THE RELATIONSHIP BETWEEN TEACHERS' CURRICULUM INVOLVEMENT AND SATISFACTION WITH SCHOOL MANAGEMENT IN PRIMARY AND SECONDARY SCHOOLS IN QINGDAO CHINA

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ABSTRACT

This study investigates the link between teachers' curriculum involvement and their satisfaction with school management among primary-secondary teachers in Qingdao, China. Questionnaires were completed by 180 participants. Curriculum involvement (12 items) covered planning and decision-making, organization and implementation, and evaluation and improvement; satisfaction with school management (9 items) included policy implementation, administrative communication, and instructional support, all measured on a four-point scale. Teachers reported high overall curriculum involvement ($M = 3.37$, $SD = 0.62$), peaking in implementation ($M = 3.62$), while planning ($M = 3.23$) and evaluation ($M = 3.25$) scored lower. Management satisfaction was moderate ($M = 3.26$, $SD = 0.67$), with administrative communication receiving the lowest rating ($M = 3.19$). Both scales showed strong internal consistency ($\alpha = .973$, $.967$). Although the two composite scores correlated at $r = .990$, measurement-model results revealed this could not be interpreted substantively: a single unrotated factor accounted for 78.7 % of variance; one-factor and two-factor CFA models yielded nearly identical fit (CFI = .770, .775); the disattenuated latent correlation was 1.016 and HTMT was 1.015) The instrument failed to empirically distinguish the two constructs, leaving the hypothesized relationship untested. This study provides descriptive evidence of Qingdao teachers' curriculum involvement and management satisfaction, and demonstrates that participation-related and satisfaction measures may become empirically indistinguishable when collected via the same instrument from identical respondents.

Keywords: Curriculum Management, Management Satisfaction, Decision-Making, Leadership

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INTRODUCTION

Curriculum translates educational goals, policies and subject knowledge into classroom practice (Priestley, Biesta, & Robinson, 2015). Implementation requires contextual adaptation rather than rigid delivery, and curriculum reform depends on school-level organisational processes (Gouëdard et al., 2020). Teacher agency arises from individual capacity interacting with workplace conditions, and formal participation opportunities do not guarantee real influence (Priestley et al., 2022).

This study defines teachers' curriculum involvement (X) as substantive professional input across three sub-dimensions: planning and decision-making, organization and implementation, and evaluation and improvement (Priestley et al., 2022; Handelzalts et al., 2019). Satisfaction with school management (Y) is a narrow construct distinct from general job satisfaction, covering policy delivery, administrative communication and instructional support and excluding pay- or student-related satisfaction (Toropova et al., 2021). Drawing on TALIS 2018 evidence and self-determination theory, authentic curriculum participation may foster positive perceptions of school management (Liu et al., 2021; Ryan & Deci, 2000).

Situated within China's 2022 compulsory education curriculum reform, this study investigates Qingdao primary and secondary-school teachers, who operate under unified municipal curriculum policies but experience diverse school management contexts.

Three research questions guide the study: RQ1 explores teachers' overall and dimensional curriculum involvement; RQ2 examines overall school-management satisfaction; RQ3 tests whether curriculum involvement (overall and sub-dimensions) correlates significantly with management satisfaction. Corresponding objectives are to describe the two constructs and their potential associations. Two hypotheses are proposed: H1: Overall curriculum involvement positively correlates with management satisfaction. H2: All three sub-dimensions of curriculum involvement positively correlate with management satisfaction.

Participants are in-service Qingdao primary/secondary teachers with at least one-semester teaching experience; kindergartens, vocational schools, higher-education institutions and tutoring agencies are excluded. This cross-sectional questionnaire study assesses covariation rather than causality. Figure 1 illustrates the conceptual framework with X, Y and their sub-dimensions.

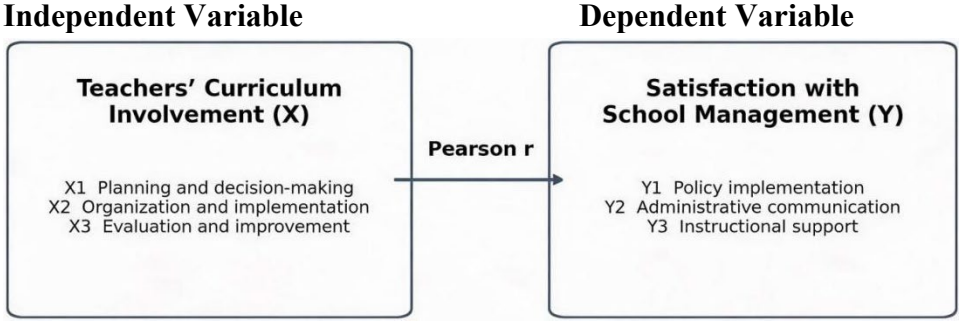


Figure 1 Conceptual framework adapted from Alsubaie, M. A. (2016) and OECD. (2020)

LITERATURE REVIEWS

Teachers' curriculum involvement refers to substantive curriculum-related input instead of superficial meeting attendance (Priestley et al., 2022). Its three dimensions include upstream planning and decision-making, in which teachers adapt curriculum policy under institutional constraints (Wallace & Priestley, 2017; Hizli Alkan & Priestley, 2019; Kneen et al., 2023); context-dependent organization and implementation with resource coordination and problem-solving (Scanlon, 2021; Ching, 2020); and iterative evaluation and improvement informed by curriculum evidence (Handelzalts et al., 2019; Wermke & Höstfält, 2014). Such curriculum-related work typically occurs within teacher teams rather than individual practice.

Satisfaction with school management captures teachers' evaluations of policy implementation, administrative communication and instructional support, independent of salary- or career-related satisfaction (Collie et al., 2012; Toropova et al., 2021). Existing literature theoretically differentiates the two constructs yet reports ambiguous associations: genuine participation may improve management perceptions via enhanced autonomy, but token or burdensome participation can make teachers more sensitive to organisational shortcomings (Özek & Büyükgöze, 2023). Teacher collaboration shapes both constructs, distinguishing meaningful contribution from mere task-taking (Reeves et al., 2017). This study therefore adopts correlation analysis to test their covariation using local Qingdao teacher data.

RESEARCH METHODOLOGY

This study adopts a quantitative design using a self-developed questionnaire. The intended participants were Qingdao in-service primary and secondary teachers with at least one-semester teaching experience. Per the Yamane (1973) formula (95 % confidence level, 0.05 sampling error), the minimum sample size was 137) Convenience sampling at cooperating schools, with extra questionnaires to reduce invalid returns, yielded 180 complete responses, which formed the analytical sample.

The questionnaire contained four parts:

1) Six closed-ended demographic items (school stage, school type, gender, total teaching experience, professional title, and whether the teacher held an administrative role)
2) 12-item curriculum involvement scale (three dimensions)
3) 9-item school-management satisfaction scale (three dimensions)
4) Optional open-ended comments

All 21 scale items used a 4-point Likert scale (1 = strongly disagree - 4 = strongly agree, no neutral point; midpoint = 2.50). For classification, means were rounded to two decimal places. Rating standards: 1.00-1.75 very low, 1.76-2.50 low, 2.51-3.25 moderate, 3.26-4.00 high. Composite scores for dimensions and overall constructs were calculated as equal-weighted item means.

The questionnaire underwent expert content review and a pilot test with 30 comparable teachers. Cronbach's alpha (≥ 0.70) assessed internal consistency. Primary data were collected with informed consent and confidentiality guarantees; secondary data came from literature and official documents. Descriptive statistics summarised participants and variables. Pearson correlation ($p < 0.05$) tested linear associations, which were interpreted only after

measurement-model validation. This cross-sectional study identifies covariation rather than causality.

Given single-source single-occasion data, four-step measurement-model assessment preceded hypothesis testing:

1) Harman's single-factor test: Unrotated principal-component analysis; a first component explaining more than 50% of variance was treated as a warning of possible common-method variance, not as proof of its presence or magnitude.

2) Exploratory factor analysis: Minimum-residual extraction with parallel analysis to determine the number of factors. Oblimin rotation was specified, but rotation was unnecessary for the retained single-factor solution; loadings ≥ 0.40 were considered salient.

3) Confirmatory factor analysis: Tested three models (one-factor, two-correlated-factors, and six-correlated-subdimensions) using maximum-likelihood estimation. Fit criteria: CFI, TLI ≥ 0.90; RMSEA, SRMR ≤ 0.08.

4) Convergent-discriminant validity: CR ≥ 0.70, AVE ≥ 0.50, Fornell-Larcker criterion, HTMT < 0.85.

The analyses reported here used jamovi and R on the 180 × 21 item matrix. Exploratory factor analysis used minimum-residual extraction, confirmatory factor analysis used maximum-likelihood estimation, and the single-factor screening used principal-component analysis. CR and AVE were calculated from the standardized two-factor CFA loadings.

RESEARCH RESULTS

This section presents questionnaire findings following the analytical workflow described in the methodology: data screening, participant profile, reliability testing, measurement-model assessment (EFA, CFA, convergent-discriminant validity), descriptive statistics and Pearson correlation analysis. The dataset includes 180 complete responses; composite scores are calculated as equal-weighted item means.

All 21 scale items use a four-point response format (1-4). Item distributions show moderate negative skewness (skewness −1.20 to −0.24; kurtosis −1.40 to −0.02), within the ±2 univariate normality range, with most responses concentrated in categories 3 and 4) Data screening confirmed no missing values and all item scores within the 1-4 range. Given convenience sampling from cooperating schools, results apply only to this sample and cannot be generalized broadly to all Qingdao teachers.

Participant demographics are summarised below for the 180 teachers. School-stage codes 1, 2, and 3 accounted for 71 (39.4%), 64 (35.6%), and 45 (25.0%) respondents, respectively. School-ownership codes 1 and 2 accounted for 156 (86.7%) and 24 (13.3%) respondents, respectively. Gender codes 1 and 2 accounted for 38 (21.1%) and 142 (78.9%) respondents, respectively. Teaching-experience codes 1 through 5 accounted for 30 (16.7%), 42 (23.3%), 55 (30.6%), 33 (18.3%), and 20 (11.1%) respondents, respectively. Professional-rank codes 1, 2, and 3 accounted for 48 (26.7%), 72 (40.0%), and 60 (33.3%) respondents, respectively. Administrative or curriculum-coordination role codes 1 and 2 accounted for 110 (61.1%) and 70 (38.9%) respondents, respectively. Age, educational attainment, and tenure at the current school were not among the six demographic variables. Only full-sample analyses are reported. Internal consistency was strong across all scales.

Table 1 Internal consistency of the study measures

Scale or domain	Items	Cronbach's α	Interpretation
Planning and Decision-Making	4	0.919	Acceptable to strong
Organization and Implementation	4	0.898	Acceptable to strong
Evaluation and Improvement	4	0.947	Acceptable to strong
Policy Implementation	3	0.858	Acceptable to strong
Administrative Communication	3	0.896	Acceptable to strong
Instructional Support	3	0.938	Acceptable to strong
Overall Curriculum Involvement	12	0.973	Strong
Overall Satisfaction	9	0.967	Strong

The lowest α value was 0.858 for Policy Implementation, well above the 0.70 threshold for acceptable reliability. High Cronbach's alpha indicates close inter-item correlation but does not guarantee construct validity.

Table 2 Descriptive statistics for teachers' curriculum involvement

Measure	Mean	SD	Minimum	Maximum
Planning and Decision-Making	3.226	0.670	1.75	4.00
Organization and Implementation	3.622	0.491	2.50	4.00
Evaluation and Improvement	3.250	0.735	1.75	4.00
Overall Curriculum Involvement	3.366	0.619	2.08	4.00

Total curriculum involvement fell in the high range near its lower boundary ($M = 3.366$, $SD = 0.619$). Organization and Implementation yielded the highest mean ($M = 3.622$). Planning and Evaluation scored moderately. The small standard deviation for Organization and Implementation signals similar teacher experiences in curriculum execution; the larger SD for Evaluation and Improvement reflects substantial variation in opportunities for curriculum review and revision.

Table 3 Descriptive statistics for satisfaction with school management

Measure	Mean	SD	Minimum	Maximum
Policy Implementation	3.380	0.651	2.00	4.00
Administrative Communication	3.187	0.686	2.00	4.00
Instructional Support	3.206	0.707	2.00	4.00
Overall Satisfaction	3.257	0.665	2.00	4.00

Overall management satisfaction was moderate ($M = 3.257$, $SD = 0.665$). Policy Implementation obtained the highest score, while Administrative Communication was lowest. The large standard deviation for Instructional Support indicates uneven provision of curriculum-related resources and guidance across teachers.

Table 4 Pearson correlations between curriculum involvement and satisfaction

Curriculum-involvement measure	r with overall satisfaction	p value	95% CI	N
Overall Curriculum Involvement	0.990	1.28e-151	0.986 to 0.992	180
Planning and Decision-Making	0.986	1.52e-141	0.982 to 0.990	180
Organization and Implementation	0.930	2e-79	0.907 to 0.948	180
Evaluation and Improvement	0.981	7.27e-128	0.974 to 0.985	180

All correlations were positive, extremely large and statistically significant ($p < 0.001$). The two composite scores shared approximately 98% of variance despite drawing on separate item pools. Such high correlation is characteristic of common-method bias from single-source cross-sectional self-report data rather than a substantive relationship between distinct constructs. Discriminant validity criteria cannot be satisfied at this magnitude. Consequently, H1 and H2 could not be meaningfully tested and are reported as unsupported; no predictive or explanatory inferences are drawn from these correlation coefficients.

Formal measurement-model testing followed. Harman's single-factor test produced an unrotated factor accounting for 78.69 % of total item variance, indicating a dominant common-method factor. KMO = 0.911 and Bartlett's sphericity test $\chi^2(210) = 6396.0$ ($p < 0.001$) supported factorability. Promax-rotated EFA failed to recover the expected two-factor structure; items from both scales loaded across both extracted factors, with cross-loadings and an improper solution.

Table 5 Exploratory factor analysis: single-factor minimum-residual loadings for the 21 items (n = 180)

Item	Factor 1
CI1	0.925
CI2	0.830
CI3	0.869
CI4	0.905
CI5	0.869
CI6	0.852
CI7	0.801
CI8	0.850
CI9	0.917
CI10	0.890
CI11	0.927
CI12	0.923
SM1	0.898
SM2	0.861
SM3	0.823
SM4	0.925
SM5	0.872
SM6	0.856
SM7	0.880
SM8	0.895
SM9	0.920

Confirmatory factor analysis results are presented below. One-factor and hypothesized two-factor models showed nearly identical poor fit; the disattenuated latent correlation between the two supposed constructs reached 1.016, demonstrating empirical non-distinction. The six-dimension and second-order models yielded only marginal fit improvements, with several inter-dimension correlations above 1.

Table 6 Fit indices for competing measurement models (n = 180)

Model	χ^2	df	CFI	TLI	RMSEA	SRMR
One-factor	1686	189	0.770	0.745	0.210	0.040
Two-factor (hypothesised)	1652	188	0.775	0.749	0.208	0.042
Six correlated dimensions	1286	174	0.829	0.794	0.188	0.045
Second-order (two higher-order factors)	1686	182	0.799	0.768	0.210	0.040

Convergent validity was satisfactory: high standardized loadings, composite reliability and AVE values for both scales. However, discriminant validity failed across all criteria: Fornell-Larcker condition was not satisfied, and HTMT = 1.015 exceeded the 0.85 cutoff.

Table 7 Convergent and discriminant validity of the two scales (n = 180)

Construct	Items	Standardised loadings	CR	AVE	√AVE	Estimated latenr with other construct
Curriculum involvement	12	0.795-0.933	0.975	0.768	0.876	0.990
Satisfaction with school management	9	0.821-0.925	0.968	0.771	0.878	0.990

In summary, the instrument cannot empirically separate curriculum involvement and satisfaction with school management in this sample. The study provides valid descriptive results (Tables 1-3), while Table 4 documents the extreme correlation caused by measurement limitations. The relational hypotheses remain untested rather than supported or rejected.

DISCUSSION & CONCLUSION

Based on 180 valid questionnaires, this study investigated teachers' three-dimensional curriculum involvement and school-management satisfaction.

Teachers reported high curriculum involvement near the lower threshold (M = 3.366, SD = 0.619), with the highest scores in organization and implementation (M = 3.622), aligning with the gap between intended and enacted curricula (Gouëdard et al., 2020). Moderate scores in planning (M = 3.226) and evaluation (M = 3.250) reflect limited upstream teacher input, given pre-set curriculum objectives (OECD, 2020). Overall management satisfaction was moderate (M = 3.257, SD = 0.665); policy implementation ranked highest and administrative communication lowest. These descriptive results remain robust regardless of discriminant-validity issues.

H1 and H2 could not be confirmed. Although correlations were large and significant (r = .930-.990), the constructs shared 86-98 % variance, which represents common-method bias rather

than a real-world relationship (Ryan & Deci, 2000). Variations among dimension-level correlations should not be interpreted substantively.

Four constrained conclusions are drawn:

1) Curriculum involvement was high but limited mainly to implementation work; teachers had less opportunity for planning and evaluation.

2) Teachers held moderate satisfaction with school management, with administrative communication and instructional support as weak points.

3) While reliability and convergent validity were acceptable, discriminant validity fully failed: one factor explained 78.7 % variance; one-factor and two-factor CFA models had nearly identical fit; disattenuated latent correlation and HTMT values were above

4) The hypothesized association could not be tested statistically because the two constructs were empirically indistinguishable.

For practice, school leaders should build formal channels for teachers to contribute to curriculum planning, respond to feedback, and improve administrative communication and instructional support. This study is limited by convenience sampling, severe common-method bias from single-source cross-sectional data, poor discriminant validity of the instrument, and uneven sample demographics that ruled out subgroup comparisons. Future research should separate the measurement of predictor and outcome variables, add autonomy-related scales, use stratified sampling, and adopt longitudinal or mixed-method designs. Methodologically, this study reminds researchers that measuring participation behaviour and satisfaction in one questionnaire requires strict discriminant-validity assessment.

To sum up, the sample showed high curriculum involvement and moderate management satisfaction. The $r = .990$ correlation stems from measurement defects instead of actual construct linkage. Only descriptive findings are reliable; the relational hypotheses remain untested.

REFERENCES

Aldridge, J. M., & Fraser, B. J. (2016). Teachers' views of their school climate and its relationship with teacher self-efficacy and job satisfaction. Learning Environments Research, 19, 291-307.

Alsubaie, M. A. (2016). Curriculum development: Teacher involvement in curriculum development. Journal of Education and Practice, 7(9), 106-107.

Chala, L. (2025). Secondary school teachers' participation in school level decision-making processes and its contribution to their job satisfaction. Science, Technology and Arts Research Journal, 14(1).

Ching, L. W. (2020). Strategies to reconcile beliefs and practices: A case study of teacher agency enactment in curriculum making. Curriculum and Teaching, 35(2), 65-82.

Collie, R. J., Shapka, J. D., & Perry, N. E. (2012). School climate and social-emotional learning: Predicting teacher stress, job satisfaction, and teaching efficacy. Journal of Educational Psychology, 104(4), 1189-1204.

Gouëdard, P., Pont, B., Hyttinen, S., & Huang, P. (2020). Curriculum reform: A literature review to support effective implementation (OECD Education Working Papers No. 239). OECD Publishing.

Handelzalts, A., Nieveen, N., & Van den Akker, J. (2019). Teacher design teams for school-wide curriculum development: Reflections on an early study. In J. Pieters, J. Voogt, & N. Pareja Roblin (Eds.), Collaborative curriculum design for sustainable innovation and teacher learning (pp. 55-82). Springer.

Hizli Alkan, S., & Priestley, M. (2019). Teacher mediation of curriculum making: The role of reflexivity. Journal of Curriculum Studies, 51(5), 737-754.

Jabeen, S. (2018). Effects of teacher empowerment strategies on teachers' motivations: A phenomenological study in a private secondary school system Karachi, Pakistan [Master's thesis, Aga Khan University].

Kgaswe, J. E. (2021). Teacher perceptions of the competence of the school management team to utilise effective communication and its influence on job satisfaction [Master's thesis, University of Johannesburg].

Kim, H.-G. (2025). Does teacher autonomy improve job satisfaction? An analysis of TALIS 2018 data from Korean lower secondary teachers. The Journal of Korean Teacher Education, 41(5), 69-99.

Kneen, J., Breeze, T., Thayer, E., John, V., & Davies-Barnes, S. (2023). Pioneer teachers: How far can individual teachers achieve agency within curriculum development? Journal of Educational Change, 24, 243-264.

Liu, S., Keeley, J. W., Sui, Y., & Sang, L. (2021). Impact of distributed leadership on teacher job satisfaction in China: The mediating roles of teacher autonomy and teacher collaboration. Studies in Educational Evaluation, 71, 101099.

OECD. (2020). TALIS 2018 results (Volume II): Teachers and school leaders as valued professionals. OECD Publishing. https://doi.org/10.1787/19cf08df-en

Özek, B. Y., & Büyükgöze, H. (2023). Examining the relationship of distributed leadership and job satisfaction: On the mediating roles of teacher self-efficacy and co-operation. Education and Science, 48(213), 255-277.

Priestley, M., Alvunger, D., Philippou, S., & Soini-Ikonen, T. (2022). Curriculum making and teacher agency. In R. J. Tierney, F. Rizvi, & K. Ercikan (Eds.), International encyclopedia of education (4th ed.). Elsevier.

Priestley, M., Biesta, G., & Robinson, S. (2015). Teacher agency: An ecological approach. Bloomsbury Academic.

Reeves, P. M., Pun, W. H., & Chung, K. S. (2017). Influence of teacher collaboration on job satisfaction and student achievement. Teaching and Teacher Education, 67, 227-236.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. American Psychologist, 55(1), 68-78.

Scanlon, D. (2021). Teacher agency in enacting physical education in a period of curriculum change and reform in Ireland. The Curriculum Journal, 32(1), 48-66.

Toropova, A., Myrberg, E., & Johansson, S. (2021). Teacher job satisfaction: The importance of school working conditions and teacher characteristics. Educational Review, 73(1), 71-97.

Tupthai, T., & Chansirisira, P. (2025). Needs assessment of participatory school management for academic effectiveness in Provincial Administrative Organization schools: A study of Northeast Thailand. Journal of Education and Learning, 14(5), 348-356.

Vannasuk, N., Julsuwan, S., & Chansirisira, P. (2025). Needs assessment of participatory school management for educational quality development of small primary schools under the Office of Basic Education Commission in the Northeastern Region. Journal of Education and Learning, 14(5), 324-333.

Wallace, C. S., & Priestley, M. R. (2017). Secondary science teachers as curriculum makers: Mapping and designing Scotland's new Curriculum for Excellence. Journal of Research in Science Teaching, 54(3), 324-349.

Wermke, W., & Höstfält, G. (2014). Contextualizing teacher autonomy in time and space: A model for comparing various forms of governing the teaching profession. Journal of Curriculum Studies, 46(1), 58-80.

Yamane, T. (1973). Statistics: An introductory analysis (3rd ed.). Harper & Row.

Zhu, J., Yao, J., & Wu, M. (2018). Extrinsic autonomy of teaching and job satisfaction: Mediating role of intrinsic autonomy of teaching. Psychological Development and Education, 34(3), 338-345.

Data Availability Statement: The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

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