

## **School Socioeconomic Context and Teacher Job Satisfaction in Japanese Compulsory Education**

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*Sociologists in education have pointed out disparities associated with socioeconomic status (SES) in the Japanese compulsory education system that was once regarded as egalitarian. In addition to disparities between individual students, prior studies have empirically shown SES-based disparities among schools on important indicators such as academic performance. This study extends the literature on the disparities among schools in compulsory education by focusing on one critical but inadequately explored factor: teachers.*

*Using nationally representative data of junior high school teachers from the Teaching and Learning International Survey administered in 2013 (TALIS 2013), this study investigates whether teacher job satisfaction, which is known to be related to turnover, varies among schools, and whether teacher self-efficacy, a major factor influencing job satisfaction, differently shapes job satisfaction among schools. In addition, the study assesses whether school-level SES explains the disparities among schools in teacher job satisfaction and in the effect of self-efficacy on job satisfaction.*

*Results using multilevel mediation modeling show that disparities in these two factors are indeed affected by SES. Specifically, school SES influences teacher job satisfaction through the frequency of students' behavioral issues: teachers at higher-SES schools tend to face fewer student behavior problems, resulting in higher job satisfaction. Similarly, among teachers with the same level of self-efficacy, those at higher-SES schools have higher job satisfaction. These empirical findings indicate that teacher job satisfaction depends on the socioeconomic context in which teachers are embedded; the context influences teacher job satisfaction partly through students' behavioral issues and the differing effects of teachers' self-efficacy. Since the lower job satisfaction of teachers in lower-SES schools may lead to higher turnover rates, this situation calls for policy intervention to help teachers who face greater difficulties in the schools with less affluent students within Japan's "egalitarian" compulsory education system.*

**Keywords:** teacher job satisfaction; teacher self-efficacy; multilevel mediation modeling; socioeconomic inequalities; TALIS

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## Introduction

Japanese compulsory education was once praised as “egalitarian” for providing relatively equal learning opportunities to all students (Cummings, 1980; Tsuneyoshi, 2008), when compared to, for example, the United States with its severe educational disparities among school districts. While the disparities in U.S. educational quality greatly derive from inequities in school finance, mainly because of schools’ heavy dependence on local property taxes (e.g., Kariya, 2008; Kozol, 2005), Japanese compulsory education has been observed to offer an equal starting point for everyone, thanks largely to a progressive distribution of educational resources by the central government (Kariya, 2009, 2010). However, sociologists in education have reported educational inequities in Japan during the past decades. Notably, students’ socioeconomic status (SES) is related to their academic performance, motivation to study, study habits (e.g., Kariya, 2013), and actual educational attainment (e.g., Yamamoto & Brinton, 2010). In addition, disparities among schools have become increasingly apparent not only between school sectors (e.g., Fujita, 2010; Kataoka, 2009) but also within public schools (e.g., Matsuoka, 2014a, 2014b; Shimizu, 2009). This study extends the literature on the disparities among schools in Japanese “egalitarian” compulsory education by focusing on one critical but relatively unexplored factor in schools: teachers.

According to the Ministry of Education, Culture, Sports, Science and Technology (MEXT) (2013), in recent years, the number of teachers on sick leave because of mental health issues are large (5,274 teachers nationwide in 2011). This may be partly because teachers are facing new strains, such as the evaluation program introduced under recent quasi-market-based educational reforms, as discussed by Yufu (2010). Although previous studies have addressed school-level differences in teachers’ culture (e.g., Kudomi, 1994, 2003) and identity (Kudomi, 2008; Yamada & Hasegawa, 2010), no study has assessed school-level differences in job satisfaction in Japan. Because (a) the substantial number of teachers taking sick leave is a critical problem, (b) teacher job dissatisfaction is related to decisions to leave the profession (Ingersoll, 2001), and (c) the literature (e.g., Shen, Leslie, Spybrook, & Ma, 2012) shows the existence of disparities among schools in other developed countries with regard to teacher job satisfaction, this study investigates whether disparities in teacher job satisfaction are present among Japanese schools. Moreover, in an attempt to understand the root of the disparities, it assesses whether teacher job satisfaction varies depending on the school socioeconomic context in which teachers are embedded using a nationally representative sample of junior high school teachers in Japan.

## 1. Literature review

### 1.1. Disparities among schools in Japan

Disparities between school sectors (i.e., between conventional public schools and their private counterparts) have recently been documented in Japanese compulsory education. For example, students from advantaged families select non-neighboring public schools (e.g., private and national schools, and schools with an attached high school) in areas around Tokyo; this is called the “rich flight” phenomenon (Fujita, 2010). Moreover, higher-SES families tend to enroll their children in private elementary and lower secondary schools (e.g., Kataoka, 2009). Students who attend private schools located in urban areas demonstrate higher academic ability, even

when controlling for SES, according to Taki (2012), who used a nationally representative sample of eighth-graders from the Trends in International Mathematics and Science Study (TIMSS) 2003. Another study analyzing TIMSS 2007 found that eighth-graders in private schools were less likely to engage in non-academic behavior (i.e., watching television for more than four hours per school day) (Matsuoka, 2013).

Beyond the achievement and behavioral gaps between the school sectors, studies using regional data (e.g., Kawaguchi, 2009) have demonstrated achievement gaps among schools, and specific characteristics of effective schools have been identified in Japan (e.g., Shimizu, 2009). Recent studies on educational inequalities using TIMSS also found that school SES indicators were significantly related to fourth-graders' math performance (Matsuoka, 2014a); those at higher-SES schools performed better in math. In addition, higher school SES was also associated with higher teacher expectations for student achievement in fourth and eighth grades (Matsuoka, 2014a) and with greater parent involvement in school activities at the eighth grade level (Matsuoka, 2014b).

## 1.2. Studies on teachers and their job satisfaction

Teacher job satisfaction has been empirically studied in developed countries such as those in North America.<sup>1</sup> In findings relevant to the present study, teacher job dissatisfaction has been linked to turnover (e.g., Ingersoll, 2001), and has been found to vary according to teacher self-efficacy (e.g., Klassen & Chiu, 2010). In addition, there are differences among schools in teacher job satisfaction, and some school-level factors (e.g., positive student behaviors) relate to job satisfaction (Shen et al., 2012).

In Japan, numerous studies regarding teachers have been performed, as described by review studies in education (Takaira, 2007; Yufu, 2009) and in sociology of education (Mimizuka, Yufu, & Sakai, 1988; Ochi & Kurebayashi, 2010); a wide range of teacher-related issues has been assessed with various methodologies. Teachers' satisfaction with their profession and work environments has also been studied since the 1960s,<sup>2</sup> as reviewed by Mizumizuka, Yufu, and Sakai (1988). More recently, Yamada (2011) reported that approximately 80% of teachers are satisfied overall with their job, based on large-scale teacher surveys conducted in 2007 and 2010; teachers with less than five years of experience tend to be more satisfied. With some exceptions (e.g., Yamada, 2011), studies on job satisfaction were mainly performed by psychological researchers such as Honma (2006), who assessed the relation between teacher job satisfaction and factors like work environment. However, these studies were conducted with single-level modeling and did not consider disparities among schools or the effect of school SES on teacher satisfaction.

## 2. Research questions and hypotheses

In the era of quasi-market-based third wave-educational reforms that emerged in the 1980s (e.g., Fujita 2010), it is critical to empirically investigate whether disparities exist among schools in teacher job satisfaction that can lead to turnover and its possible association with school socioeconomic context; between-school disparities are likely to become greater even in the progressively funded compulsory education system. Despite its importance, no study has examined these issues using nationally representative data from Japan. Thus, the study asks the following two research questions to enrich the literature.

*Research Question 1: Are there disparities among schools in teacher job satisfaction? If so, is school-level SES associated with the disparities?*

*Research Question 2: Are the effects of teacher self-efficacy on job satisfaction different among schools? If so, is school-level SES associated with the effects?*

These inquiries should help us to understand how, if at all, teacher job satisfaction is differentiated among schools and to establish a mechanism of how disparities among schools in teacher job satisfaction emerge.

*Hypothesis 1: There are disparities among schools in teacher job satisfaction, and school-level SES is associated with these disparities.*

The study hypothesizes the presence of SES-based disparities among schools in teacher job satisfaction as well as those in student performance (e.g., Matsuoka, 2014a; Shimizu, 2009), teachers' expectations for student achievement (Matsuoka, 2014a), and parental involvement (Matsuoka, 2014b). Teachers at higher-SES schools are hypothesized to tend to have higher job satisfaction because those at lower-SES schools face greater difficulties in teaching. To test the presence of such difficulties, following Shen et al. (2012), the study includes an indicator of student behavioral issues to observe if this factor explains the disparities among schools in Japan.<sup>3</sup> As lower-SES schools, regarded as “tough” (*shindoi*) by Shimizu (2009), are likely to have more behavioral problems, the study examines a mediation effect—i.e., whether school-level SES is related to the index of student behavioral issues, which may then in turn be associated with teacher job satisfaction.

*Hypothesis 2: Effects of teacher self-efficacy on job satisfaction are different among schools, and school-level SES is associated with these effects.*

As the literature (e.g., Klassen & Chiu, 2010) suggests, teacher self-efficacy should be related to job satisfaction and this should partly explain individual differences in job satisfaction. This relation between self-efficacy and job satisfaction is hypothesized to vary among schools as teachers are nested in schools of varying SES. This study hypothesizes that school-level SES will partly explain the differing effects of teacher self-efficacy on job satisfaction. More concretely, teachers at higher-SES schools are expected to have higher job satisfaction than those with the same level of self-efficacy who work at lower-SES schools. This is because teachers in higher-SES schools (a) teach students who tend to have shared values regarding education and do well academically, and (b) can more easily observe a link between their teaching and students' growth, implying that their self-efficacy in teaching can lead to higher job satisfaction.

### **3. Method**

#### **3.1. Data**

To answer the research questions empirically, this study utilizes Japanese data from the Teaching and Learning International Survey administered in 2013 (TALIS 2013). This dataset contains a nationally representative sample of lower secondary school teachers in Japan. TALIS was managed internationally by the Organisation for Economic Co-operation and Development (OECD) and was administered by the National Institute for Educational Policy Research (NIER) in Japan. The international target population of TALIS is lower secondary teachers (OECD, 2014a). In Japan, the population consists of 289,125 teachers at 10,863 lower secondary schools (mostly junior high schools) (NIER, 2014). Through two-stage sampling procedures,

200 schools were first selected from five stratified categories (i.e., public schools from four city sizes and private or national schools). Twenty teachers were then randomly chosen from the selected schools, based on teacher demographics (age, sex, and teaching subject) (NIER, 2014). The survey was administered from mid-February to mid-March 2013. Survey responses were obtained from 3484 teachers and 192 principals from 192 schools. It should be noted that personnel affairs of teachers (e.g., hiring and transferring) are in the discretion of each prefectural board of education in accordance with reports by educational boards of cities and towns (Kariya, 2009).

### 3.2. Variables

Based on teachers' and school principals' responses to the survey, the following outcome, mediating, and explanatory variables were created.<sup>4</sup> Note that all continuous variables at both the teacher and school levels were standardized (mean = 0, standard deviation = 1) to help in interpreting the results.

#### *Outcome Variable*

*Teacher Job Satisfaction.*<sup>5</sup> This continuous variable was included in the original dataset. Teachers were asked to indicate their responses (*strongly disagree*, *disagree*, *agree*, or *strongly agree*) to eight items (OECD, 2014b), such as "I enjoy working at this school" and "If I could decide again, I would still choose to work as a teacher" (OECD, 2014c, p. 97). This study uses an existing variable in the dataset, named teacher job satisfaction (TJOBSATS). Higher values of this variable indicate greater teacher job satisfaction.

#### *Mediating Variables*

*Teacher Self-Efficacy.* Teacher self-efficacy was included at the teacher level, since the previous studies (e.g., Klassen & Chiu, 2010) showed a link between teacher self-efficacy and job satisfaction. This continuous variable was also included in the original dataset, named teacher self-efficacy (TSELEFFS). Teachers were asked to indicate their responses (*not at all*, *to some extent*, *quite a bit*, or *a lot*) to the question "In your teaching, to what extent can you do the following?" (OECD, 2014c, p. 117) with regard to such functions as controlling disruptive behavior, crafting good questions for students, and helping students to value learning. The definition of this index is, to some extent, similar to that of "teacher identity: stability" in the literature on teacher's culture and identity such as Kudomi (2008) and Yamada & Hasegawa (2010).

*School Student Behavior Index.* This school-level variable is hypothesized to mediate the relation between school SES and teacher job satisfaction. It is generated from the variable "School Delinquency and Violence" (OECD, 2014b, pp. 160–61) that is intended to show school climate. The variable was based on school principals' responses to four items. Instead, the study includes seven items to create the index, which is more normally distributed than the existing one based on four items. Principals were asked to indicate how often students engaged in activities such as absence or tardiness and intimidation or verbal abuse of teachers and staff (i.e., items from "a" to "g") (OECD, 2014c, p. 94). Choices included *never*, *rarely*, *monthly*, *weekly*, and *daily*. The alpha reliability of this newly created index was 0.846, and the skewness and kurtosis were  $-0.867$  and  $1.022$ , respectively. As the index is reverse coded, higher scores imply fewer behavioral problems. In other words, when this variable is negative, teachers in such schools face greater difficulties in teaching because of students' more frequent behavioral issues.

### *Teacher-Level Explanatory Variables*

*Teacher's Age.* Three dummy variables were made to show each teacher's age. The reference group was teachers in their 20s, and the three dummy variables were teachers in their 30s, 40s, and 50s or older. A set of variables was also created based on the number of years of teaching experience, but these are very highly correlated with age; thus, separating the effects of age and teaching experience in Japan is impossible. All results attributed to the age variable also likely include some effect of teaching experience.

*Total Working Hours.* This continuous variable indicates the hours teachers spent at work in the typical week, including work performed after regular hours and on weekends.

*Duration at School.* This dummy variable shows whether a teacher has worked at the sampled school for more than four years. Because junior high schools have three grades of students, spending more than four years at the school should result in a considerable familiarity with school procedures.

*High-SES Classroom.* Teachers were asked to select one of the five categories (none, 1%–10%, 11%–30%, 31%–60%, and more than 61%) to indicate the percentage of their students who came from families with socioeconomic difficulties. To target a specific class, teachers were asked to consider students from the first class that they had taught after 11 a.m. on the previous Tuesday (OECD, 2014b). “None” was coded as 1, and all the other responses as 0. In other words, a binary variable (0 or 1) was created to show whether the teacher believed that no students had socioeconomic difficulties at home. When this variable is 1, it implies a relatively higher-SES classroom because the target class had no students from families with socioeconomic difficulties. As junior high schools in Japan do not use academic tracking, this method of assessment is likely to represent all classes at the school.

*Female.* Female teachers are coded as 1 and their male counterparts as 0.

### *School-Level Explanatory Variables*

*City and Large City.* Two dummy variables were coded using principals' responses with regard to the size of the city in which their school was located. *City* means a municipal population ranging from 100,001 to 1,000,000, and *large city* represents a population of more than one million. A reference group was identified as schools in communities of less than 100,000 individuals.

*Private.* This variable was also based on principals' responses. Privately managed schools were coded as 1 and publicly managed schools as 0. As teachers at private schools are likely to stay at the same schools and those in the public sector are periodically transferred to other schools within a prefecture, this binary variable should be included as a control variable.

*School SES.* This is a composite average of high-SES classrooms in each school. A score of 1 on this variable implies that all teachers at a school reported having no student from families with socioeconomic difficulties, whereas a score of 0 implies that all teachers reported having some students with socioeconomic difficulties in their target classes. This normally distributed variable was standardized to show each school's SES in relation to others in the nationally representative sample.

## **3.3. Analysis**

After descriptive statistics were generated,<sup>6</sup> a multilevel mediation model was constructed

building on previous studies. Notably, a basic model of relations between job satisfaction and other factors such as self-efficacy is based on Klassen and Chiu (2010)'s model as adapted by OECD (2014a). Because teachers are nested in schools, influencing one another at their workplace, the study employs multilevel modeling. In addition, the study uses mediation techniques that help to reveal whether school SES influences job satisfaction through the school student behavior index as hypothesized based on Shen et al. (2012) and the differing effects of self-efficacy on job satisfaction.

Due to space limitations, the study presents only the final model and its results. Using Mplus version 7.2 (Muthén & Muthén, 1998-2012), the multilevel mediation analysis was performed with a random intercept and slope model.<sup>7</sup> Between-school disparities were estimated as the variation of intercepts; teacher job satisfaction and the slope of teacher self-efficacy varied among schools. School-level variables were included to explain, in part, the variation of each factor. Multiple imputation was performed for the main analysis to deal with missing values. Note that missing values were quite low (roughly 98% complete for continuous variables), as presented in Tables 1 and 2, and all teachers and schools were included in the main analysis owing to multiple imputation, resulting in the use of the full sample of 3,484 teachers from 192 schools.

## 4. Results

### 4.1. Descriptive statistics

Descriptive statistics of continuous variables are presented in Table 1.<sup>8</sup> These continuous variables appear to be normally distributed at each level, suggesting considerable differences in teacher job satisfaction, total working hours, and teacher self-efficacy among individual teachers, as well as in school SES and school student behavior index among schools. A raw score of the total working hours was included to show the number of working hours per week, but the standardized version of this variable was used in the analysis.

As descriptive statistics do not provide information about between-school differences in the outcome variable, an intra-class correlation coefficient was estimated to show the variation among schools. The coefficient was 0.084, implying 8.4% of the variation in teacher job satisfaction among schools, while the rest of it (91.6%) was among individual teachers. Table 2 includes frequencies for categorical variables.<sup>9</sup>

### 4.2. Explaining teacher job satisfaction

Table 3 presents level 2 (between-school level) results obtained from the multilevel mediation analysis, predicting teacher job satisfaction. Figure 1 summarizes the results regarding SES at both levels along with that of the school student behavior index that mediates a relation between school SES and job satisfaction. All SES-related results with an effect of school student behavior index on teacher job satisfaction are shown in the figure. Bold lines indicate significant relations among the variables and dashed lines show insignificant associations. A filled circle (dot) on the left side of teacher job satisfaction at the within-level (level 1) means a random intercept, which is referred to "Teacher Job Satisfaction" at the between-level (level 2). Another filled circle on the arrow from teacher self-efficacy to teacher job satisfaction at the within-level represents a random slope of self-efficacy on job satisfaction, which is shown as

Table 1 Descriptive statistics of continuous variables

	N	Min	Max	Mean	SD	Skewness	Kurtosis
<i>Teacher level</i>							
Teacher Job Satisfaction	3470	-3.833	1.990	0	1	-0.357	0.480
Total Working Hours: Raw	3413	0	96	53.920	17.969	-0.699	0.496
Total Working Hours: Standardized	3413	-2.982	2.303	0	1	-0.699	0.496
Teacher Self-Efficacy	3463	-3.211	3.591	0	1	0.632	0.367
<i>School level</i>							
School SES	192	-1.369	2.713	0	1	0.963	-0.009
School Student Behavior Index	189	-4.612	1.227	0	1	-0.867	1.022

Table 2 Frequencies for categorical variables

	N	%		N	%
<i>Teacher level (N = 3484)</i>			<i>School level (N = 192)</i>		
Age			City		
Thirties	816	23.4	City (1)	79	41.0
Forties	946	27.1	Others (0)	113	59.0
50 and above	1076	30.9	Large City		
Duration at School			Large City (1)	30	15.5
More than 4 years (1)	1502	43.1	Others (0)	162	84.5
0-3 years (0)	1946	55.8	Private		
Not Known	36	1.0	Private (1)	12	6.5
High-SES Classroom			Public (0)	180	93.5
No disadvantaged students (1)	1078	30.9			
Others (0)	2374	68.1			
Not Known	32	0.9			
Female					
Female (1)	1360	39.0			
Male (0)	2124	61.0			

“Slope of Teacher Self-Efficacy” at the between-level. The random intercept and random slope at the between level are indicated as closed circles that are continuous latent variables varying between schools. In the meantime, observable variables are shown as rectangles in the figure.

School SES appears to shape teacher job satisfaction indirectly. As the figure<sup>10</sup> illustrates, school SES first influences the school student behavior index. A higher-SES school is associated with a higher index of school student behavior implying that higher-SES schools have fewer students’ behavioral issues as reported by school principals ( $p < .001$ ). More concretely, school SES strongly predicts the school student behavior index. As both of these are standardized variables (mean = 0, standard deviation = 1), at 1 SD, the increase is 0.475 compared to the mean. The differences between 1 SD above and below the mean are about 1 SD ( $0.95 = 0.475 \times 2$ ) of the index. Thus, school SES explains the substantial parts of the behavioral index when the other factors such as city size and school sector are controlled.

In turn, this behavioral index is significantly related to teacher job satisfaction ( $p < .01$ ). When schools have an index of 1 SD above the mean, the estimate is 0.113, compared with the mean resulting in a difference of 0.226 (or  $0.113 \times 2$ ) between 1 SD above and below the mean. This indicates that the difference in the behavioral index among schools 1 SD above and below



Table 3 Predicting teacher job satisfaction: between-school level

	Estimate		S.E.
<i>School level (N = 192)</i>			
Teacher Job Satisfaction: Intercept	0.169	*	0.068
City	-0.009		0.067
Large City	-0.034		0.068
Private	-0.034		0.114
School SES	-0.001		0.039
School Student Behavior Index	0.113	**	0.034
School Student Behavior Index: Intercept	0.392	**	0.113
City	-0.323	*	0.146
Large City	-0.579	**	0.185
Private	-1.083	***	0.241
School SES	0.475	***	0.057
Mediation Effect on Teacher Job Satisfaction			
School SES through School Student Behavior Index	0.054	**	0.017
Random Slope of Teacher Self-Efficacy: Intercept	0.255	***	0.032
City	-0.021		0.041
Large City	-0.061		0.057
Private	-0.052		0.091
School SES	0.067	*	0.026
School Student Behavior Index	-0.003		0.020
<i>Residual Variances</i>			
Teacher Job Satisfaction	0.072	***	0.015
School Student Behavior Index	0.751	***	0.111
Slope of Teacher Self-Efficacy	0.008		0.006
Information Criteria			
Akaike (AIC)	19822.125		
Sample-Size Adjusted BIC	19932.327		

\* =  $p < .05$ , \*\* =  $p < .01$ , \*\*\* =  $p < .001$ , S.E. = standard error

the mean (a 2-SD difference) leads to a disparity among schools of about one-quarter of 1 SD of teacher job satisfaction.

The mediation effect of school SES on teacher job satisfaction through the behavioral index should also be addressed. The difference of the indirect effect between school SES at 1 SD above and 1 SD below the mean is 0.108 ( $= 0.054 \times 2$ ). This represents the estimate of the extent to which school SES influences teacher job satisfaction through the behavior index. Admittedly, the effect is not dramatically strong, but it is still observable.

In addition, the slope of teacher self-efficacy on teacher job satisfaction is significant and has a random effect, showing the variation of the effect on teacher job satisfaction among schools. Importantly, school SES partly explains this variation ( $p < .05$ ) when the other school-level variables are held constant. More specifically, teachers at higher-SES schools tend to have higher job satisfaction when they have the same level of teacher self-efficacy. Importantly, if school SES is 1 SD above the mean, teachers in such schools have an additional 0.067 in job satisfaction, compared with those at the mean-school SES. The difference between 1 SD above and below the mean is 0.134 ( $= 0.067 \times 2$ ); the effect of self-efficacy on job satisfaction significantly varies among schools based on school SES.

Table 4 shows results at the individual teacher level (within-school level). Older teachers appear to have a lower level of job satisfaction whereas those in their 20s have a higher level

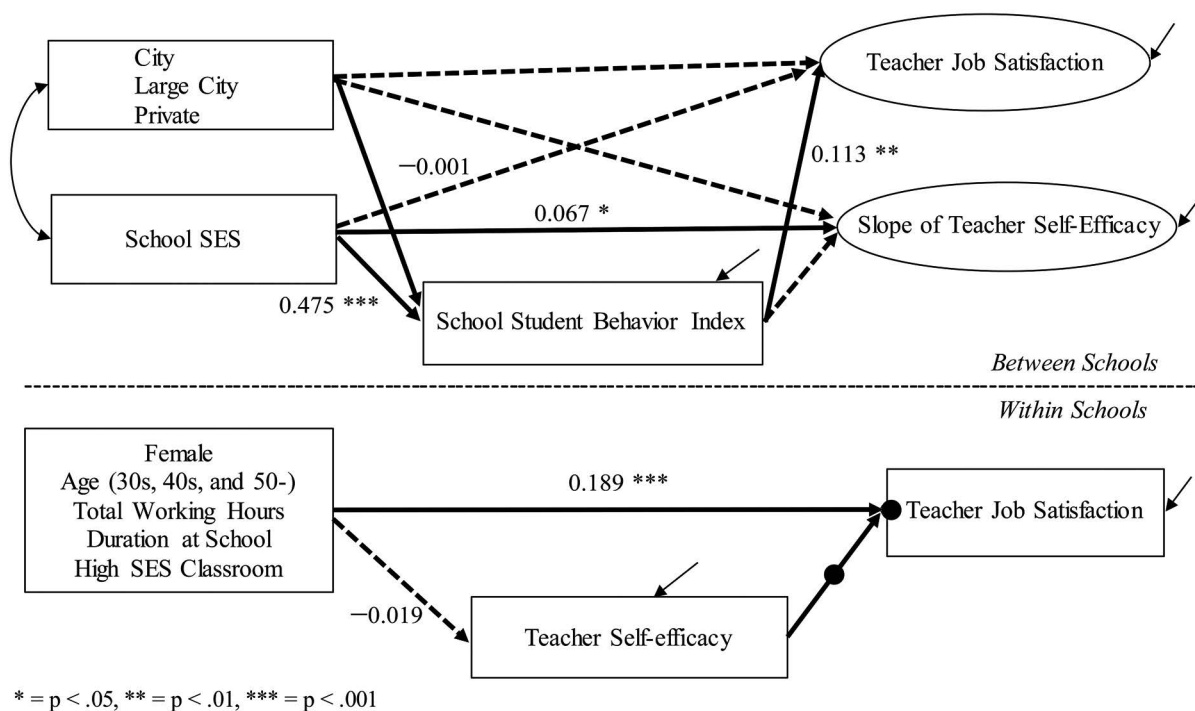


Figure 1 Multilevel mediation modeling

of job satisfaction. Neither teachers' total working hours nor whether they have been working at the same school for more than one cycle of lower secondary education (three academic years) significantly predicts the outcome. Teachers who report that there is no student with socioeconomic difficulties at home in their targeted class are more likely to have higher job satisfaction ( $p < .001$ ). Sex, age, and total working hours relate to teacher self-efficacy. As being female shows a negative effect, male counterparts tend to have higher self-efficacy. The SES of the target classroom appears to have no influence on self-efficacy.

## 5. Discussion and implications

This study's empirical results reveal the disparities among schools in teacher job satisfaction. They parallel the literature (e.g., Matsuoka, 2014a, 2014b; Shimizu, 2009) on between-school disparities in Japanese compulsory education that was once regarded as "egalitarian." In fact, school-level SES is indirectly related to the variation in teacher job satisfaction among schools; teachers at higher-SES schools tend to have higher job satisfaction and those at lower-SES schools are likely to have a lower level of satisfaction possibly leading to turnover, as shown in the previous studies such as Ingersoll (2001). In addition, this study's findings indicate how the disparities among schools in teacher job satisfaction emerge. Consistent with the literature (Shen et al., 2012), students' behavior problems partly explain the disparities among schools in teacher job satisfaction; behavior problems likely lead to difficulties in teaching, which in turn reduce job satisfaction. At the teacher level, also consistent with the earlier studies (e.g., Klassen & Chiu, 2010), teacher self-efficacy appears to be related to job satisfaction.

Table 4 Predicting teacher job satisfaction: within-school level

	Estimate		S.E.
<i>Teacher Level (N = 3484)</i>			
Teacher Job Satisfaction			
Female	-0.045		0.036
Thirties	-0.128	*	0.061
Forties	-0.274	***	0.063
50 and above	-0.250	***	0.059
Total Working Hours	-0.027		0.019
Duration at School (4 years-)	-0.035		0.040
High-SES Classroom	0.189	***	0.036
Teacher Self-Efficacy: Intercept			
Female	-0.266	***	0.036
Thirties	0.289	***	0.051
Forties	0.365	***	0.052
50 and over	0.432	***	0.054
Total Working Hours	0.074	***	0.021
Duration at School (4 years-)	0.050		0.039
High-SES Classroom	-0.019		0.037
<i>Residual Variances</i>			
Teacher Job Satisfaction	0.840	***	0.027
Teacher Self-Efficacy	0.954	***	0.031

\* =  $p < .05$ , \*\*\* =  $p < .001$ , S.E. = standard error

Moreover, this effect differs among schools, and school SES partly explains the variation of the effect, supporting the second hypothesis: among teachers at the same level of self-efficacy, those at higher-SES schools have higher levels of job satisfaction. Teachers in such schools probably observe a clearer link between their teaching and student growth, leading to higher job satisfaction. These empirical findings indicate that teacher job satisfaction depends on the socioeconomic context in which teachers are embedded; the context influences teacher job satisfaction partly through students' behavioral issues and the differing effects of teachers' self-efficacy.

This study's results call for policy interventions aimed at helping teachers in lower-SES schools. For example, increasing the number of teachers in such schools would possibly enable them to deal with the greater frequency of behavioral issues arising in low-SES communities. As for future research, it would have been ideal if the data had included detailed information regarding students' SES, academic performance, and their evaluation of teachers. Moreover, using longitudinal data on teachers' use of sick leave and turnover will help researchers to clarify the factors shaping teacher job satisfaction and the resulting negative consequences for the quality of the education on which disadvantaged students rely. Finally, future studies should consider how teacher job satisfaction relates to other aspects of the teaching profession, such as teachers' occupational culture and identity studied by Kudomi (2003, 2008) and Yamada & Hasegawa (2010).

### Acknowledgments

This work was supported by JSPS KAKENHI Grant Number 26780488.

### Notes

1. Due to space limitations, only notable studies are cited in this article.

2. In the field of educational administration, Aoki & Ueda (1989) is an example of early empirical work on teacher job satisfaction.
3. There is a relation between students' behavioral issues and teachers with a higher risk of burnout (Kudomi, 2003). Another study in educational administration (Tsuyuguchi & Takagi, 2014) also shows that difficulties of teaching (e.g., students' behavioral issues) are associated with scores indicating levels of teacher burnout.
4. Teachers' educational background was not included as most teachers are four-year college graduates. Teachers' full-time or part-time status was also not included because during the survey some part-time teachers who should have been included in the sample were excluded (OECD, 2014c) resulting in an inadequate representation of this group. Because of this data limitation, results of this study can best be interpreted as obtained from the sample of full-time teachers.
5. Because of space limitations, the construction of variables such as job satisfaction and self-efficacy cannot be completely explained. See OECD (2014b) for further explanation.
6. Correlation analyses were also performed before the main analysis. Results of the analyses are not presented due to space limitations.
7. A sample weight was used for each level (i.e., teacher and school). Replicate weights were also used to verify the results.
8. Both sample weights (i.e., teacher and school weights) were utilized in the descriptive statistics presented. Each weight was adjusted to show the number in each respective sample; the number of each variable is not weighted, as included in the dataset.
9. These frequencies are weighted at each level. An adjusted weight was used to make the total numbers as they are in the dataset.
10. Figure 1 presents conceptual relationships between variables at each level. At between-level, City, Large City, and Private are in the same rectangle, but each variable independently relates to each outcome. Likewise, each explanatory variable is independently associated with the outcomes at within-level.

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