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World Education Leadership Symposium Online Conferences 2021 (WELSmain)

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Prof. Dr. Stephan Gerhard Huber

Host WELSmain 2021 (since 2009) / Veranstalter WELSmain 2021 (seit 2009):

Institute for the Management and Economics of Education (IBB) /
University of Teacher Education Zug (PH Zug)

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Association of school leaders and teachers, ministries and authorities as well as further universities and partners / Schulleitungs- und Lehrerverbände, Ministerien und Behörden sowie weitere Hochschulen und Partner

**PARADIGM CHANGE FROM COGNITIVE LEARNING TO
COMPETENCY-ORIENTED LEARNING
THROUGH SCHOOL MUSEUMS:
A MEDIATED MODEL OF CHINESE PRINCIPALS'
INSTRUCTIONAL LEADERSHIP**

Ying Hu

East China Normal University

Ibrahim Duyar

Arkansas State University

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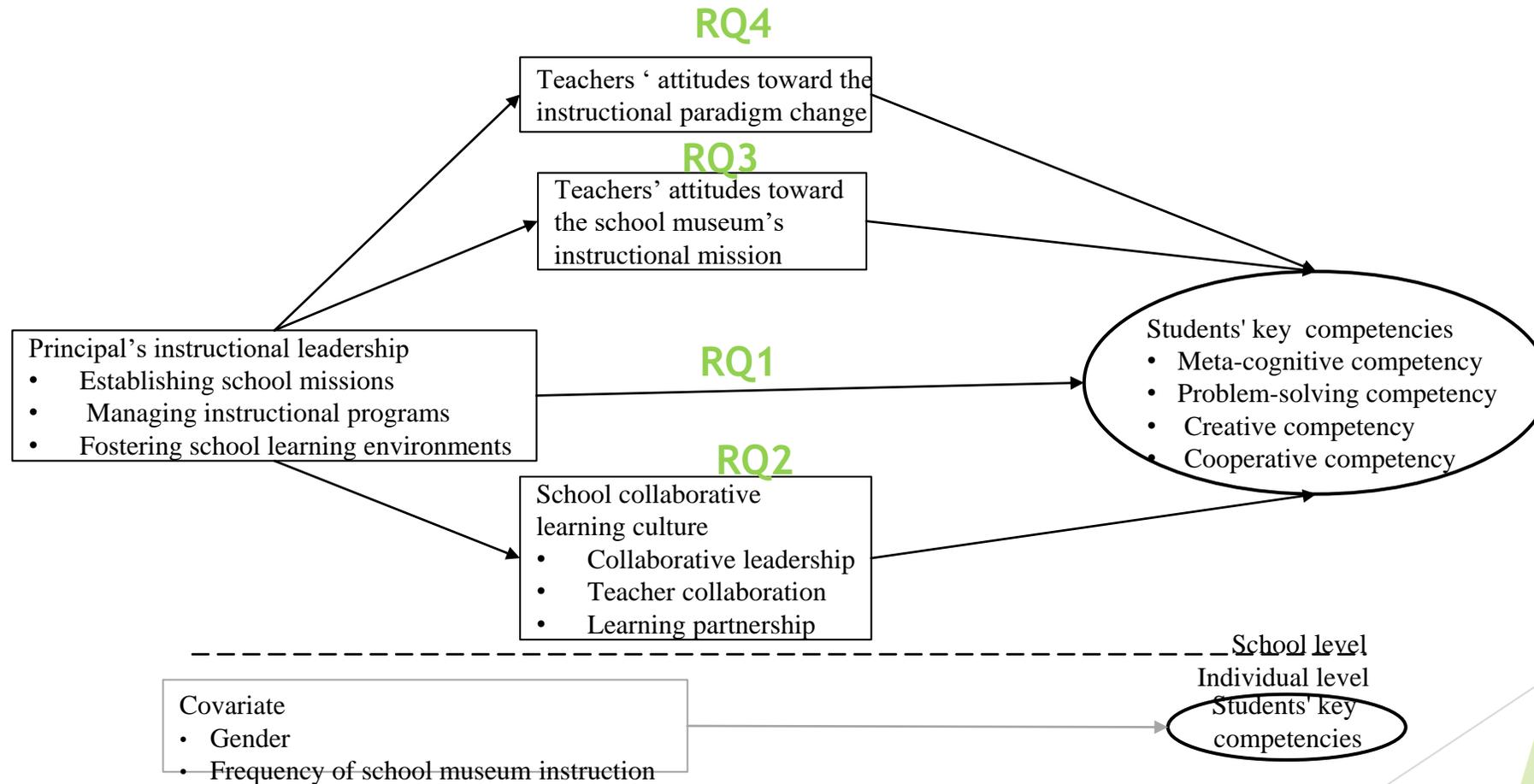
Purpose of the Study

- ▶ To explore the paradigm change from cognitive learning to competency-oriented learning in China reflected in the context of school museums.
- ▶ Four competencies: The cognitive competency, the creative competency, the cooperative competency, and the professional competency (The Central Office of P.R.C., 2017)
- ▶ The thriving of school museums is identified as one of the means to implement the new paradigm to learning.

Theoretical Framework

The theory of holistic learning guided this study.
(Miller, 1990, 2009)

Conceptual Framework



Methods

- ▶ Quantitative Resesarch Design
- ▶ Random Sampling:
- ▶ A total of 22 public primary schools were selected from the eastern coastal area cities including Shanghai, Shaoxing, Hangzhou and Foshan. 111 teachers teaching in the context of school museums (female 68.47%) participated in this research.
- ▶ It is interesting to note that more than 70% of teachers involving museum teaching have been teaching for more than 10 years.

Data Analysis Strategy

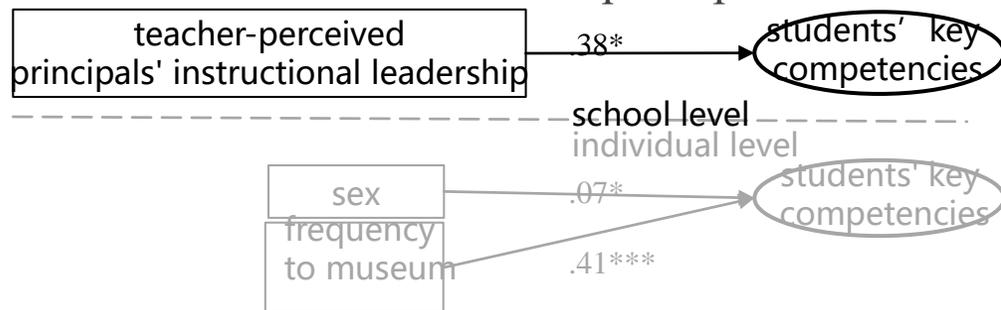
- ▶ multilevel structure equation modeling (MSEM)
- ▶ Multilevel confirmatory factor analysis (MCFA)
- ▶ Fit indices including the comparative fit index (CFI), the Tucker–Lewis index (TLI), the root-mean-square error of approximation (RMSEA), the chi-square with degree of freedom, and the standardized root-mean square residual (SRMR) were used to evaluate models.

Instruments:

- ▶ PIMRS (Hallinger, 1982/2005) for principals' instructional leadership (Cronbach' alpha 0.98)
- ▶ SCS (Gruenert & Valentine, 1998) three dimensions for measuring school collaborative learning culture (Cronbach' alpha 0.97)
- ▶ Self-developed measurement (Hu & Duyar, 2020) for teachers' attitudes toward instructional mission for school museums (Cronbach' alpha 0.87)
- ▶ TATCS (Kin & Kareem, 2017) for teachers' attitudes toward instructional paradigm change (Cronbach's alpha 0.87)
- ▶ Competency tendency scale (Lai & Hwang, 2014) for key competency of students ((Cronbach's alpha 0.94).

Findings

- ▶ **RQ1: Do principal's instructional leadership, teachers' attitudes toward instructional paradigm change, teachers' attitudes toward the school museum's instructional mission, and schools' collaborative learning culture significantly influence students' level of (a) cognitive competencies, (b) creative competencies, and (c) cooperative competencies?**
- ▶ Yes. All these variables have a significant influence on the students' competencies.
- ▶ The influence of the principal's instructional leadership on students' key competencies



Note: (1) * $p < .05$; *** $p < .001$; (2) All coefficients are standardized results.

Figure 2a The influence of the principal's instructional leadership. Model fitting: $\chi^2(16) = 50.88, p < .001$; RMSEA = .04; CFI = .97; TLI = .96

RQ1: Do principal's instructional leadership, teachers' attitudes toward instructional paradigm change, teachers' attitude towards the school museum's instructional mission, and schools' collaborative learning culture significantly influence students' level of (a) cognitive competencies, (b) creative competencies, and (c) cooperative competencies?

- The influence of teachers' attitudes toward instructional paradigm change and instructional mission of school museums on students' key competencies

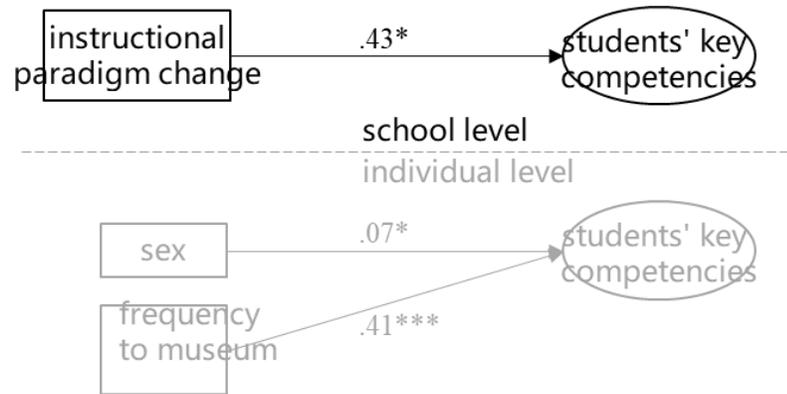


Figure 3 The influence of instructional paradigm change. Model fitting: $\chi^2(16) = 49.06, p < .001$; RMSEA = .04; CFI = .97; TLI = .96.

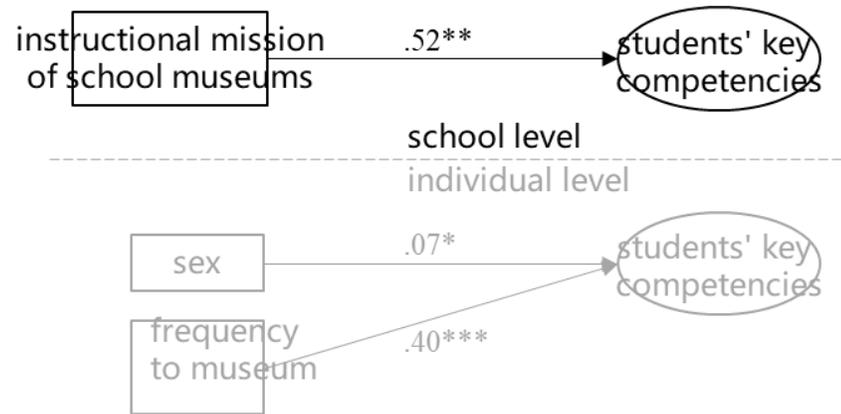


Figure 4 The influence of instructional mission of school museums. Model fitting: $\chi^2(16) = 53.84, p < .001$; RMSEA = .05; CFI = .97; TLI = .96.

Note: (1) * $p < .05$; *** $p < .001$; (2) All coefficients are standardized results.

RQ1: Do principal's instructional leadership, teachers' attitudes toward instructional paradigm change, teachers' attitude towards the school museum's instructional mission, and schools' collaborative learning culture significantly influence students' level of (a) cognitive competencies, (b) creative competencies, and (c) cooperative competencies?

- ▶ The influence schools' collaborative learning culture on students' key competencies

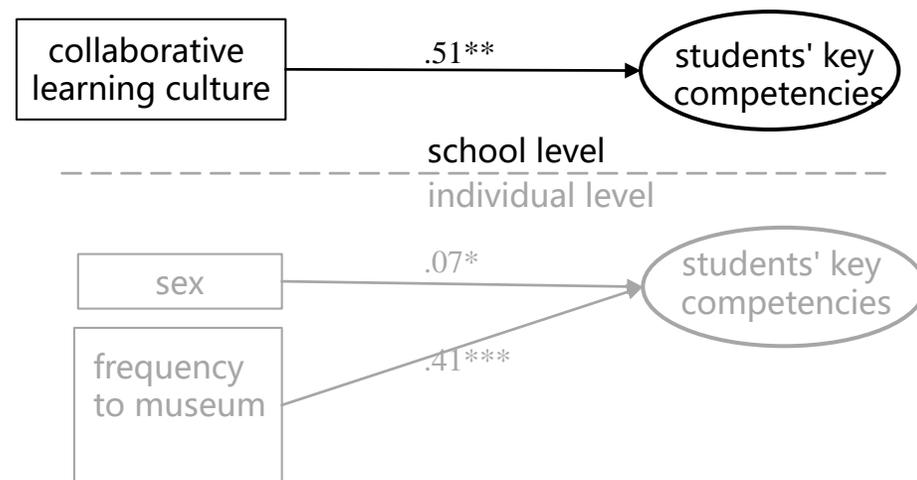


Figure 5a The influence of the school's collaborative learning culture. Model fitting: $\chi^2(16) = 57.62, p < .001$; RMSEA = .05; CFI = .97; TLI = .95.↵

RQ2: Do schools' collaborative learning culture mediate the relationship between principal's instructional leadership and students' level of (a) cognitive competencies, (b) creative competencies, and (c) cooperative competencies?

► Yes.

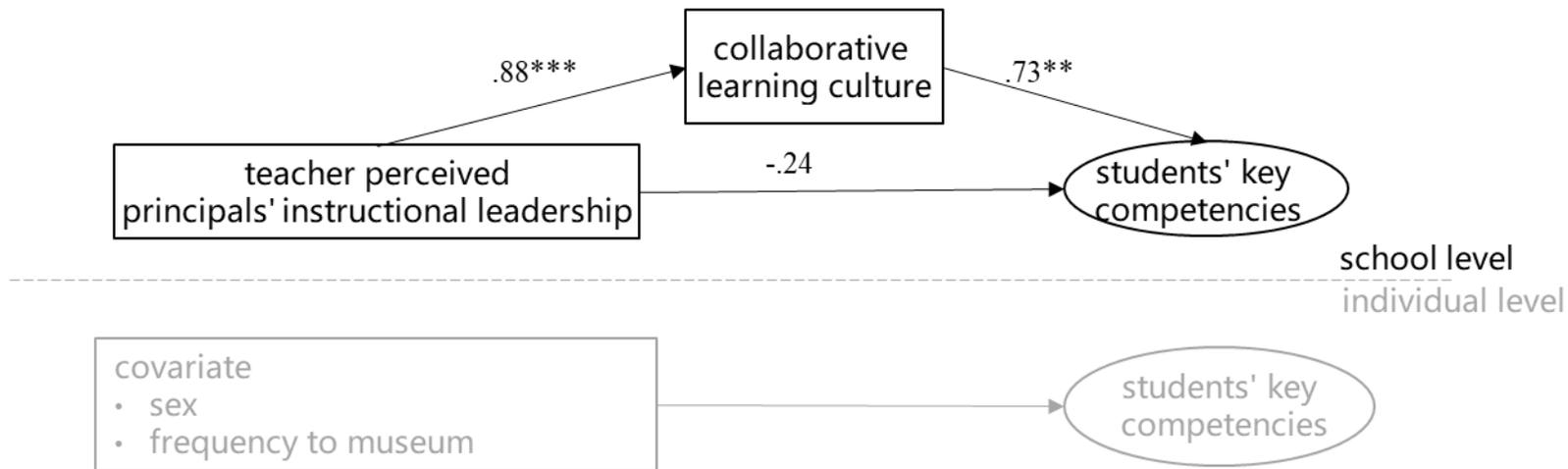


Figure 6 The mediating role of the museum's teaching mission. The model fitting indicators are: $\chi^2(19) = 52.10, p < .01$; RMSEA = .04; CFI = .98; TLI = .96.

Note: (1)*** $p < .001$; (2) All coefficients are standardized results.

RQ3: Do teachers' attitudes toward school museums' instructional mission mediate the relationship between principal's instructional leadership and students' level of (a) cognitive competencies, (b) creative competencies, and (c) cooperative competencies?

► Yes.

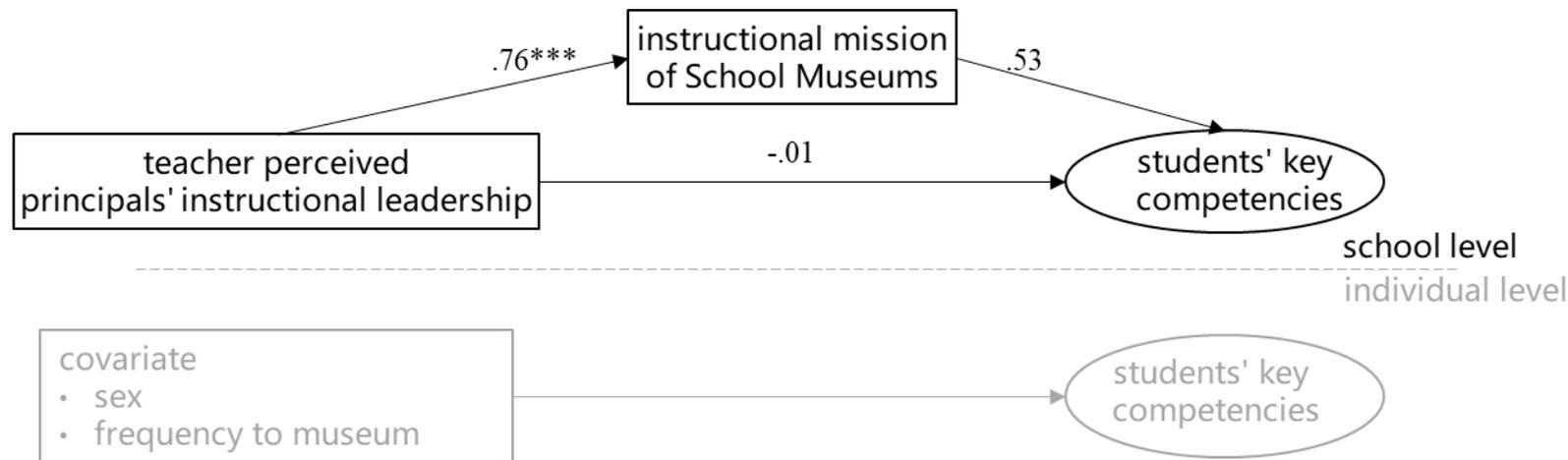


Figure 7 The mediating role of school's collaborative learning culture. The model fitting indicators are: $\chi^2(19) = 58.77, p < .01$; RMSEA = .04; CFI = .97; TLI = .96.

Note: (1) ** $p < .01$; *** $p < .001$; (2) All coefficients are standardized results.

RQ4: Do teachers' attitudes toward instructional paradigm change mediate the relationship between principal's instructional leadership and students' level of (a) cognitive competencies, (b) creative competencies, and (c) cooperative competencies?

- ▶ Teachers' attitudes toward instructional paradigm change **did not** mediate the relationship between the teacher's perception of the principal's leadership and students' key competencies, with a mediating effect of 0.31, $p = 0.32$ ($p > 0.05$) .

Conclusions

- ▶ This research has reinforced the evidences that the principals' instructional leadership can positively predict students' performances. While the former researches focus more on the academic performances, which are mainly cognitive abilities, this research target the tendencies students presented in both cognitive and non-cognitive abilities.
- ▶ The research has testified that contrary to the common understanding about China's cognition and standardized test-focused learning approach, China has made a clear choice towards incorporating non-cognitive and cognitive aspects of learning both in policy and in practice.
- ▶ In addition to human factors, which are commonly studied in literature, the study showed that "space" where the learning takes place is also an important contributor of students' learning both cognitively and non-cognitively.

Limitations

- ▶ The samples of this research were mainly from teachers' perspective.
- ▶ Data is limited in region.

Implications

- ▶ Further research could be carried out in qualitative investigation to explore how the principals and teachers have actually done in realizing instructional paradigm change with their school museums.

Thank you!