

# SCHOOL LEADERSHIP AND TEACHERS' IMPLEMENTATION OF CURRICULUM REFORM IN TAIWAN: MEDIATING EFFECT OF TEACHERS' ORIENTATION

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## Abstract

In response to the global education development trend, Taiwan had officially launched the Competency-based Education Reform in 2019. Although school leadership has been linked to teachers' changes, the relationship's underlying mechanism remains unclear. Thus, we aimed to examine the mediating effect of teachers' orientation toward curriculum changes on the relationship between school leadership and teachers' implementation of reform. In October 2020, we conducted a questionnaire survey on teachers in 53 elementary and middle schools among six counties/cities in Taiwan. Among 506 valid responses, 345 teachers are women (68.2%) and 161 are men (31.8%). We adapted the Education Reform Scale developed by Ramberg in 2014. The dependent variable was "Teachers' Implementation of Curriculum Reform (3-item)". The main predictors included "School Leadership (4-item)" and "Teachers' Orientation toward Changes (3-item)". Each item was responded to on a 6-point scale from strongly disagree to strongly agree. We used SPSS PROCESS macro to conduct the mediation analysis. After controlling for teacher's characteristics, the regression model showed that school leadership is positively associated with teachers' implementation of reform ( $\beta=0.450$ ,  $p<0.001$ ). After adding teachers' orientation in the model, the association of school leadership with teachers' implementation of reform attenuated but remained statistically significant ( $\beta=0.286$ ,  $p<0.001$ ). Teachers' orientation showed a significant indirect effect on the association between school leadership and teachers' implementation of reform ( $\beta=0.164$ ; Bootstrap 95% CI=0.105 to 0.227). This study suggests that teachers' orientation toward curriculum changes partially mediates the relationship between school leadership and teachers' implementation of the Competency-based Education reform.

**Keywords:** *Competency-based education, curriculum reform, school leadership, teachers' orientation, Taiwan.*

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## 1. Introduction

In response to the global education development trend (Chappell, Gonczi, & Hager, 2020; Cheng, 2017; Fullan, 2015; Moon, 2007), Taiwan has officially implemented the Competency-based Education Reform in 2019. This education reform was focusing on "competency" for elementary school to high school students (National Academy for Educational Research, 2014). The competency-based interdisciplinary curriculum is at the center of this reform, and the new curriculum is expected to cultivate students' ability to confront challenges and solve problems (Chen & Huang, 2017; Henri, Johnson, & Nepal, 2017).

However, whether teachers can implement changes in teaching methods following the new curriculum guidelines is still unknown. Also, although school leadership has been linked to teachers' changes, the relationship's underlying mechanism remains unclear.

## 2. Design

This study was a cross-sectional questionnaire survey design.

### 3. Objectives

The objectives of the present study were to: (1) examine the relationship between school leadership and teachers' implementation of curriculum reform, and (2) examine the mediating effect of teachers' orientation toward curriculum changes on the above relationship.

### 4. Methods

We conducted a questionnaire survey on teachers in 53 elementary and middle schools among six counties/cities in Taiwan in October 2020. The content of the questionnaire included the Education Reform Scale developed by Ramberg (Ramberg, 2014). The outcome variable was "Teachers' Implementation of Curriculum Reform (3-item, Cronbach's  $\alpha=0.867$ )". The independent variable was "School Leadership (4-item, Cronbach's  $\alpha=0.867$ )" and the mediator was "Teachers' Orientation toward Changes (3-item, Cronbach's  $\alpha=0.867$ )". Each item was responded to on a 6-point scale from strongly disagree to strongly agree. We used the model 4 of SPSS PROCESS macro to conduct the mediation analysis.

### 5. Results

Among 506 valid responses, 345 teachers are women (68.2%) and 161 are men (31.8%). There are 264 elementary school teachers (52.2%), and 242 middle school teachers (47.8%). Regarding the teachers' implementation of reform, most teachers responded that they had been implemented curriculum changes, and those who responded they did not implement changes were 4.7% to 7.1%. The multiple linear regression model (Table 1) showed that school leadership is positively associated with teachers' implementation of reform (Model 2,  $\beta=0.450$ ,  $p<0.001$ ) after controlling for teacher's characteristics and other covariates. After adding teachers' orientation in the model, the association of school leadership with teachers' implementation of reform attenuated but remained statistically significant (Model 3,  $\beta=0.286$ ,  $p<0.001$ ). Teachers' orientation showed a significant indirect effect on the association between school leadership and teachers' implementation of reform ( $\beta=0.164$ ; Bootstrap 95% CI=0.105 to 0.227).

Table 1. Multiple linear regression model of teachers' implementation of reform.

Outcome Independent variable (ref)	Model 1	Model 2	Model 3
	Teachers' Orientation $\beta$	Implementation of Curriculum Reform $\beta$	$\beta$
School Leadership	0.279 <sup>***</sup>	0.450 <sup>***</sup>	0.286 <sup>***</sup>
Teachers' Orientation			0.588 <sup>***</sup>
Male	-0.005	-0.002	0.001
Educational attainment	0.099 <sup>*</sup>	0.029	-0.030
Background	-0.089 <sup>*</sup>	-0.063	-0.011
Teaching School	-0.084	-0.026	0.023
Years of service	-0.102 <sup>*</sup>	-0.032	0.028
Position (Mentor)			
General	0.082	-0.014	-0.062
Administration	0.090	0.068	0.015
Area (Taichung City)			
Hsinchu City	0.100	0.067	0.008
Hsinchu County	-0.002	-0.022	-0.021
Miaoli County	-0.036	0.022	0.043
Changhua County	-0.031	0.006	0.025
Nantou County	0.007	0.004	-0.001
Teaching experience (less than 1 year)			
1-2 years	-0.017	0.016	0.026
2 or more years	0.112 <sup>*</sup>	0.132 <sup>**</sup>	0.066

\* $p<0.05$ , \*\* $p<0.01$ , \*\*\* $p<0.001$

## 6. Discussion

This study found that school leadership was associated with teachers' implementation of the Competency-based Education reform. Also, teachers' orientation toward curriculum changes partially mediates the association. Most countries have recognized Competency-based education, and it is also the common goal of education for everyone (Arguelles et al. 2000, Cheng, 2017; Fullan, 2015; Salganik & Rychen, 2003; Wu & Chan, 2018). To keep up the pace with the world for Taiwan's education, all educators must devote themselves to competency-based education reforms (Chen & Huang, 2017).

This research shows that school leadership can directly influence teachers' implementation of curriculum reform. Through school leadership's overall planning of curriculum and teaching, teachers can make curriculum planning and implementation changes. Therefore, to make the reform influential, school leaders and their teams must have clear curriculum plans and measures so that teachers can implement them in practice. At the same time, this study also pointed out that the willingness of teachers to participate in reform will be affected by school leadership. In other words, if school leadership fails to play the role of leading teachers and makes teachers willing to join the school in reforms, the effectiveness of change will be reduced. Therefore, school leaders and their teams must develop curriculum and teaching and reach a consensus with all the members in school to make the reform works.

## 7. Conclusion

This study suggests that teachers' orientation toward curriculum changes partially mediates the relationship between school leadership and teachers' implementation of the Competency-based Education reform. To realize teachers' implementation of curriculum changes, we recommend that the school leadership should work with teachers to build stronger connection between school leadership and teachers. At the same time it is necessary to reach a consensus with all the members in school to push the reform forward.

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