

The Effect of School Organizational Support on Job Satisfaction of Primary and Secondary School Teachers: The Mediating Role of Teachers' Engagement in Educational Research

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Abstract: *The topic of teacher work satisfaction has long been a focus of educational study. This study examined the impact of school organizational support on teacher job satisfaction as mediated by teachers' engagement in educational research, utilizing the findings of a survey on the academic quality of basic education students in Jiangsu Province in 2020 and analyzing the data of 21,154 primary and 16,585 secondary school teachers. In this work, the structural equation model is utilized. Significant favorable relationships are shown between school organization support, teachers' participation in educational research, and teachers' work happiness. The engagement of teachers in educational research somewhat mediates the relationship between school organization support and teacher job happiness. School organization support positively predicts teacher job satisfaction. The impact of school organization support on teachers' participation in educational research and job satisfaction is greater at the primary level than at the junior secondary level.*

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Introduction

IN China, the educational research system is an inherent aspect of the basic education community, intended to support the professional development of teachers, the enhancement of the quality of basic education, and the complete development of students (Shen & Yang, 2019; Liang et al., 2016). Cheng (2014) contends that the exceptional performance of Chinese students on the Program for International Student Assessment (PISA) is attributable in part to the systematic and frequent educational research conducted by instructors, which is difficult to achieve in other nations. However, the phenomenon of “resistance to research” among instructors occurs as a result of problems produced by the excessive pursuit of rapid research findings, such as intense workload, unclear objectives, inadequate financing, and a rigid management system (Shao, 2012; Luo, 2008; Yang, 2018). Consequently, teacher education research has become a two-edged sword. How may educational research help the job happiness of educators? Few studies have done in-depth analyses of the relationship between school organizational support and teacher job satisfaction from the standpoint of teacher education research. Consequently, we use the results of a survey on student academic quality in Jiangsu Province’s basic education to investigate the relationship between school organizational support, teachers’ participation in scientific research, and teacher job satisfaction. The study adopts the structural equation model in order to provide a theoretical framework and empirical basis for the application of organizational support theory to the discussion of teacher educational research and job satisfaction, as well as to provide insights for the promotion of teacher educational research and the enhancement of teacher professional satisfaction.

A Literature Review

The Influence of School Organizational Support on Teachers’ Job Satisfaction

The organizational support theory combines organizational anthropomorphism, expectation theory, and the social exchange idea. The theories of organizational support and employee perception of organizational support and appropriate measuring scales were developed by Eisenberger et al. in 1986. In their meta-analysis, Rhoades and Eisenberger (2002) contend that there is a strong positive relationship between organizational support and worker job satisfaction, enthusiasm, and output. Chinese scholar Xu gives his concepts of organizational support and perceived organizational support in a Chinese context based on their prior research (Xu et al., 2005).

Organizational support is a fundamental aspect of school administration. In their research study, Rhoades and Eisenberger (2002) conclude that perceived organizational support of employees can increase employee job satisfaction and promote other beneficial job-related behaviors. When teachers perceive adequate organizational support and concern for their well-being, their job security and general contentment will increase. Improved teacher job satisfaction promotes a heightened sense of accountability for instructional outcomes (Ji & Zhao, 2021; Hakkak et al., 2014; Bogler & Nir,

2010). El-Hilali and Al-Rashidi (2015) discover that organizational support (including professional development, reasonable workload, and equitable distribution of educational resources) is one of the most influential factors on job satisfaction among female primary school teachers in their study of female primary school teachers. Meng (2019) finds a substantial positive association between job satisfaction and organizational support for Dalian's junior secondary physical education teachers. Similarly, Ji (2020) indicates that the perception of organizational support can predict significantly the job satisfaction of primary and secondary school teachers in Tibet. Thus, we propose two hypotheses:

H1a: At the primary level, school organizational support exerts a positive influence on teacher job satisfaction.

H1b: At the junior secondary level, school organizational support has a positive effect on teacher job satisfaction.

The Impact of School Organizational Support on Teachers' Engagement in Scientific Research

Teacher educational research, as defined by You (2018), is a collection of theoretical and practical educational exploration activities, including regular teaching research, participation in major research projects, and educational paper writing, undertaken by teachers to investigate the causes and solutions to problems in schooling as well as the universal patterns of education and teaching. China's distinctive educational research system plays a crucial role in implementing the state's curriculum reform and fostering the professionalism of teachers. In the 1950s, in order to ensure the quality of education, local departments of education established educational research offices and recruited a group of outstanding teachers from schools to serve as teaching research staff in order to instruct in-service teachers in syllabus study, teaching material compilation, and lesson planning. In light of the relatively low educational levels of teachers at the time, the development of educational research offices at all levels was a crucial step toward standardizing the quality of classroom instruction (Gu, 2014). The school-based educational research offices have contributed to the general improvement of the quality of school education by resolving problems in teaching, summarizing and sharing valuable practical teaching experience, and supervising the quality of school teaching (Yin et al., 2020). The Several Opinions of the State Education Commission on Improving the Performance of Teaching Research Offices were announced in 1990 in an effort to standardize the criteria for educational research and the functions of related organizations. Since China's reform and opening up, this is the first official document issued by the Ministry of Education to improve educational research, signaling the beginning of institutionalization and standardization of the educational research system (State Education Commission, 2012; He, 2020).

To fulfill the ever-increasingly complex demands of contemporary society on teachers, schools must cultivate their own motives for sustained professional growth (Yarmakeev, 2019). Shore and Wayne (1993) found an association between organizational support and the positive work behavior of employees. Additionally, several studies have indicated that perceived organizational support can dramatically increase employees' proactive work involvement (Cleveland & Shore, 1992; Rhoades &

Eisenberger, 2002). When school organizational support offers teachers with effective aid in their educational research efforts, involvement will increase dramatically (Xu et al., 2013; Zhou et al., 2019). This study therefore proposes the following hypotheses:

H2a: At the primary level, school organizational support has a positive effect on teachers' participation in educational research.

H2b: At the junior secondary level, school organizational support positively affects teachers' engagement in educational research.

The Effect of Teachers' Engagement in Educational Research on Job Satisfaction

While some scholars suggest that teachers' participation in educational research may increase their workload or possibly lead to career burnout (Luo, 2008; Yang, 2018), others contend that encouraging teachers' professional growth might improve their job satisfaction (Guskey & Yoon, 2009). Scientific research activities that contribute to addressing practical teaching challenges, understanding curricular content, and boosting self-efficacy can considerably improve teacher work satisfaction (Xue, 2006; Shao, 2012; Avalos, 2010). Creative research allows teachers to see novelties in their job rather than boring repetitions, which effectively alleviates negative emotions such as inactivity, exhaustion, and indifference (Sukhomlinsky, 2009). As a result, we raise the two hypotheses below.

H3a: At the primary level, teachers' participation in educational research has a positive impact on teacher job satisfaction.

H3b: At the junior secondary level, teachers' engagement in educational research is positively correlated with teacher job satisfaction.

A Summary of the Literature Review

Previous studies have demonstrated that teachers are motivated not only by money and spiritual benefits but also by job satisfaction. Despite this, relatively few studies have examined the links between school organizational support, teachers' participation in educational research, and teacher job satisfaction. However, the above analysis of the relationship between school organizational support, teachers' engagement in scientific research, and teacher job satisfaction suggests that there may be a correlation between the three variables: school organizational support has a direct effect on teacher job satisfaction and can also influence teacher job satisfaction via the mediating effect of teachers' engagement in educational research.

Data and Methodology

Sources of Data

The 2020 survey findings on the academic quality of Jiangsu Province's basic education students serve as our data source. Initiated in 2006, the survey chooses primary and high school students and instructors from around the province for testing and inquiry, resulting in a large sample size and authoritative results (Chen, 2020). Before the inves-

tigation and testing, the survey in 2020 selected a series of study themes and dimensions, and sampling was conducted in two stages. The student sample consisted of fifth and ninth graders; the teacher sample consisted of the class teachers and English, Chinese, and mathematics teachers of the sampled students; and the school leadership sample consisted of the sampled students' principals (including the principals and vice principals). As a result, the student, teacher, and leadership databases for primary and secondary schools were created. The survey was conducted in two phases. In the first phase, the trial test and questionnaire modification were conducted, and in the second, the province-wide uniform survey was conducted. Prior to the survey, the team engaged a group of education management and education assessment specialists to conduct semantic analysis and expert validity evaluation of the questionnaires. Based on the outcomes of the experts' evaluations, the questionnaires were improved. The survey team then conducted a pilot test of student, teacher, and principal questionnaire content in X City, Jiangsu Province. According to the results of the reliability and validity study of the trial questionnaires, irrelevant questions were eliminated from the final version of the province-wide uniform survey questionnaires for the second stage. After the second stage of the provincial unified survey, the questionnaires' dependability and validity were evaluated again. After eliminating the problematic items, the research-relevant subjects and dimensions were identified. The current study selects data from the teacher questionnaire survey findings. Data for 21,154 primary school teachers and 16,585 junior secondary school teachers were obtained after sorting and screening. In **Tables 1** and **2**, descriptive statistics and variable descriptions are illustrated.

Research Tools

This empirical investigation focuses primarily on five dimensions: school organizational support; teachers' cognitive engagement in educational research; teachers' emotional engagement in educational research; teachers' behavioral engagement in educational research; and teachers' job satisfaction.

School Organizational Support Questionnaire

The six survey items on this questionnaire are graded on a six-point Likert scale, with 1 denoting "strongly disagree" and 6 denoting "strongly agree." The more points are received, the greater school support instructors believe they receive for participating in educational research initiatives.

Teacher's Educational Research Participation Questionnaire

It has 12 survey items in three dimensions and uses a Likert scale with a maximum of five points (1 for "non-conforming" and 5 for "conforming"). Teachers are more likely to participate in educational research if they score high.

Teacher's Job Satisfaction Questionnaire

Table 1. Descriptive Statistics.

| Variable names | Primary Schools (N=21,154) | | | | Junior Secondary Schools (N=16,585) | | | | |
|---------------------|------------------------------------|--------|--------|-----|--|--------|-------|-----|----|
| | Mean | SD | Min | Max | Mean | SD | Min | Max | |
| Teacher Charact. | Gender-male | 0.180 | 0.388 | 0 | 1 | 0.300 | 0.457 | 0 | 1 |
| | Length of service | 15.870 | 10.972 | 0 | 44 | 19.290 | 9.654 | 0 | 44 |
| | Position | 2.540 | 0.816 | 1 | 5 | 2.980 | 0.800 | 1 | 5 |
| | Educational level | 2.980 | 0.332 | 1 | 4 | 3.070 | 0.316 | 1 | 4 |
| | Marital status-married | 0.820 | 0.386 | 0 | 1 | 0.910 | 0.291 | 0 | 1 |
| | Concurrent administrative post-Yes | 0.650 | 0.477 | 0 | 1 | 0.500 | 0.500 | 0 | 1 |
| | Subject-Chinese | 0.432 | 0.495 | 0 | 1 | 0.333 | 0.471 | 0 | 1 |
| | Subject-Mathematics | 0.318 | 0.466 | 0 | 1 | 0.330 | 0.470 | 0 | 1 |
| | Ownership-public | 0.950 | 0.216 | 0 | 1 | 0.850 | 0.355 | 0 | 1 |
| School Charact. | School in the city | 0.610 | 0.488 | 0 | 1 | 0.628 | 0.483 | 0 | 1 |
| | School in the town | 0.345 | 0.475 | 0 | 1 | 0.330 | 0.470 | 0 | 1 |
| | School in South Jiangsu Prov. | 0.448 | 0.497 | 0 | 1 | 0.432 | 0.495 | 0 | 1 |
| | School in North Jiangsu Prov. | 0.388 | 0.487 | 0 | 1 | 0.363 | 0.481 | 0 | 1 |

SD: Standard Deviations; Min: Minimum Value; Max: Maximum Value; Charact: Characteristics; Prov.: Province.

It consists of four survey items scored on a five-point Likert scale (from 1 to 5, with 1 denoting “strongly disagree” and 5 denoting “strongly agree”). The higher the score, the more satisfied teachers are with their jobs.

Reliability and Validity Tests

The findings of model reliability and validity assessments at the primary and junior secondary levels are reported in **Tables 3** and **4**, respectively.

School Organizational Support

School organizational support in this study refers to the school’s support for teacher participation in educational research initiatives. This component is represented by six survey items in the 2020 teacher questionnaire. According to the factor analysis, the KMO test scores at the primary and junior secondary levels are 0.932 and 0.924, respectively, which meet the requirements. The Cronbach’s α coefficient of school organizational support at the primary and junior secondary levels are 0.956 and 0.945, respectively, showing that the questionnaire is reliable and valid. In confirmatory factor analysis, the range of SMC of school organization support at the two stages is 0.654-0.884 and 0.598-0.846, respectively, with CR 0.960 and 0.947, AVE 0.802 and 0.750, CFI 0.976 and 0.972, TLI 0.960 and 0.953, and RMSEA 0.014 and 0.063, showing strong goodness of fit of this dimension.

Table 2. Variable categories and descriptions

| Variable | Variable Name | Descriptions |
|-----------------------------------|------------------------------------|---|
| Teacher Charact. | Gender-male | 1=male, 0=female; a dummy variable; females as the control group. |
| | Position | 1=the third level, 2=the second level, 3=the first level, 4=senior, 5=ultra-senior |
| | Educational level | 1=senior secondary(technical secondary and secondary normal schools), 2=junior college, 3=bachelor degree, 4=master degree |
| | Length of service | A continuous variable; the value representing years of service. |
| | Marital status-married | 1=married, 0=unmarried; a dummy variable; the unmarried as the control group. |
| | Concurrent administrative post-Yes | 1=Yes, 0=No; a dummy variable; those without concurrent posts as the control group. |
| | Subject-Chinese | 1=Chinese language teacher, 0= non-Chinese language teacher; a dummy variable; English teachers as the control group. |
| | Subject-Mathematics | 1=maths teacher, 0=non-maths teacher; a dummy variable; English teachers as the control group. |
| Charact. of Corresponding Schools | Ownership-public | 1=public school, 0=private school; a dummy variable; private schools as the control group. |
| | School in the city | 1=school in the city, 0=school outside the city; a dummy variable; schools in villages as the control group. |
| | School in the town | 1=school in the town, 0=school outside the town; a dummy variable; schools in villages as the control group. |
| | School in South Jiangsu Prov. | 1= school in South Jiangsu Prov., 0=school outside South Jiangsu Prov.; a dummy variable; schools in Central Jiangsu Prov. as the control group. |
| | School in North Jiangsu Prov. | 1= school in North Jiangsu Prov., 0= school outside North Jiangsu Prov.; a dummy variable; schools in Central Jiangsu Prov. as the control group. |

Charact: Characteristics; Prov.: Province.

Teachers' Cognitive Engagement in Educational Research

Four survey items, based on data from the teacher survey, assess teachers' cognitive participation in educational research. The Cronbach's α coefficients for teachers' cognitive participation in educational research at the primary and junior secondary levels are 0.886 and 0.884, respectively, showing the questionnaire's reliability and validity. In confirmatory factor analysis, the range of SMC for teachers' cognitive engagement in educational research at the two stages is 0.483-0.753 and 0.479-0.753, the CR is 0.892 and 0.891, the AVE is 0.675 and 0.673, the CFI is 0.982 and 0.987, and the RMSEA is 0.074 and 0.065, indicating that this dimension has a good fit.

Teachers' Emotional Engagement in Educational Research

Table 3. The Test of Model Reliability and Validity at the Primary Level.

| Dimensions | Cronbach' α | SMC | CR | AVE | CFI | RSMEA |
|--|--------------------|-------------|-------|-------|-------|--------|
| School organizational support | 0.956 | 0.654-0.884 | 0.960 | 0.802 | 0.976 | 0.014 |
| Teachers' cognitive engagement in educational research | 0.886 | 0.483-0.753 | 0.892 | 0.675 | 0.982 | 0.074 |
| 1 st order Teachers' emotional engagement in educational research | 0.895 | 0.587-0.796 | 0.899 | 0.690 | 0.979 | 0.056 |
| Teachers' behavioral engagement in educational research | 0.894 | 0.573-0.810 | 0.900 | 0.694 | 0.987 | 0.056 |
| Teacher job satisfaction | 0.781 | 0.323-0.781 | 0.796 | 0.501 | 0.986 | 0.054 |
| 2 nd order Teachers' engagement in educational research | | 0.741-1.040 | 0.947 | 0.857 | 0.927 | 0.064 |
| Testing standards | > 0.7 | > 0.3 | > 0.7 | > 0.5 | > 0.9 | < 0.08 |

Table 4. The Test of Model Reliability and Validity at the Junior Secondary Level.

| Dimensions | Cronbach' α | SMC | CR | AVE | CFI | RSMEA |
|--|--------------------|-------------|-------|-------|-------|--------|
| School organizational support | 0.956 | 0.598-0.846 | 0.947 | 0.75 | 0.972 | 0.063 |
| Teachers' cognitive engagement in educational research | 0.886 | 0.479-0.753 | 0.891 | 0.673 | 0.987 | 0.065 |
| 1 st order Teachers' emotional engagement in educational research | 0.895 | 0.591-0.767 | 0.899 | 0.69 | 0.976 | 0.068 |
| Teachers' behavioral engagement in educational research | 0.894 | 0.578-0.812 | 0.894 | 0.679 | 0.99 | 0.054 |
| Teacher job satisfaction | 0.781 | 0.305-0.790 | 0.786 | 0.487 | 0.986 | 0.059 |
| 2 nd order Teachers' engagement in educational research | | 0.697-1.038 | 0.941 | 0.843 | 0.926 | 0.064 |
| Testing standards | > 0.7 | > 0.3 | > 0.7 | > 0.5 | > 0.9 | < 0.08 |

The data on teachers' emotional engagement in educational research came from a four-item survey administered via a teacher questionnaire. The Cronbach's α coefficients for primary and junior secondary teachers' emotional engagement in educational research are 0.895% and 0.891%, respectively, suggesting the questionnaire's reliability and validity. In confirmatory factor analysis, the range of SMC for teachers' emotional participation in educational research at the two stages is 0.587-0.796 and 0.591-0.767, the CR is 0.899 and 0.899, the AVE is 0.690 and 0.690, the CFI is 0.979 and 0.976, and the RMSEA is 0.056 and 0.068, indicating that this dimension is well-fitting.

Teachers' Behavioral Engagement in Educational Research

For the dimension of teachers' behavioral participation in educational research, which is examined under four items, data are taken from the teacher questionnaire. At the primary and junior secondary levels, the Cronbach's α coefficients of teachers' behavioral participation in educational research are 0.894 and 0.912, respectively, indicating strong reliability and validity of the questionnaire. The range of SMC for teachers' behavioral involvement in educational research at the two stages in confirmatory factor analysis is 0.573–0.810 and 0.578–0.812, respectively, with CR 0.900 and 0.894, AVE 0.694 and 0.679, CFI 0.987 and 0.990, and RMSEA 0.056 and 0.054, indicating good goodness of fit for this dimension.

Teachers' Engagement in Educational Research

Teachers' participation in educational research is a second-order latent variable in this study that is obtained from their cognitive, emotional, and behavioral involvement. The range of SMC for teachers' participation in educational research at the primary and junior secondary levels is 0.741–1.040 and 0.697–1.038, respectively, with CR of 0.947 and 0.941, AVE of 0.857 and 0.843, CFI of 0.927 and 0.926, and RMSEA of 0.064 and 0.064. It demonstrates how well the model of teachers' involvement in educational research fits the data and how it can be used as the main mediating factor in this investigation.

Teacher Job Satisfaction

In this study, the main dependent variable is teacher job satisfaction. Data for this dimension is taken from the teacher's questionnaire, which is broken down into four items. At the primary and junior secondary levels, the teachers' job satisfaction Cronbach's α coefficients are 0.781 and 0.771, respectively, indicating good validity and reliability of the questionnaire. The range of the SMC in the confirmatory factor analysis is 0.323–0.781 and 0.305–0.790, CR is 0.796 and 0.786, AVE is 0.501 and 0.487, CFI is 0.986 and 0.986, and RMSEA is 0.054 and 0.059, respectively. All components are adequate, indicating a good goodness of fit for the model of teacher work satisfaction, with the exception of the AVE value at the junior secondary level, which is marginally below the standard.

The common method biases of all self-assessment items are tested in this study using confirmatory factor analysis after reviewing the study by Liu et al. (2019). With CFI = 0.572, GFI = 0.418, RMSEA = 0.197 at the primary level and CFI = 0.556, GFI = 0.443, RMSEA = 0.191 at the junior secondary level, the results show that the model has a low goodness of fit. Therefore, this study does not exhibit any significant common method biases.

Research Results and Analyses

The Interaction between School Organizational Support, Teachers' Engagement in Educational Research and Teacher Job Satisfaction

Table 5. Overall Reliability and Validity Indicators of the Structural Model.

| Education Levels | Primary level | | | | Junior secondary level | | | |
|------------------|---------------|--------|-------|-------|------------------------|--------|-------|-------|
| Indicators | CFI | RMSEA | GFI | TLI | CFI | RMSEA | GFI | TLI |
| Values | 0.952 | 0.067 | 0.913 | 0.946 | 0.947 | 0.067 | 0.911 | 0.940 |
| Standards | > 0.9 | < 0.08 | > 0.9 | > 0.9 | > 0.9 | < 0.08 | > 0.9 | > 0.9 |

Table 6. The Path Analysis.

| Paths | Primary level | | | | | Junior secondary level | | | | |
|----------|---------------|-------|--------|-----|-------|------------------------|-------|--------|-----|-------|
| | Est. | S.E. | C.R. | P | Std. | Est. | S.E. | C.R. | P | Std. |
| TEER←SOS | 0.189 | 0.003 | 63.007 | *** | 0.475 | 0.156 | 0.003 | 47.841 | *** | 0.410 |
| TJS←SOS | 0.407 | 0.006 | 64.471 | *** | 0.542 | 0.356 | 0.006 | 55.302 | *** | 0.523 |
| TJS←TEER | 0.311 | 0.014 | 22.075 | *** | 0.165 | 0.243 | 0.015 | 16.024 | *** | 0.135 |

Notes: 1) TEER=teachers' engagement in educational research; SOS= school organizational support; TJS=teacher job satisfaction
 2) *P < 0.05. **P < 0.01. ***P < 0.001.

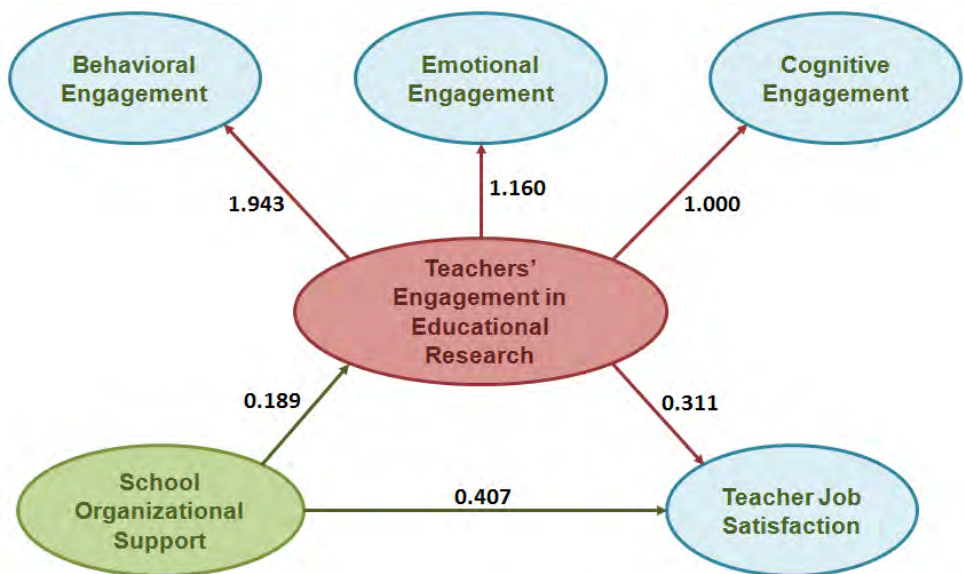


Figure 1. The Path Analysis at the Primary Level.

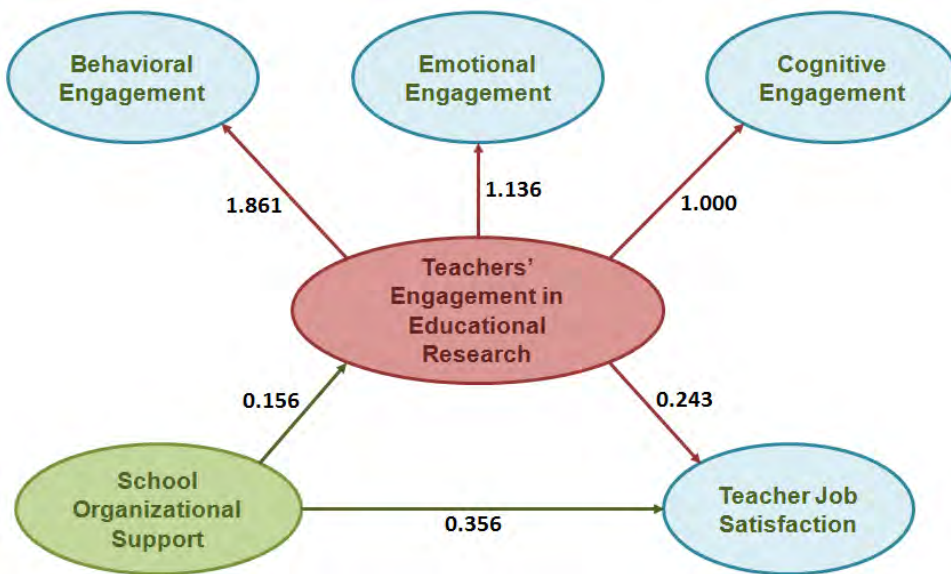


Figure 2. The Path Analysis at Junior Secondary Level.

In this work, the variance maximum likelihood technique is used to estimate the structural equation model's parameters in order to determine the structural model's overall reliability and validity indicators (**Table 5**).

As shown in **Table 5**, the CFI of the structural model at the primary and junior secondary levels is 0.952 and 0.947, the RMSEA is 0.067 and 0.067, the GFI is 0.913 and 0.911, and the TLI is 0.946 and 0.940, indicating that the model is well-fitting.

As shown in **Figure 1** and **Table 6**, at the primary level, school organizational support increases teacher job satisfaction significantly and positively (Std. = 0.542, $P < 0.001$), validating hypothesis H1a. School organizational support has a considerable beneficial effect on teachers' participation in educational research (Std. = 0.475, $P < 0.001$), confirming hypothesis H2a. The participation of teachers in educational research has a significant beneficial effect on teacher job satisfaction (Std. = 0.165, $P < 0.001$), validating hypothesis H3a.

School organizational support had a considerable beneficial effect on teacher job satisfaction at the junior secondary level (Std. = 0.523, $P < 0.001$), corroborating H1b. H2b is supported since school organizational support promotes teachers' engagement in scientific research significantly and positively (Std. = 0.410, $P < 0.001$). Teachers' participation in educational research had a significant beneficial effect on teacher job satisfaction (Std. = 0.135, $P < 0.001$), corroborating H3b (**Figure 2**).

The preceding conclusions are similar to those of prior investigations (Shore & Wayne, 1993; El-Hilali & Al-Rashidi, 2015; Tang, 2018; Ji, 2020; Ji & Zhao, 2021). Researchers discovered that teachers identify their importance to the school through spiritual and professional support as well as material support, such as professional

recognition and respect from the school, easy access to information, reasonable salaries and promotion, and other benefits that help teachers do their jobs better (Rhoades & Eisenberger, 2002; Yang et al., 2022). Because of the principle of reciprocity, perceived school organizational support motivates teachers' loyalty to the school's development and readiness to assist the school in attaining its goals, resulting in increased job satisfaction. Meanwhile, school organizational support strengthens teachers' emotional attachment to the school. The care, recognition, and respect inherent in school organizational support meet teachers' social and emotional needs and encourage them to integrate organizational membership and role status into their social identity, thus enhancing organizational success and improving job happiness. As a result, the school's genuine expression of recognition and respect for teachers' professionalism, as well as support for their teaching and research, might motivate them to participate in educational research and boost their job satisfaction.

The Test of Mediating Effect between School Organizational Support, Teachers' Engagement in Educational Research and Teacher Job Satisfaction

In this study, the 95% confidence intervals are constructed, bias correction (bias-corrected percentile 95% CI), and percentile regression (percentile 95% CI) are used. The Bootstrap method is used for the test of mediating effects and paths, and a random selection of 5,000 Bootstrap samples is conducted. **Table 7** displays the point estimates, Z-scores, and confidence intervals for each effect.

The test's results indicate: (i) At the primary stage, teachers' participation in educational research has a positive impact on their job satisfaction, with a mediating effect value of 0.058; the percentile and the bias-corrected 95% confidence intervals do not contain 0, with $P < 0.01$, which denotes a significant level of effect. It suggests that, at this point, the relationship between school organizational support and teacher job satisfaction is mediated by teachers' involvement in educational research. (ii) At the junior secondary level, teachers' participation in educational research has a positive impact on teacher job satisfaction with a mediating effect value of 0.038; the percentile and the bias-corrected 95% confidence intervals do not contain 0, with $P < 0.01$, indicating a significant level of effect. This indicates that, at this point, the relationship between school organizational support and teacher job satisfaction is mediated by teachers' involvement in educational research. (iii) The impact size at the primary stage is 0.466, with $P < 0.01$ indicating a substantial level of effect. Neither the percentile nor the bias-corrected 95% confidence intervals contain 0. It implies that partial mediation is the way to resolution at the primary school level. (iv) The overall effect size reaches 0.388 at the junior secondary level; the percentile and the bias-corrected 95% confidence intervals do not contain 0, and $P < 0.01$ denotes a substantial degree of effect. It implies that partial mediation is the appropriate path for mediation at this time.

The association between school organizational support and teacher job satisfaction in primary and secondary schools is significantly influenced by teachers' participation in educational research. We advance in this study by confirming that there is a mediating effect of teacher educational research on the relationship between school organi-

Table 7. The Test of Paths and Mediating Effects.

| Paths and Effects | Estimated Values | Coefficient Products | | Bootstrap method (5,000 times) 95% CI | | | | | |
|-----------------------------------|------------------|----------------------|----------|---------------------------------------|-------|-----|-------------|-------|-----|
| | | SD | Z-values | Bias Correction | | | Percentiles | | |
| | | | | Lower | Upper | P | Lower | Upper | P |
| The Primary School Level | | | | | | | | | |
| Overall effects | 0.466 | 0.008 | 58.250 | 0.451 | 0.482 | *** | 0.451 | 0.481 | *** |
| Direct effects | 0.408 | 0.008 | 51.000 | 0.392 | 0.424 | *** | 0.392 | 0.424 | *** |
| Indirect effects | 0.058 | 0.003 | 19.333 | 0.053 | 0.064 | *** | 0.053 | 0.064 | *** |
| The Junior Secondary Level | | | | | | | | | |
| Overall effects | 0.388 | 0.008 | 48.500 | 0.374 | 0.403 | *** | 0.373 | 0.403 | *** |
| Direct effects | 0.35 | 0.008 | 43.750 | 0.335 | 0.366 | *** | 0.335 | 0.366 | *** |
| Indirect effects | 0.038 | 0.002 | 19.000 | 0.033 | 0.043 | *** | 0.033 | 0.043 | *** |

Note: * $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.

zational support and teacher job satisfaction at both the primary and secondary levels, despite some prior studies having found that school organizational support can influence teacher job satisfaction through organizational commitment, career commitment, and work burden alleviation (Tang, 2018). This suggests that schools can increase teacher job satisfaction by giving teachers the organizational support they need to conduct educational research (including emotional, practical, and informational support); by relieving their stress at work; by enhancing their positive emotional experiences; and by igniting their interest in doing so.

The study also found that in the primary and junior secondary levels, there are differences in the correlations between school organizational support, teacher involvement in educational research, and work satisfaction. Some earlier research investigated the topic either at the primary or junior secondary level, or they did not segment the samples from the various stages, making it difficult to draw comparisons between the two levels (Gu et al., 2020). Contrarily, the current study examines samples from both primary and junior secondary schools in order to enable comparative analysis, which indicates that organizational support in both primary and junior secondary schools has a positive impact on teacher educational research and job satisfaction, though the effect at the primary stage is more significant than that at the following stage. Additionally, this study finds that primary school teachers are more satisfied with their jobs than their counterparts at junior high schools, which is supported by studies by Shen and coworkers (2016) and Ding et al. (2018). Job burnout is inversely connected with teacher job satisfaction, and junior secondary school teachers' job burnout is strongly correlated with their workload (Zhang et al., 2014; Cai & Zhu, 2013). Teachers in junior secondary schools face more pressure from students' academic success than their counterparts in primary schools, which may account for their substantially poorer job satisfaction.

Conclusions and Limitations

Conclusions

We develop a theoretical model to describe the effect of school organizational support on teacher job satisfaction as mediated by teachers' engagement in educational research, using data from a survey of the academic quality of Jiangsu Province's basic education students conducted in 2020.

Our empirical investigation yields the following findings: (i) There is a strong and positive correlation between school organizational support and teachers' participation in educational research and work satisfaction at both the primary and junior secondary levels. (ii) School organizational support not only directly and positively predicts teacher job satisfaction but also indirectly influences teacher job satisfaction through the mediating effect of teachers' engagement in educational research. School organizational support influences teachers' engagement in educational research and teacher job satisfaction differently at the two stages, with a more pronounced effect at the primary level than at the junior secondary level.

Limitations

Future studies could benefit from further development. (i) This study examines the interaction between school organizational support, teachers' engagement in educational research, and teacher job satisfaction using only cross-sectional data. Since there are flaws in the analysis of causal effects using cross-sectional data, it is recommended that future research utilizes longitudinal data to further investigate the causal effect of school organizational support on teacher job satisfaction via the mediating role of teacher educational research. (ii) Throughout the course of teacher education research, there may be additional moderating variables influencing teacher work satisfaction (Guskey, 2002). Due to the survey's limited scope, this report cannot examine other mediating elements in the analysis, which will be the subject of subsequent research.

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