



AN EMPIRICAL STUDY OF COLLABORATIVE CULTURE AS A MODEL OF ORGANIZATIONAL BEHAVIOR IN GREEK PRIMARY SCHOOLS

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Abstract:

The investigation of the collaborative culture in Greek primary schools with an emphasis put on Small rural and Urban all-day primary schools was the basis for conducting the study. The main purpose of the study is to highlight the ways in which teachers in everyday school practice act and shape school collaborative culture, so that if a redefinition of their role is required, feedback to focus their interest on the effectiveness of their schools of responsibility. The scope of the survey was the total number of teachers (N=782) in randomly selected primary schools in the country. The research tool used was the School Culture Survey - Teacher Form (S.C.S.-T.F.) questionnaire which evaluates and records the teachers' views on the six dimensions (collaborative leadership, teacher collaboration, professional development, unity of purpose, collegial support and learning partnership) that shape the model of collaborative school culture. The findings demonstrate that teachers adopt the model of collaborative culture to a relatively satisfactory degree, applying several forms of collaborative behavior, as illustrated by the descriptive analysis. The analysis of One-way variance (ANOVA), between the factors of the collaborative school culture in relation to the variable "Position in the school unit"

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revealed the existence of a significant difference for the “collaborative leadership”, “professional development”, “unity of purpose”, “collegial support” and “learning partnership” factors, while, there was no significant differentiation for the “teacher collaboration” factor. In addition, the analysis of ANOVA between collaborative school culture in relation to the variable “geographical location of the school unit” revealed the existence of a significant difference only for the “collaborative leadership”, “teacher collaboration” and “collegial support” factors. Via Independent Samples T-test, the comparative study of relationships between the factors of the collaborative culture in the two types of schools revealed the existence of a significant differentiation for “collaborative leadership” and “collegial support”, while no significant difference was observed for the other factors of collaborative school culture. Of course, the observed forms of collaboration do not support the existence of a genuine collaborative culture, however, they lay the foundations for the development of more meaningful partnerships.

Keywords: school collaborative culture, small rural/urban Greek primary schools, descriptive/ comparative analysis, questionnaire “S.C.S.-T.F.”

1. Introduction

1.1 Statement of the Problem

Our country over the last 10 years has been plagued by an economic-social crisis and this unfavorable situation was impossible not to affect our educational system experiencing its own organizational and operational problems. Could the picture, thus, be reversed, to improve the quality of the education system and become the primary level of education more effective? Is there an opportunity offered for teachers or potential school leaders to find a solution to upgrading public education for the benefit, ultimately, of our society? Admittedly, the function performed by a teacher is difficult, since quite a complicated and demanding task has to be performed, every day confronted with many questions, problems and dilemmas, which are called upon to overcome in order to achieve their educational goals. In this attempt, however, it is highly unlikely for the effective teacher to achieve the desired results alone, but needs the support of other colleagues and this can be achieved through the collaborative culture developed between them.

Undoubtedly, the collaboration of teachers is the most vital element for their growth and development making them more efficient both in their teaching and in their contribution to the school’s improvement. In parallel, the development of teachers as well has a direct positive impact on the learning achievements of students, because when teachers dare and make innovations, they are motivated to conquer new and more creative knowledge, skills and experience. Collaborative culture operates as a silent model for students who begin subconsciously to positively face collaboration and learn to operate in line within collaborative communities. Moreover, collaborative culture reflects the collegiate, making, thus, the school unit capable of responding immediately

to any crisis, changes and opportunities that appear. Therefore, the existence of collaborative culture plays an important role in catholic school improvement.

It is paramount, therefore, to delve into the school culture to measure its existence with the aim of school improvement. Also, it is useful to list the perceptions of primary school teachers to see if they converge or diverge depending on theoretical and research approaches to shaping a healthy collaborative culture.

1.2 Purpose and Research Questions / Hypotheses of the Study

The purpose of this research is to examine the perceptions of teachers to gain a better understanding of how they formed the collaborative culture in Greek primary schools. Also, it is necessary to investigate, to what extent their views on the values and standards of behavior that define the school culture differentiated in school practice. Moreover, the comparative approach to the two types of schools will highlight the dynamic of organizational behaviors adopted by teachers or potential leaders (teachers develop themselves as teacher leaders), whose influence in the educational field is vital to the implementation of organizational, pedagogical and learning targets. Based on the literature we designed the current research questions/hypotheses. In what follows are the research questions (RQ)/hypotheses (Ho):

RQ: What are the perceptions of teachers about the collaborative culture that is currently formed in primary schools in Greece?

Ho1: There is no significant relationship between teachers' collaborative culture and the "Position in the school unit" they serve.

Ho2: There is no significant relationship between teachers' collaborative culture and the "Geographical location of the school unit" in which they serve.

Ho3: There is no significant relationship between teachers' collaborative culture and the "Type of school unit" they serve.

The outcome of this study would prove significant to the principals and the teachers to understand the stance of school culture. As well as that, this may provide the administrators with a method to assess their school culture.

2. Literature Review

2.1. Organizational (School) Culture

Organizational culture, perhaps, is one of the essential elements influencing the "personality" and the "performance" of an organization and is vital, as it offers "uniqueness" to the organization. Organizations such as, schools could address any of their weaknesses by raising awareness and promoting positive school culture. To begin, literature has defined organization culture in many ways. Organizational culture encompasses beyond just "being" and "being able to" mobilize the forces and the energy of a group of people with the common goal of implementing strategies and policies to implement programs that affect its effectiveness (Schein, 1985). Organizational culture is the "compass" that provides direction and guides how employees think and act on the

job and is central to the values, beliefs, interpersonal behaviors and attitudes to stakeholders that determine how the organization does its job (Tharp, 2009). As well as that, culture of an organization highly influences its various decisions and actions, the stability, cohesion, unity and adoption of reforms of an organization (Athanasoula-Reppa, 2008; Kythreotis et al., 2010). A positive school culture would be desirable for any school. Some positive school cultures are linked to student and teacher motivation, student educational accomplishment, teacher job satisfaction, commitment and collaboration and school community building (Kythreotis et al., 2010). Generally, organizational culture can be found in shared relationships among colleagues, norms within the school environment, student and teacher relations, and sharing experiences. A school's organizational culture provides a sense of identity, promotes achievement orientation, and helps shape standards and patterns of behavior (Haberman, 2013).

The great challenge for a school-leader is to be able to create a consistent organizational culture, aimed at developing teachers' skills and competencies and continually evolving and improving learning (Alger, 2008). But teachers' role in shaping the school culture is also important, as their values and beliefs determine their behavior within the school, while being crucial for their professional development, introduction of innovative actions, implementation of an appropriate pedagogical approach and ultimately the improvement of the school unit. At one school, however, there is a culture of students and parents. The two main teacher-student groups represent two different subcultures, the "work-teaching subculture" and the "student-learning subculture" whose degree of cohesion reinforces the overall school culture aimed at productivity and effectiveness (Kythreotis et al., 2010). Certainly, school effectiveness depends not only on the learning process but also on the way it is taught (innovating), on its evaluation and on the goals set by a school organization that relates to students' abilities, existing logistics and students' degree of self-confidence, according to the model of collective effectiveness (Hoy & Miskel, 2008). However, it is the teachers' culture that is being studied more profoundly as it is a crucial factor for school improvement that is going through the change in the culture of the school unit, which is practically not easy, and any attempt to change it if not done slowly can create many problems at school (Bush & Middlewood, 2005).

2.2. Collaborative School Culture

A necessary prerequisite for empowering school culture is the collaborative effort of all and consequently, the introduction of collaborative culture appears to be reinforced over other forms of culture (Fullan, 2007; Waldron & Mcleskey, 2010) describes how such collaboration develops in a school as he suggests that rather than restructuring a school, "re-culturing" is required. To change school culture and create a more inclusive school, educators must question their beliefs about teaching and learning for students who struggle to learn and engage in a collaborative change process that results in new values, norms, and preferred behaviors (Fullan, 2007; Foulidi et al., 2017). The research has revealed that such a collaborative culture leads to higher levels of trust and respect

among colleagues, improved professional satisfaction, improved instructional practices, better outcomes for all students, and school change that is maintained over time (Friend & Cook, 2007). In addition, through collaborative teacher learning and professional development, school unit members are motivated to look for more effective ways for students' academic success brotherly relationships are strengthened and tensions-conflicts are avoided (Waldron & Mcleskey, 2010; Kapachtsi & Kakana, 2014).

The role of school culture in classroom management and school improvement goes through the transformation of the culture of individualism into the culture of full collaboration (collaborative culture), based on the types of teacher culture recognized by Hargreaves (1995). Following the collaborative culture model, a collaboration between teachers on classroom management and teaching-learning issues transcends the exchange of information and views on these two issues and results in collective contemplation and reflection. In schools where there is no help for students and values and hope have ceased to dominate their culture, they are not productive and are characterized as 'toxic' (Golia et al., 2013). On the contrary, there are schools where principals and teachers create a positive collegial collaborative, and team-based environment that cares about students and are role prototypes of people who want to create a healthy school culture (Peterson & Deal, 1998).

Internationally, several studies have investigated the dominant collaborative culture of school community members (Gruenert & Valentine, 1998; Martin, 2009; Teasley, 2017; Veeriah et al., 2017), the impact of school culture on teacher leadership style (Sahin, 2004; Martin, 2009; Bush, 2011; Ngnag, 2011; Arokiasamy, 2017) and the relationship between organizational culture of school improvement and effectiveness (Kythreotis et al., 2010; Menon-Eliophotou & Athanasoula-Reppa, 2011; Bland, 2012; Narayan, 2016). There are fewer references to Greece and limited to the role of culture and leadership in education (Athanasoula-Reppa, 2008; Koula, 2011; Biniari, 2012; Tentzerakis, 2018; Giatra, 2019), to school improvement through collaborative action research (Kapachtsi, & Kakana, 2014) and to the teachers' perceptions of multi-grade or small rural school functioning (Ekonomopoulos & Brouzos, 2017).

2.3. Small Rural and Urban Primary Schools

Pedagogical approaches and the discussion of the two types of primary schools focus on whether or not small rural schools lag behind or dominate over urban schools with divergent views and arguments, depending on the criteria used to evaluate the quality of education (Bell & Singsworth, 1987). It is a common finding that small rural schools are comparable to urban primary schools and have the potential to provide meaningful education if they utilize modern educational methods and shape appropriate organizational structure and culture (Galton et al., 1998; Fykaris, 2012; Giannakos & Vlamos, 2012).

With regard to teachers and / or headmasters in small rural primary schools, they have a multidimensional task, more complex than their counterparts in urban schools, and therefore require special qualifications and skills to be effective (Galton et al., 1998;

McBer, 2000; Fykaris, 2012). The teachers who serve in a few primary schools are very young, with no significant experience, and are left alone without the necessary tools and support, which can have a serious negative impact on their psychology and the efficiency of their teaching. In addition, many teachers have concerns about their professionalism due to innovation-reforms, unclear goals, and lack of time, so they need understanding, motivation, regular feedback, and appropriate motivation-rewards (McBer, 2000; Pincas, 2007; Fykaris, 2012). A section dedicated to the significant literature resources, consulted or employed, that contributed to the study. It surveys scholarly articles, books and other sources (e.g., dissertations, conference proceedings) relevant to a particular issue, area of research, or theory, providing a description, summary, and critical evaluation of each work. The purpose is to offer an overview of significant literature published on a specific topic.

3. Material and Methods

3.1. Research Design and Population Sampling

According to Cohen et al. (2007), the quantitative analysis aims to find relationships between various factors and focuses on isolating one or more specific variables related to a phenomenon. But the basic principle of the quantitative method is to seek relationships between variables or to examine the validity of research hypotheses based on perceived patterns and literature review. In addition, it describes behaviors and attitudes in a structured way, such as questionnaires, scales, and subscales and requires as large a representative sample of participants as possible in order to reach generalizable conclusions to a wider population (Cohen et al., 2007).

Our aim was to select a nationwide sample as representative and informative as possible of the demographic variables, with particular emphasis on the geographical stratification of the sample at Region-Prefecture level. The “pilot” and “main” research were conducted during the 2019-2020 academic year, after approval by the relevant Ministry of Education. The respondents were randomly selected by means of systematic random sampling, whereby 100 percent of the respondents were teachers and specialty teachers of national primary schools from Greece. A total of 805 questionnaires were collected, of which, 27 sets of questionnaires were considered useless because the respondents were either unwilling to collaborate or were not serious about the survey. Therefore, only 782 correctly answered sets of questionnaires were used for the data analysis. The questionnaire data were distributed and collected in digital form via the Google Drive email.

3.2. Data Analysis

In this study a self-administered questionnaire consisting of two sections were used: Section A contains Teacher Demographic Information, Section B contains the School Culture Survey Questionnaire-Teacher Form (“SCS-TF”) that was developed by Gruenert & Valentine, (1998). This questionnaire contains 35 items listed under six factors/scales

including (collaborative leadership, teacher collaboration, professional development, unity of purpose, collegial support and learning partnership). The five-point Likert scale (1= Strongly disagree, 2= Disagree, 3= Slightly disagree, 4= Agree and 5= Strongly agree) was used to measure school collaborative culture. The use of the questionnaire is not mentioned in the Greek literature in corresponding surveys in Greece.

After, on 24th July 2018 permission of use by Professor Jerry Valentine, the questionnaire was subjected to construct validity using the back-to-back translation technique, from English to Greek, according to the appropriate procedure. Then, followed the pilot questionnaire weighting phase, where the reliability of the questionnaire was checked, with the test-retest reliability method. For the internal consistency of the questionnaire in the first and the second trial of the “pilot study” Cronbach's alpha coefficient was obtained at 0.810 and 0.839, respectively.

Data were analyzed using the package program of SPSS v. 24. Descriptive statistics were used to obtain the frequency (N), percentage (%), mean (M), median, mode, interquartile range (IQR), first-third quartile (Q1-Q3) and standard deviation (SD).

The inferential statistics of One-way analysis of variance and Independent Samples T-test analysis are used to identify, if there is a relationship between the six factors of collaborative school culture and independent variables (Anastasiadou, 2013). Performing any of the above tests, the null hypothesis (H_0) is accepted or rejected and the alternative (H_1) is accepted when the value of the observed level of statistical significance is higher or lower, respectively, than a predetermined one (Houser, 2009). Research findings were tested at the level of $p < 0.05$.

The main phase of research showed high internal consistency reliability and the Cronbach's alpha value of the total items of the inventory was calculated as 0.815. The value of Cronbach $\alpha = 0.815$ confirms the reliability of the questionnaire, as index values greater than 0.7 are considered sufficiently satisfactory (Spector, 1992). The sample was analyzed with the Kolmogorov-Smirnov test and found, that the regularity test for six factors is statistically significant, which means that the population distribution where the sample comes from is close to normal, so parametric tests can be used.

4. Results and Discussion

4.1. Demographic Profile of Participants

Besides questions on collaborative school culture, respondents were also asked about their demographic background. The final nationwide sample contains (N=782) questionnaires and the analysis of personal-demographic variables (Table 1) showed regarding gender, 40.2% (314) are male and 59.8% (468) are female. In terms of age, 29.5% (231) are 25-35 years old, 38.8% (241) are 36-44 years old, 28.4% (222) are 46-55 years old and 11.3% (88) up to 56 years old.

Table 1: Demographic Characteristics of the Teachers Who Participated in the Current Survey

Characteristics		Frequency (N)	Percentage (%)
Gender	Male	314	40.2
	Female	468	59.8
Age	≤35	231	29.5
	36-45	241	38.8
	46-55	222	28.4
	≥56	88	11.3
Level of education	First degree	230	29.4
	Second degree	131	16.8
	Teaching qualification	79	10.1
	Master's degree	327	41.8
	Doctorate	15	1.9
Foreign language certified	Yes	589	75.3
	No	193	24.7
ICT certified	Yes	697	89.1
	No	85	10.9
Type of primary school	Small rural	371	47.4
	Urban	411	52.6
School unit position	Headmaster	143	18.3
	Sub-headmaster	101	12.9
	Teacher	538	68.8
Teacher branch	Teacher	491	62.8
	Specialty teacher	291	37.2
Geographical location of the school unit	Rural	262	33.5
	Semi-urban	284	36.3
	Urban	236	30.2
Degree of satisfaction with your collaboration with the other stakeholders of the education	Not at all	8	1.0
	Little	43	5.5
	Somewhat	335	42.8
	A lot	341	43.6
	Very much	55	7.0

In relation to the level of education, 29.4% (230) have a university first degree, 16.8% (131) have a second degree, 10.1% (79) have a teaching qualification, 41.8% (327) have a master's degree and 1.9% (15) have a doctorate.

About 75.3% (589) and 89.1% (697), respectively, are foreign language and ICT certified, while 24.7% (193) and 10.9% (85) respectively, are not.

In terms of the type of primary school in which teachers serve, 47.4% (371) serve in a small rural and 52.6% (411) in an urban primary school.

About the school unit position, 18.3% (143) of them are headmasters, 12.9% (101) are sub-headmasters and 68.8% (538) are teachers and specialty teachers.

In terms of teacher branches, 62.8% (491) are teachers and 37.2% (291) are teachers of different specialties.

Regarding the geographical location of the school, 33.5% (262) of the respondents serve in a rural area, 36.3% (284) in semi-urban and 30.2% (236) in urban areas.

Finally, 6.5% (51) of the survey participants consider their cooperation with the other participants in the training to be not at all and little satisfactory, while 42.8% (335) consider it moderate. On the contrary, 50.6% (396) of the respondents consider this collaboration to be a lot and very much satisfactory.

4.2. Description of the Collaborative School Culture

From the analysis of the survey data, we conclude that the mean score (M= 3.55) of the collaborative school culture is relatively high indicating that the majority of respondents adopt this particular organizational behavior model as discussed below (Table 2).

a. Collaborative Leadership

The 0.7% (5) of respondents disagree, 41.0% (321) neither agree nor disagree, while the majority of respondents 58.3% (456) have a positive view of collaborative-shared leadership. The mean score of collaborative leadership in the studied schools was (M=3.58 and SD=0.400). Most teachers seem to accept the form of collaborative leadership at 3.50, with half practicing it up to 3.55 and the rest by that grade. Thus, ¼ of teachers who hold less of this kind of leadership reach up to 3.30, while ¼ of teachers practice it at least at a grade of 3.80.

b. Teacher Collaboration

The 1.9% (15) of the respondents disagree, the majority of the respondents 55.4% (433) neither agree nor disagree, while 42.7% (334) have a positive view of Teacher collaboration. The average for teacher collaboration in the studied schools was (M=3.35 and SD=0.417). Most teachers seem to support teacher collaboration at 3.50, with half supporting it up to 3.33 and the rest by that grade. Finally, ¼ of teachers who support teacher collaboration reach up to 2.90, while ¼ of those who have incorporated this collaboration more than all others, support it at least to 3.40.

Table 2: Descriptive Analysis of Collaborative School Culture

Collaborative school culture	Mean	SD	Median	Mode	Xmin	Xmax	IQR	Q1-Q3
Collaborative leadership	3.58	0.400	3.55	3.50	1.90	5.00	0.50	3.30-3.80
Teacher collaboration	3.35	0.417	3.33	3.50	2.00	4.70	0.50	2.90-3.40
Professional development	3.50	0.422	3.60	3.60	1.60	4.80	0.60	3.10-3.70
Unity of purpose	3.71	0.474	3.50	3.80	1.80	5.00	0.60	3.30-3.90
Collegial support	3.59	0.492	3.50	3.50	1.50	5.00	0.80	3.15-3.95
Learning partnership	3.58	0.471	3.50	3.50	1.50	5.00	0.80	3.10-3.90

c. Professional Development

The 2.2% (17) of respondents disagree, the 42.6% (333) neither agree nor disagree, while the majority 55.2% (432) consider professional development to be quite necessary. The average for Professional development factor in the studied schools was ($M=3.50$ and $SD=0.422$). Most teachers seem to support professional development at a grade of 3.60, with half supporting it up to 3.60 and the rest by that grade. Finally, $\frac{1}{4}$ of teachers who support professional development reach up to 3.10, while $\frac{1}{4}$ of those who have incorporated it more than all others support it at least to 3.70.

d. Unity of Purpose

The 0.8% (6) of respondents disagree, 29.2% (228) neither agree nor disagree, while the majority 70.1% (548) consider it quite necessary to have a common goal that is not other than the educational mission and the vision that everyone is pursuing. The mean score for the Unit of purpose factor in the studied schools was ($M=3.71$ and $SD=0.474$). Most teachers strive to form a common goal at a grade of 3.80, with half supporting up to 3.50 and others above. Finally, $\frac{1}{4}$ of teachers who pursue the unit of purpose reaches 3.30, while $\frac{1}{4}$ those who have incorporated it more than all others support at least 3.90.

e. Collegial Support

The 1.8% (14) of the respondents disagree, 28.4% (222) neither agree nor disagree, while the majority of 69.8% (546) consider collegial support to be quite necessary. The average for collegial support in the schools surveyed was ($M=3.59$ and $SD=0.492$). Most teachers support collegiate colleges up to 3.50, with half supporting up to 3.50 and the rest upwards. Finally, $\frac{1}{4}$ of teachers seeking collegial support reaches to 3.15, while $\frac{1}{4}$ those who have incorporated it more than all others support it at least to 3.95.

f. Learning Partnership

The 1.7% (13) of respondents disagree, the 28.4% (222) neither agree nor disagree, while the majority 70.0% (547) consider it quite necessary to form a healthy Learning partnership, as a key tool for more effectively achieving organizational change and learning. The mean score for the Learning partnership in the studied schools was ($M=3.58$ and $SD=0.471$). Most teachers support learning partnership at 3.50, with half supporting up to 3.50 and others above. Finally, $\frac{1}{4}$ of teachers who seek learning partnerships reach up to 3.10, while $\frac{1}{4}$ of those who have incorporated it more than anyone else, support it at least to 3.90.

4.3. Testing the Relationship between Collaborative School Culture and “Position in the School Unit”

The results of ANOVA analysis (Table 3) prove that there is a differentiation in participants' perceptions of school unit position for the factors of Collaborative leadership, Professional development, Unity of purpose, Collegial support and Learning partnership, which are significant as shown by p-value ($p<0.05$). On the contrary, there is

no significant difference between teachers' perceptions of Teacher collaboration ($p=0.073$).

Table 3: Analysis of ANOVA between Collaborative School Culture in Relation to the Variable "Position in the School Unit"

Collaborative school culture	Position in the school unit	Mean	Sum of Squares	df	Mean square	F	P
Collaborative leadership	Headmaster	3.77					
	Sub-headmaster	3.43					
	Teacher	3.58					
Between groups:			7.418	2	3.709	13.410	0.000
Within groups:			215.453	779	0.277		
Total:			228.871	781			
Teacher collaboration	Headmaster	3.46					
	Sub-headmaster	3.52					
	Teacher	3.40					
Between groups:			1.651	2	0.826	2.621	0.073
Within groups:			245.398	779	0.315		
Total:			247.049	781			
Professional development	Headmaster	3.45					
	Sub-headmaster	3.45					
	Teacher	3.58					
Between groups:			2.96	2	1.448	4.790	0.009
Within groups:			235.528	779	0.302		
Total:			238.425	781			
Unity of purpose	Headmaster	3.62					
	Sub-headmaster	3.63					
	Teacher	3.78					
Between groups:			4.163	2	2.082	7.174	0.001
Within groups:			226.043	779	0.290		
Total:			230.206	781			
Collegial support	Headmaster	3.66					
	Sub-headmaster	3.56					
	Teacher	3.77					
Between groups:			4.513	2	2.256	7.048	0.001
Within groups:			249.376	779	0.520		
Total:			253.889	781			
Learning partnership	Headmaster	3.65					
	Sub-headmaster	3.61					
	Teacher	3.76					
Between groups:			2.547	2	1.274	4.176	0.016
Within groups:			237.560	779	0.305		
Total:			240.107	781			

Performing multiple comparisons using the Bonferroni criterion, the observed statistically significant difference for the Collaborative leadership factor is due to the differences between the headmasters and sub-headmasters or teachers. Also, for the

Professional development, Unit of purpose and Collegial support factors, the differences between the teachers and headmasters or sub-headmasters, while for the Learning partnership factor the differences between the teachers and sub-headmasters.

4.4. Testing the Relationship between Collaborative School Culture and “Geographical Location of the School Unit”

Table 4. Analysis of ANOVA between Collaborative School Culture in Relation to the Variable “Geographical Location of the School Unit”

Collaborative school culture	Geographical location of school unit	Mean	Sum of Squares	df	Mean square	F	P
Collaborative leadership	Rural	3.61					
	Semi-urban	3.53					
	Urban	3.64					
Between groups:			1.930	2	0.965	3.402	0.034
Within groups:			230.941	779	0.284		
Total:			222.871	781			
Teacher collaboration	Rural	3.40					
	Semi-urban	3.52					
	Urban	3.34					
Between groups:			4.220	2	2.110	6.769	0.001
Within groups:			242.829	779	0.312		
Total:			247.049	781			
Professional development	Rural	3.60					
	Semi-urban	3.50					
	Urban	3.51					
Between groups:			1.749	2	0.874	2.878	0.057
Within groups:			236.676	779	0.304		
Total:			238.425	781			
Unity of purpose	Rural	3.75					
	Semi-urban	3.71					
	Urban	3.74					
Between groups:			0.201	2	0.100	0.340	0.712
Within groups:			230.005	779	0.295		
Total:			230.206	781			
Collegial support	Rural	3.81					
	Semi-urban	3.60					
	Urban	3.79					
Between groups:			7.557	2	3.778	11.949	0.000
Within groups:			246.332	779	0.316		
Total:			253.889	781			
Learning partnership	Rural	3.70					
	Semi-urban	3.73					
	Urban	3.72					
Between groups:			0.124	2	0.062	0.202	0.817
Within groups:			239.983	779	0.308		
Total:			240.107	781			

From the results of the ANOVA analysis (Table 4) we find that there is a significant difference in teachers' perceptions according to the "geographical location of the school unit" for the factors of Collaborative leadership ($p=0.034$), Teacher collaboration ($p=0.001$) and Collegial support ($p=0.000$). In contrast, for the factors Professional development, Unity of purpose and Learning partnership, there is no significant difference between teachers' perceptions according to "geographical location of the school unit".

Applying multiple comparisons using the Bonferroni criterion ultimately resulted in no significant differences for the factor Collaborative leadership, whereas for the factors Teacher collaboration and Collegial support the difference is focused between the semi-urban and rural or urban areas of primary schools.

4.5. Testing the Relationship between Collaborative School Culture and "Primary School Type"

The results of the T-test (Table 5) show that for Collaborative leadership ($p=0.025$), that is, there is a significant difference in perceptions between teachers in small rural ($M= 3.55$) and in urban ($M=3.63$) primary schools. Also, there is a significant difference between teachers' perceptions of small rural ($M=3.68$) and urban ($M=3.76$) for Collegial support ($p=0.044$). In contrast, there is no significant difference in teachers' perceptions of the two types of schools for Teacher collaboration, Professional development, Unity of purpose and Learning partnership factors.

Table 5: T-test Analysis between Collaborative School Culture in Relation to the Variable "primary school type"

Collaborative school culture	Primary school type	Mean	Levene's-T				
			F	Sig.	t	df	p
Collaborative leadership	Small rural	3.55	2.357	0.125	-2.239	780	0.025
	Urban	3.63					
Teacher collaboration	Small rural	3.44	0.070	0.791	0.826	780	0.409
	Urban	3.41					
Professional development	Small rural	3.53	1.369	0.242	-0.293	780	0.770
	Urban	3.54					
Unity of purpose	Small rural	3.74	1.410	0.235	0.159	780	0.874
	Urban	3.73					
Collegial support	Small rural	3.68	0.221	0.638	-2.013	780	0.044
	Urban	3.76					
Learning partnership	Small rural	3.73	2.591	0.108	0.435	780	0.663
	Urban	3.71					

5. Discussion

By analyzing demographic variables and focusing on specific characteristics, we find greater participation of women, which may be due to the greater willingness of the female gender to respond, and in particular to the fact in that both Greek and European education more women serve in primary education (Eurydice, 2013).

Regarding the age and years of service, the profile of teachers shows that the majority of them embers are in the most productive ages, so it is obvious that they will have some increased interest in the organization and management of school units, and their aspects will be of interest for the promotion of school culture, as they perceive it, not what it really is.

With regard to additional qualifications, the data show their high level of education and specialization, so that they can respond effectively to the increased demands of the subject areas and modern teaching.

Concerning foreign language skills, this is an optimistic message for the teaching staff, as it enables easy access to foreign language bibliography and is an incentive to organize and participate in innovative European and International educational programs.

In terms of computer literacy and ICT, the evidence demonstrates the potential of an educational tool, especially in small rural schools, to provide meaningful education based on modern digital educational methods (Fykaris, 2012; Giannakos & Vlamos, 2012). Finally, their degree of satisfaction with their collaboration with the support structures, the local government, the school committee, the parents' association and the students are considered positive, perceptions that aim at changing-creating a school culture for an effective school (Kapachtsi & Kakana, 2014; Fulidi et al., 2017) and characterize the collaborative culture (Waldron & Mcleskey, 2010).

Concerning Research Question (RQ), teachers' perceptions are characterized by a relatively satisfactory mean score ($M=3.55$) of collaborative culture. Therefore, it is found that teachers of primary schools lead and favor collaboration as their main philosophy, through which they reflect on their search for more effective ways to lead to school improvement, as previous research has shown (Lucas & Valentine, 2002; Ngnag, 2011; Kapachtsi, & Kakana, 2014).

The research data are in perfect correspondence with the theoretical and empirical analysis of many scholars (Martin, 2009; Waldron & Mcleskey. 2010; Koula, 2011; Teasley, 2017; Veeriah et al., 2017; Giatra, 2019), who demonstrated collaborative culture as the appropriate organizational culture for the development of a productive school unit and refute the findings of several studies (Biniari, 2012; Tentzerakis, 2018) that highlighted the phenomena of isolation and degradation of cooperation in the school environment of the Greek school.

Respondents are distinguished by their relatively high perception of Collaborative leadership ($M=3.58$). It turns out that teachers as leaders or potential leaders create, maintain, and support collaborative relationships with and between school staff and trust their professional judgment. They also support and reward risk-taking and innovative ideas aimed at improving student education. In a collaborative and supportive environment, the leadership of a school is not practiced exclusively within the leader (s), because there are different members who can play very different formal roles (Reeves, 2006). In addition, it makes teachers "equal leaders", co-responsible, able to collaborate, participate in decision-making and identify themselves with the school mission

associated with school improvement (Bush,2011; Menon-Eliophotou & Athanasoula-Reppa, 2011).

Therefore, we find that teachers contribute to a healthy and organizational culture as a result of their positive perceptions of Collaborative leadership which is an important factor in achieving it, as previous studies have suggested (Davis, 2003; Martin, 2009; Veeriah et al., 2017).

Respondents' opinions are characterized by the lower mean score (M=3.35) for the Teacher collaboration factor. In particular, it was observed that teachers have opportunities for dialogue and planning across grades and subjects, and spend considerable time planning together. However, the absence of more practical forms of collaboration was revealed, such as the teaching intercepts and co-teaching, and inability disagreements in teaching practice are voiced openly and discussed. Nevertheless, they show a desire to engage in constructive dialogue that reinforces the school's educational vision, design and discuss together to develop programs and projects. Teachers' perceptions converge in the view that in order for schools to truly provide a learning environment for their students, collaborative practice must be at the core of their approach (Reeves, 2006).

Respondents are distinguished by their perception of average professional development (M=3.50), with 55.2% considering it to be quite necessary as a series of activities to modernize their knowledge and skills from teacher participation in certified activities. Full-time teacher development is a continuous process, a continuation of the natural development that precedes and aims at enhancing teachers' good relationship with knowledge and linking pedagogical work with the developments of the wider society to which it belongs. Teachers' perceptions are consistent with the idea of continuous staff training which is an essential element of successful schools (Pedder et al., 2005; Veeriah et al., 2017).

Respondents are distinguished by a high average perception of Unity of purpose setting (M=3.71) other than their educational mission and the vision that they all strive in order for a group of people to work together in ways that are most effective. The process of shaping common goals will push members towards a more coherent working relationship and there will be many benefits to the process of clarifying values, beliefs and knowledge. It is thus shown that teachers' perceptions are largely in line with Gabriel's (2005) views that *"a mission statement should focus on goals that you intend to achieve, rather than theories"*.

Respondents have a high perception of Collegial support at an average (M=3.59), while the majority (69.8%) consider it to be quite necessary because teachers who work together in a collaborative environment have the opportunity to build lasting relationships, evolve into learning partners by investing in one another and improving their achievements (Giatra, 2019). It is demonstrated that teachers' positive perceptions of collegiality development constitute a compass for school improvement, as previous research supports (Strahan, 2003; Pedder et al., 2005; Martin, 2009).

Respondents have a high perception of adopting a medium-sized Learning partnership ($M=3.58$) as a key means of achieving organizational change and learning, while the majority (70.0%) find it quite necessary. We conclude that teachers' organizational behavior is not far from the views of several authors who argue that organizational change and learning are best achieved with the collaboration of all stakeholders in the school community (Davis, 2003; Athanasoula-Reppa et al., 2010; Kythreotis et al., 2010; Biniari, 2012; Narayan, 2016).

Referring to Research hypothesis (Ho1), there was a higher statistically significant difference in the aspects of headmasters and their convergence to the overall mean value for the dimension of Collaborative leadership, compared to those of sub-headmasters and teachers. This differentiation can be attributed to the fact that the headmaster/leader of the collaborative culture can self-limit his/her power because he/she understands that all members of the teaching staff are considered capable of leading, playing different formal roles but also necessary in every endeavor to change and improve the school unit, as many researchers have argued (Reeves, 2006; Veeriah et al., 2017). On the contrary, there was a higher significant difference between teachers' views and their convergence towards the overall mean of Professional development, Unity of purpose and Collegial support dimensions, compared to the views of headmasters and sub-headmasters. Interpretation of these findings can be attributed to the increased awareness of teachers on the issue of their professional competence and the search for ways of their professional development and upgrading, mainly by using their own training programs offered, according to previous studies (Darra & Saitis, 2010; Veeriah et al., 2017). Also, teachers in schools have to perform a multidimensional project usually without significant experience, professionalism, and even adaptability difficulties, which is why they need to be focused on clearer goals for an effective school, according to other researchers (Galton et al., 1998; McBer, 2000). In addition, in a school the orientation of dialogue and reflection among teachers is narrower because they share the same class and it is logical to have developed a culture of support, uniting all their strengths which will contribute to positive school improvement as mentioned previous studies (Strahan, 2003; Pedder et al., 2005). The increased degree of collegiality exhibited by teachers multiplies, as Waite (2010) typically points out, and allows for more complete achievement of school unit goals, because repetitions are eliminated as activities become collaboratively and better valued the available means (Hargreaves, 1995).

Finally, for the Learning partnership factor, the distinction is limited between the views of teachers and sub-headmasters, which is probably related to the "subculture of teaching" they represent which enhances the learning process and identifies with the views of other researchers who support organizational change and learning are best achieved through the coherence of all subcultures of the school community (Athanasoula-Reppa, 2008; Bland, 2012; Kapachtsi & Kakana, 2014; Narayan, 2016). There was no significant difference in the perceptions of school unit employees regarding the dimension of Teacher collaboration, indicating that everyone preferred collaboration as their primary philosophy of school improvement and effectiveness.

Regarding Research hypothesis (Ho2), the significant differentiation is confined between the perceptions of teachers serving in semi-urban areas versus those in rural or urban areas for the dimensions of Teacher collaboration and Collegial support. One possible explanation may be the better organizational structure and logistics of these schools, the more rational management of available resources, the more effective collaboration with supportive educational structures and all stakeholders in the school community (Galton et al., 1998; Pincas, 2007), factors that enhance the overall school culture aimed at school improvement (Hoy & Miskel, 2008; Kythreotis et al., 2010; Koula, 2011; Narayan, 2016).

Indeed, the area in which a school is based is important because it affects the degree to which its staff can access external partners and key people who can contribute to its development. Also, if the external environment is more supportive and the wider society in which the school belongs has a positive attitude towards education then teachers are motivated for continuous development and learning because they feel that the efforts they make are recognized (Stoll et al., 2006).

According to Research hypothesis (Ho3), the differentiation and even more positive perception of teachers on the factors of Collaborative leadership and Collegial support in urban schools can be attributed to various factors, such as:

In an urban school because of most of its members, the leader of collaborative culture can self-limit his authority because he understands that all staff members are considered competent to lead. As teachers participate on the school's leadership team, study groups and academic teams, they are able to influence their school's direction. As well as that, when teachers have a genuine part in making decisions and implementing changes, they become more committed to reform efforts (Reeves, 2006; Waldron & Mcleskey, 2010; Narayan, 2016).

Also, in an urban school, the orientation to dialogue is closer, because they share the same class and it is logical that they have developed a culture of social support through which they will be able to unite all their forces to improve their school. unit (Strahan, 2003; Pedder et al., 2005). In contrast, teachers in small schools have a multidimensional and difficult task, they are slightly behind in collaborative leadership and collective participation behaviors because they require clearer goals for an effective school (Galton et al., 1998; McBer, 2000).

However, previous research suggests that in a smaller school, it is easier to communicate directly and frequently with teachers and such an environment will allow collective work, making the school a single learning community (Stoll et al., 2006). In contrast, Hord (2004) argues that under the right conditions, even a teaching staff of 30-40 people can work collectively in a single group.

6. Recommendations

In a collaborative culture, reform is not imposed upon teachers but created by them because it is defined by the values and norms of the members of the school unit, our suggestion is to integrate it and develop it as a support tool in our educational endeavor. It is also suggested that educational policy planning should contribute to its cultivation as it constitutes the atmosphere of the school climate, having a significant impact on school improvement and effectiveness.

School leaders and/or potential leaders need to shape their school schedules to give teachers time during the school day to exchange ideas and engage in constructive dialogue.

Collaborative culture as a “work-teaching subculture” is also necessary, especially in small rural primary schools, where teachers are multi-tasking because it empowers students in the bright field of learning and pedagogy.

7. Conclusion

Consequently, shaping a healthy collaborative school culture is a feasible and not an impossible task. Our findings lay the foundations for the development of more meaningful partnerships that will form a framework for the operation based on the principles of collectivity and utilization of the potential of all its members, promoting the vision of the school unit, enhancing the professionalism of individuals and aiming at the educational partnership of all actors of the school community.

At the same time, the cultivation of the collaborative leadership model reinforces the recently prevailing view of turning to the modern theory of hybrid forms of leadership that make up the form of “Integrated leadership” aimed at school improvement (Krüger & Scheerens, 2012).

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Conflict of Interest Statement

The authors declare no conflicts of interest.

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