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Analysis of the Effect of School Organizational Culture and Professional Learning Communities on Teacher Efficacy

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Introduction. The aim of the study is to find ways to expand teacher efficacy by examining how the teacher's efficacy varies according to the school organisation culture and the level of the professional learning community.
Materials and Methods. Survey methods were used to collect the data from 400 in-service teachers at elementary, middle, and high schools in South Korea, with five schools selected from each region, respectively. This study utilizes the data from 359 teachers. This study used a random sampling method, taking the location of the school into consideration. Descriptive statistics were used to examine the overall trends in school organisation culture. T-test was used to examine differences among research variables depending on the personal background of gender and teacher level, and the F-test and Scheffe tests were used for school level and teaching experience.
Results. First, school's organization culture is transforming and evolving into a more ideal and model culture. As schools increasingly transform into innovative schools, innovative cultures and group cultures gradually form. Second, a school is a type of organization system that elicits responses elicits a variety of responses from the teachers depending on their personal background and characteristics. Third, professional learning communities have a positive effect on teacher efficacy. Therefore, school organisation culture can be seen as a better predictor of teacher efficacy than a professional learning community.
Discussion and Conclusion. The article is of interest to the managers of the school education system.

Keywords: school organizational culture, professional learning community, teacher efficacy, school reform, school improvement, organizational change

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Анализ влияния школьной организационной культуры и профессионального учебного сообщества на эффективность деятельности учителей

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Введение. В школах особое внимание уделяется тому, как учителя выполняют свою роль, поскольку педагоги с высоким уровнем эффективности демонстрируют успешное применение своих профессиональных знаний и навыков. Их самоэффективность влияет на академические достижения учащихся. Цель

исследования – проанализировать влияние организационной культуры школы и профессионального образовательного сообщества на эффективность деятельности педагога.
Материалы и методы. Материалами исследования послужили данные опроса 359 учителей, для отбора респондентов применялся метод случайной выборки с учетом месторасположения школы. Для проверки общих тенденций в школьной организационной культуре была использована дескриптивная статистика. С помощью Т-теста изучались различия среди исследовательских переменных в зависимости от гендерного статуса и профессионального уровня, F-тест и тест Шеффе применялись для оценки уровня школы и учительского опыта.
Результаты исследования. По результатам проведенного анализа было определено, что организационная культура школы трансформируется и развивается в более идеальную и модельную культуру. По мере того, как школы все больше превращаются в инновационные учебные центры, постепенно формируются инновационные и групповые культуры. Во-вторых, школа – это тип организационной системы, которая вызывает различные реакции со стороны учителей в зависимости от их личного опыта и характеристик. В-третьих, профессиональные учебные сообщества оказывают положительное влияние на эффективность работы учителей. Таким образом, школьная организационная культура выглядит лучшим прогностическим параметром эффективности учительского труда, чем профессиональное учительское сообщество.
Обсуждение и заключение. Статья предназначена для специалистов по управлению школьным образованием.

Ключевые слова: организационная культура школы, профессиональное учебное сообщество, эффективность работы учителя, школьная реформа, совершенствование школы, организационное изменение

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Introduction

Within school organizations, there is a high level of interest in how teachers fulfill their role, as teachers have a key role and responsibility in education and the school system. For example, a teacher with high self-efficacy has high expectations for student improvement and progress, takes responsibility for their students' learning, sets learning goals and strategies, and tries to find effective teaching methods. Also, teachers with high efficacy exhibit high levels of skills and expertise, and achieve education goals, including student achievement despite challenging environments and situations. Just as self-efficacy affects people's performance, a teacher's efficacy affects their teaching performance and overall day-to-day activities [1].

Nevertheless, the standards of teacher efficacy in South Korea are shown to be the lowest amongst 23 countries from the 2008 Teaching and Learning International Survey (TALIS), and showed similarly low levels of teacher efficacy in the 2013 TALIS, amongst 34 countries [2].

There need to be more studies and research on increasing the teacher efficacy of South Korean teachers, taking into consideration participation in professional development activities as a major variable that affects the efficacy of teachers [3]. A teacher's efficacy develops through positive self-evaluation built on successful experiences. Thus, teacher efficacy can be improved by participating in professional development activities, where teachers can acquire the knowledge and skills that underlie successful experience. In addition, through the participation and engagement process, teachers receive positive feedback and encouragement, and it creates synergy for problem solving through interaction with peer teachers,

This study overcomes the limitations of leadership theory of self-efficacy within previous studies on professional learning communities, which is entwined and closely related to teacher efficacy. This study begins by observing the recent and comprehensive discussions regarding approaches to leadership. Ross & Bruce's

study found that participation in teacher professional development programs enhanced teacher efficacy, especially efficacy in learning management [4].

However, it is difficult for professional learning communities to settle properly or become fully formed compared to the degree to which professional learning communities are emphasized and established within the school site. A study by Eaker et al. found that while US teachers accept the concept of a professional learning community, the teachers have low abilities to implement and apply the concept of a professional learning community in their environments [5]. This is due to the reason that it is not enough to change the administrative structure of the school as a way to improve the school, rather the consciousness of the constituent members need to change, which is not easy [6]. In other words, it is in line with Sarason's criticisms that changing the structure without changing the belief system cannot lead to a fundamental change [7].

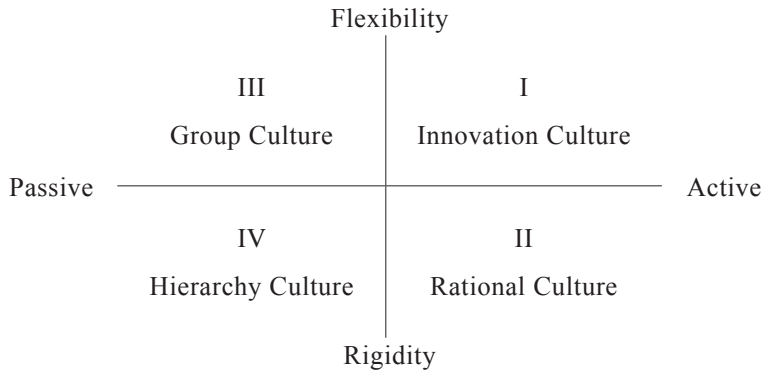
In sum, this study seeks to investigate the effect on teacher efficacy at the group or organizational level of school organizational culture and teacher's learning community, rather than on an individual leader level. This study seeks to find ways to expand teacher efficacy by examining how the teacher's efficacy varies according to the school organization culture and the level of the professional learning community.

Literature Review

1. *School Organizational Culture*. Organizations have different cultures, each with a different purpose and different activities. Organizational culture refers to the assumptions, beliefs, values, norms and customs, habits, and rituals that the members of the organization share in the process of adapting to the external environment and solving internal problems. School organizational culture refers to the culture within the school organization [8]. In other words, it means a unique organizational culture of the school. Academia's interest in school organizational culture is due to continuous reports that school organizational culture has a direct or indirect effect on school organizational effectiveness. The concept of school organizational culture is useful for explaining the behavior of members in the school organization from a more long-term and comprehensive perspective [9].

One way to understand the school organizational culture is to approach the school organizational culture through categorization. However, categorizing school organizational culture is challenging as it involves a combination of various factors at work, and the fact that it is being categorized is itself also controversial. In this study, the conceptual division criteria are premised on the concept of organizational culture: "adapting to the external environment of the school, the process of addressing internal problems" [10]. Therefore, in order to categorize the school organizational culture, the behavioral dimension to the external environment is divided as active and passive, and the process of solving internal problems is divided into flexibility and rigidity. It was divided into rational culture, group culture, and hierarchy culture, as presented in Figure [10]. Innovation culture seeks to apply new teaching methods by developing ideas and educational programs enthusiastically and in an exploratory fashion in response to changes in the external environment. Rational culture actively responds to changes in the external environment, emphasizes the achievement of educational goals in school operations, and considers the consequences of success or failure, but shows rigidity in problem solving. Group culture is passive in changing the external environment but emphasizes mutual teamwork or cooperation, and shows flexibility in the problem-solving process. Hierarchy culture is passive in the external environment, and the operation of the school is managed under the direction of the principal or vice principal according to the procedures and regulations.

2. *Professional Learning Community*. Discussions of teachers' professional learning communities, and its applicability on the school site have been ongoing in the United States and other European



F i g u r e. Classification of school organizational culture types

countries for the past 20 years to achieve school reform. In particular, in the United States, as part of the efforts to innovate school sites, educators and administrators quickly implemented teachers' professional learning communities [11]. South Korea attempted many conceptual approaches in the direction of school innovation, and recognized the necessity of forming a professional learning community (PLC) that can achieve developmental growth for teachers together as a group, rather than at the individual level. A professional learning community is an organization that continuously improves the problem solving ability of the organization by sharing new knowledge acquired by individuals at an organizational level [12–16].

Professional learning communities generally have a common concept. The main agent of the professional learning community is the teacher, and the goal is to promote student learning, which is why the teachers work together to improve teaching and learning. In sum, the concept of a professional learning community in this study refers to a community where teachers explore and continuously improve all areas for teaching-learning activities through active learning and cooperation with fellow teachers, aiming at student growth and learning promotion [6].

3. *Teacher Efficacy*. Teacher efficacy is the personal judgment or belief about the various abilities required to perform the tasks assigned to the teacher [3]. For example, the efficacy of teaching and learning is the belief that alternative teaching activities, assessment strategies and explanations can be used, and the efficacy of teacher participation in students provides knowledge and emotional support to students and motivates them to learn. Being able to do that means believing in one's own ability. Teachers' efficacy in classroom management also means a belief in their ability to effectively manage the behavior of students with disabilities and create an orderly learning environment [17].

The efficacy of teachers in school organizations has a significant impact on the quality and outcomes of school education. Teacher efficacy refers to expectations or beliefs about the teacher's own ability to have a positive impact on students' learning [18]. Teacher efficacy is also a teacher's belief that it is possible to help struggling students learn.

Materials and Methods

1. *Research Subjects*. To conduct this study, 400 teachers (20 ~ 40 units depending on school size) were surveyed from a total of 15 schools located in Daejeon, Chungnam, and Gyeonggi (5 schools from each region). This study used a random sampling method, taking the location of the school into consideration. Of the 370 questionnaires that were collected, 359 (approximately 89.7%, discarding incomplete questionnaires) were used for analysis.

2. *Measurement Tools.*

A) Measurement Tools for School Organizational Culture. In this study, we approached the quantitative measurement of school organizational culture empirically and practically. Therefore, the questionnaire for school organizational culture used Suk-Yeol Lee's questionnaire [10], which was designed with the situation of the school in mind, referring to previous studies by Quinn & McGrath and Lundberg [18]. The questionnaire structure divides school organizational culture into innovation culture, rational culture, group culture, and hierarchy culture, and composed of five question items for each culture type. The questionnaire was applied to a 5-point scale, and the reliability and the validity of the final questionnaire was confirmed. The Cronbach α values of the measurement tool used in this study showed innovation culture at .82, rational culture at .77, group culture at .83, and hierarchy culture at .87.

B) Measurement Tools for Professional Learning Community. The professional learning community questionnaire used Suk-Yeol Lee's [6] Professional Learning Community Questionnaire (PLCQ), which developed 24 items through rigorous validity and reliability tests, obtained from domestic and international studies. In Lee's research, the sub-factors of the professional learning community consisted of 4 items of student growth and learning (hereinafter 'learning promotion'), 4 items of cooperative culture, 6 items of group research, and 10 items of practice and continuous improvement (hereinafter 'practice'). The questionnaire applied a Likert five-point scale, and likewise in Suk-Yeol Lee's study that developed the measurement tool, the Cronbach α coefficients were all over .80, confirming its reliability. The Cronbach α of the measurement tool used in this study show that learning promotion was .85, cooperation culture .90, group exploration .93, practice duration .96, and the total was .97.

C) Measurement Tools for Teacher Efficacy. To measure teacher efficacy, we used the teacher efficacy questionnaire developed by D. K. Choi [19], which was based on previous studies. Teacher efficacy is composed of a total of 15 questions: 4 questions of confidence, 7 questions of self-regulation, and 4 questions of task difficulty (hereinafter referred to as 'challenge'). These questions had a 5-point Likert scale applied to them and the higher the score means the higher the level of teacher efficacy and the measured scores were summed and then evaluated. The Cronbach α for the measurement tool used in this study was .78 for confidence, .87 for self-regulation, .78 for challenge, and 91 in total.

3. *Analysis Method*. The statistical method of analysis for the data collected through the questionnaire is as follows.

First, descriptive statistics (average and standard deviation) were used to examine the overall trends in school organizational culture, professional learning communities, and teacher efficacy.

Second, the *t*-test was used to examine differences among research variables depending on the personal background of gender and teacher level, and the F-test and Scheffe tests were used for school level and teaching experience.

Third, correlation and Enter method were used to perform multiple regression analysis to analyze which variables of school organizational culture and professional learning community had a significant effect on teacher efficacy.

Results

1. *Overall Trends in School Organizational Culture, Professional Learning Community, and Teacher Efficacy.* The results of how teachers generally perceive school organizational culture, professional learning community, and teacher efficacy are presented in Table 1.

To investigate the degree of realization of the teachers, the results were converted to a 5-point scale and then compared. In the case of school organizational culture, group culture was the highest with 3.81, followed by innovation culture at 3.68, rational culture at 2.76, and hierarchy culture at 2.58. This result is contrary to the previous study results of Suk-Yeol Lee,

Table 1. **Descriptive statistics of school organizational culture, PLC and teacher efficacy**

Category		N	M	SD
School Organizational Culture	Innovation Culture	358	3.68	.70
	Rational Culture	357	2.76	.81
	Group Culture	359	3.81	.69
	Hierarchy Culture	357	2.58	.86
Professional Learning Community	Learning Promotion	358	4.05	.59
	Cooperative Culture	358	4.09	.64
	Group Research	355	3.77	.75
	Practice	356	3.86	.70
	Total	351	3.91	.64
Teacher Efficacy	Confidence	350	3.52	.61
	Self-regulation	349	3.46	.60
	Task Difficulty (Challenge)	349	3.70	.67
	Total	348	3.54	.55

which recognize that hierarchy culture is high among school organizational culture types [10]. The reason why the results were different from the past is that each city and province emphasized innovative schools and the school culture gradually changed. The professional learning communities were high at 3.91, and the teacher's efficacy was comparatively high at 3.54. In general, South Korean schools emphasize innovation schools, indicating that there are changes in the field.

2. *Analysis of Differences in Research Variables Depending on Teacher's Personal Background*.

A) School Organizational Culture. The results of examining differences in school organizational culture according to the teacher's personal background are presented in Table 2.

The school organizational culture realized by teachers showed a significant difference in innovation culture, rational culture, group culture, and hierarchy culture depending on the school grades on average on the five-point scale. At the school level, elementary school teachers realize innovation culture higher than their middle and high school teacher peers, while the actualization of rational and hierarchy cultures were lower. High school teachers realize rational and hierarchy cultures higher than elementary and middle school teachers. In terms of gender, male teachers realize rational and hierarchical culture higher than female teachers, while female teachers realize innovation culture higher than male teachers. According to teacher seniority, the head teachers realize innovation culture higher than regular teachers. In addition, depending on the years of teaching experience, teachers with less than 5 years' experience are highly aware of rational and hierarchical cultures, while teachers with 16–25 years are highly aware of innovation and group culture.

B) Differences in Professional Learning Community. The results of examining differences in professional learning communities according to the teacher's personal background is presented in Table 3.

On average, the school organization's professional learning community was 3.91 on a 5-point scale. There is a significant difference in school grades, indicating that elementary school teachers actualize and realize professional learning communities higher than middle school or high school teachers. There are also significant differences in gender, with female teachers realizing higher levels of professional learning communities than male teachers. In addition, teachers participating in the professional learning community realize

Table 2. **Analysis of school organizational culture according to teacher's personal backgroun**

Variable \ Organizational Culture		N	Innovation Culture			Rational Culture			Group Culture			Hierarchy Culture		
			M	SD	t / F	M	SD	t / F	M	SD	t / F	M	SD	t / F
School Grade	Elementary	43	4.21	.61		2.26	.81		4.38	.52		1.66	.52	
	Middle	71	3.85	.60	2.12**	2.50	.77	18.17**	4.00	.61	27.00**	2.35	.86	41.83**
	High	244	3.53	.69		2.93	.76		3.65	.68		2.80	.79	
	Total	358	3.68	.70		2.76	.81		3.81	.69		2.58	.86	
Gender	M	162	3.57	.64	-2.56*	2.90	.72	2.74**	3.76	.65	-1.95	2.77	.79	3.88**
	F	195	3.76	.74		2.66	.86		3.88	.72		2.42	.89	
Level	Regular Teacher	253	3.61	.70	-2.86**	2.79	.80	-1.04	2.79	.80	-1.86	2.66	.86	2.55*
	Head Teacher	103	3.84	.66		2.69	.82		2.69	.82		2.40	.86	
Teaching Experience	Less than 5 years	90	3.51	.77		2.94	.97		3.77	.70		2.84	.82	
	6–15 years	120	3.64	.70	4.45**	2.74	.72	3.86*	3.75	.71	2.01	2.56	.84	6.62**
	16–25 years	72	3.90	.66		2.53	.83		3.98	.75		2.25	.89	
	26 and more	75	3.72	.60		2.83	.64		3.77	.56		2.61	.84	
	Total	357	3.68	.70		2.77	.81		3.81	.69		2.58	.86	

Table 3. **Analysis of difference in professional learning communities according to the teacher's personal background**

Category \ Statistics		N	M	SD	t / F	Scheffe
School Grade	Elementary	42	4.55	.42	37.97**	E > M,H M > H
	Middle School	71	4.10	.47		
	High School	238	3.74	.64		
	Total	351	3.91	.64		
Gender	M	159	3.75	.57	-4.29**	
	F	191	4.04	.68		
Teacher Level	Regular Teacher	249	3.88	.65	-1.47	
	Head Teacher	100	3.99	.63		
Teaching Experience	Less than 5 years	89	3.78	.64	3.24**	16–25 > 5
	6–15 years	117	3.93	.66		
	16–25 years	70	4.09	.70		
	26 or more	74	3.85	.52		
	Total	350	3.91	.64		

Note: * $p < .05$, ** $p < .01$.

the professional learning community higher than those who did not participate.

C) Differences in Teacher Efficacy. The differences in teacher efficacy depending on the teacher's personal background are as follows (Table 4).

On average, teacher efficacy was 3.54 on the 5-point scale. Reviewing the teacher's personal background showed a significant difference when it came to school grades. Elementary school teachers realized higher teacher efficacy than high school teachers. In addition, there was a significant difference in teacher level; the head teacher or dean realized higher teacher efficacy than regular teachers. In addition, teachers with 16–25 years of teaching experience actualized higher teacher efficacy than those with 6–15 years' experience, or those with less than 5 years.

3. *Relationship between the Three Research Variables*.

A) The Effect of School Organizational Culture on Teacher Efficacy. The results of analyzing the effect of school organizational culture on teacher efficacy are as follows (Table 5).

Innovation culture and group culture of school organizational culture had a significant impact on teacher efficacy at 1%. The type of school organizational culture was found to explain approximately 21% of the variance of teacher efficacy, and we regarded the relative weight of teacher efficacy among the organizational culture types as the β coefficient (standardized regression

Table 4. **Analysis of difference in teacher efficacy depending on teachers' personal background**

Category \ Statistic		N	M	SD	t / F	Scheffe
School Grade	Elementary	40	3.75	.53		
	Middle	71	3.55	.48	3.47*	E > H
	High School	237	3.50	.56		
	Total	348	3.54	.55		
Gender	Male	156	3.57	.54	1.15	
	Female	191	3.51	.56		
Teacher Level	Regular Teacher	246	3.47	.56	-3.47**	
	Head Teacher	100	3.70	.49		
Teaching Experience	Less than 5 years	89	3.34	.57		
	6–15 years	114	3.48	.56		
	16–25 years	71	3.73	.51	9.14*	16–25 > 5, 6–15 years
	26 or more	73	3.67	.46		
	Total	347	3.54	.55		

Note: * $p < .05$, ** $p < .01$.

Table 5. **The effects of school organizational culture on teacher efficacy**

Dependent Variable	Independent Variable	Unstandardized Coefficient	Standardized Coefficient (β)	t	F	R2
Teacher Efficacy	(constant)	1.618		6.41**		
	Innovation	.278	.353	5.44**		
	Rational	.040	.059	1.076	22.49**	.211
	Group	.160	.203	3.20**		
	Hierarchy	.070	.110	1.709		

Note: * $p < .05$, ** $p < .01$.

coefficient), which appeared in the order of group culture followed innovation culture.

B) The Effect of Professional Learning Communities on Teacher Efficacy. The effect of professional learning communities on teacher efficacy is presented below in Table 6.

Among the sub-factors of a professional learning community, the sub-factors with a significant effect on teacher efficacy was found to be 'learning promotion' and 'practice' with 1%, which is a significant predictor of teacher efficacy. The sub-factors of the professional learning community accounts for approximately 22% of the variance of teacher efficacy, and the relative weight of teacher efficacy among the sub-factors of the professional learning community was observed through the β coefficient (standardized regression coefficient), which appeared in the order of continued practice, followed by learning promotion.

C) The Effect of School Organizational Culture and Professional Learning Communities on Teacher Efficacy. The results of analyzing the concurrent effects of the sub-variables of school organizational culture and professional learning communities on teacher efficacy are as follows (Table 7).

T a b l e 6. **The effect of professional learning communities on teacher efficacy**

Dependent Variable	Independent Variable	Unstandardized Coefficient	Standardized Coefficient (β)	t	F	R2
Teacher Efficacy	(constant)	1.981		10.48**		
	Learning Promotion	.070	.309	3.64**		
	Cooperative Culture	-.034	-.158	-1.62	24.25**	.224
	Group Research	-.004	-.037	-0.34		
	Practice	.028	.360	3.21**		

Note: * $p < .05$, ** $p < .01$.

T a b l e 7. **The effect of school organizational culture and professional learning communities on teacher efficacy**

Dependent Variable	Independent Variable		Unstandardized Coefficient	Standardized Coefficient (β)	t	F	R2
Teacher Efficacy	Organizational Culture	(constant)	1.293		4.696		
		Innovation Culture	.177	.225	3.21**		
		Rational Culture	.039	.058	1.07		
		Group Culture	.077	.098	1.38		
		Hierarchy Culture	.063	.098	1.56	15.02**	.269
	Community	Learning Promotion	.059	.257	3.02**		
		Cooperative Culture	-.030	-.141	-1.43		
		Group Research	-.011	-.092	-.84		
		Practice	.022	.278	2.45*		

Note: * $p < .05$, ** $p < .01$.

Among the subcultures of the school organizational culture, innovation culture and sub-variants of the professional learning community have a significant effect on teacher efficacy. Overall, the school organizational culture and professional learning community explain approximately 27% of the variance of teacher efficacy. As a result of comparing the relative influences of the variables on efficacy, we found a significant influence was present in order of practice, learning promotion, and innovation culture.

D) Effect of School Organizational Culture and Professional Learning Communities on Teacher Efficacy. The results of the effect of the subtypes of school organizational culture and sub-variables of professional learning communities on teacher efficacy are presented in different stages in Table 8. In this analysis, a hierarchical multiple regression analysis method was used to analyze which of the two variables had a greater effect. As shown in Table 8, by collectively incorporating sub-variables of school organizational culture and professional learning communities to observe its effects on the sub-variables of teacher efficacy, among 26.9% of the explanatory power was comprised by 21.1% of the school organizational culture variables, and 5.8% of the professional learning community variables. Therefore, school organizational culture can be seen as a better predictor of teacher efficacy than a professional learning community.

Discussion and Conclusion

The purpose of this study is to analyze the relationship between school organizational culture, professional learning communities, and teacher efficacy. To achieve this purpose, this study's approach is threefold: to investigate differences among research variables according to individual or organizational characteristics, to analyze the effects of school organizational culture and sub-variables of professional learning communities on teacher efficacy, and to examine which has a more significant effect on teacher efficacy between school organizational culture and professional learning community.

The results of the study showed firstly, school organizational culture appeared in the order of group culture, innovation culture, rational culture, and hierarchy culture, and the level of professional learning communities were high, and teacher efficacy showed relatively positive results. This shows the emphasis on innovation at the school site instigated change. Secondly, there was a significant difference in school organizational culture depending on the subtypes of: school grade, gender, teacher level, and teaching experience. There were also significant differences in professional learning communities depending on school grade, gender, and teaching experience. For teacher efficacy, there was a significant difference depending on school grade, teacher level, and teaching experience. Thirdly, examining the influence of school organizational culture and professional learning communities on teacher efficacy showed that innovation culture and group culture influence school organizational culture, and professional learning communities affect learning formation and continued practice. Lastly, school organizational culture had a greater impact on teacher efficacy than professional learning communities.

Based on the above results, the conclusions of this study are as follows. First, school

Table 8. **Stages of effect of school organizational culture and professional learning community on teacher efficacy**

Category	R^2	F	ΔR^2	F
Stage 1. School Organizational Culture Variable	.211	22.493**		
Stage 2. School Organizational Culture Variable Professional Learning Community Variable	.269	15.028**	.058	10.52**

Note: * $p < .05$, ** $p < .01$.

organizational culture is gradually becoming a healthy culture. Among the school organizational culture types, innovative culture and group culture have a significant effect on teacher efficacy. However, among the types of school organizational culture, innovation culture and group culture are higher than rational culture and hierarchy culture. Innovative and group cultures have a positive effect on teacher efficacy because they emphasize coordination, cohesion, teamwork, and collaboration among teachers. We speculate this is due to the change of teachers' cultures over the past decade with greater emphasis on innovation schools.

Second, school is a type of organizational system, but teachers show various and diverse modalities. Male teachers tend to view the school organization as bureaucratic more than female teachers. This contrasts with Suk-Yeol Lee's research, which found female teachers perceived the school organization as a hierarchy culture, whereas this study showed female teachers perceived the school organization more as an innovation culture. In addition, female teachers had higher perception of professional learning communities than male teachers. Regarding efficacy, there were differences in the school grade and the level of the teacher but not by gender. Elementary school teachers tended to have higher efficacy, and head teachers and deans tended to have higher efficacy than regular teachers. Consequently, teachers respond to the school organization in various ways, depending on their personal background.

Third, professional learning communities have a positive effect on teacher efficacy. Professional learning communities are becoming an essential factor in enhancing teaching effectiveness as several sub-variables of the PLC promote student learning and continuously improving while implementing. From this, we can claim that this shows the fact that teachers have pursued various measures to improve student achievement while increasing their professionalism and expertise through the professional learning community.

In the future, school organizational culture and professional learning communities need to be discussed in terms of their interaction, and including improving teacher efficacy as a factor in school reform. The school organizational culture is embedded in the beliefs and values, norms and customs, habits and rituals that are shared by its members, and serves as a guide to its members' behavior. Therefore, the school organizational culture plays an important role in reinforcing a teacher's willingness to follow the principal's instructions. Especially when innovative and group culture is exerted, the professional learning community becomes more active, and when these elements are combined, the teacher's efficacy increases. In this context, it is necessary to create a school organizational culture, and to emphasize the professional learning community at the organizational level as a factor for change. It is worth noting that teacher efficacy increases when professional learning communities work together rather than school organizational culture alone.

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