or above
- 6. Have you license of teacher**
 (1) Yes (2) No
7. What is your race (nationality)
Race: (1) Malay (2) Chinese (3) Indian (4)others
8. School characteristics
 (1) Private (2) public
9. size (student enrollment of school)
 (1) Less than 50 (2) 51-100 (3) 101-150 (4) 151-200 (5) more than 200
10. location: (1) rural (2) suburban or urban



Appendix C: Job Characteristics Questionnaire

Job Diagnostic Survey

1. My job provides a lot of variety.
2. My job allows me the opportunity to complete the work I start.
3. My job is one that may affect a lot of other people by how well the work is performed.
4. My job lets me be left on my own to do my own work.
5. My job by itself provides feedback on how well I am performing as I am working.
6. While performing my job I get the opportunity to work on many interesting projects.
7. My job is arranged so that I have a chance and the ability to talk with customers/clients/end users.
8. My job has the ability to influence decisions that significantly affect the organization.
9. My job provides me the opportunity of self-directed flexibility of work hours.
10. My job provides me with the opportunity to both communicate with my supervisor and to receive recognition from them as well.
11. My job gives me the opportunity to use many new technologies.
12. My job is arranged so that I have an understanding of how it relates to the business mission.
13. My job influences day-to-day company success.
14. I am able to act independently of my supervisor in performing my job function.
15. I receive feedback from my co-workers about my performance on the job.

Scoring for the JDS:

The survey is designed to analyze five dimensions of the job:

Skill Variety - Total the scores for questions 1, 6, 11: _____

Task Identity - Total the scores for questions 2, 7, 12: _____

Task Significant - Total the scores for questions 3, 8, 13: _____

Autonomy - Total the scores for questions 4, 9, 14: _____

Feedback About Results - Total the scores for questions 5, 10, 15: _____



Appendix D: Job Satisfaction Questionnaire
Minnesota Satisfaction Questionnaire

On my present job, this is how I feel about...

1. Being able to keep busy all the time.
2. The chance to work alone on the job.
3. The chance to do different things from time to time
4. The chance to be “somebody” in the community.
5. The way my boss handles his/her workers.
6. The competence of my supervisor in making decisions.
7. Being able to do things that don't go against my conscience.
8. The way my job provides for steady employment.
9. The chance to do things for other people.
10. The chance to tell people what to do.
11. The chance to do something that makes use of my abilities.
12. The way company policies are put into practice.
13. My pay and the amount of work I do.
14. The chances for advancement on this job.
15. The freedom to use my own judgment.
16. The chance to try my own methods of doing the job.
17. The working conditions.
18. The way my co-workers get along with each other.
19. The praise I get for doing a good job.
20. The feeling of accomplishment I get from the job.

Scoring for the MSQ:

The survey is designed to analyze five dimensions of the job:

Intrinsic Satisfaction - Total of scores for questions 1~4, 7, 9~11, 15, 16, 20: _____

Extrinsic Satisfaction - Total of scores for questions 5, 6, 8, 12~14, 17~19: _____

Global Satisfaction – Total of all scores: _____



Appendix E: Turnover Intention Questionnaire

1. Over the past few months, I have seriously thought about looking for a new job.
2. Presently, I'm actively searching for another job.
3. I intend to leave this kindergarten in the near future.



幼稚園教師工作特徵、工作滿意度與離職意圖之關係

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摘要

幼稚園教師離職對教學品質和續讀率有極大的影響。本研究探討工作特徵、工作滿足對離職傾向之關係，並以線性迴歸和複迴歸進行探討。研究結果發現：1.幼稚園教師之年齡與年資對離職傾向並無顯著之影響；2.幼稚園教師之工作特徵與工作滿意量表對離職傾向相互重疊；3.幼稚園教師之工作特徵、工作滿意負向且顯著預測離職傾向，尤以工作滿意是最顯著之影響。

關鍵詞：工作特徵、工作滿意度、離職意圖、幼稚園教師、台灣

