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The Relationship Between Professional Learning Community Practices and Organizational Learning in Secondary Educational Institutions¹

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Abstract

This research explores the connection between professional learning community practices and organizational learning within secondary education institutions. Adopting a quantitative research approach, the study utilized a relational survey design. A total of 305 teachers were selected as the sample using a simple random sampling technique to ensure unbiased participation. To gather data, the "Professional Learning Community Scale" and the "Learning Organization Profile Scale" were employed. The analysis involved calculating descriptive statistics, including arithmetic means and standard deviation values. The Pearson Product-Moment Correlation Coefficient method was applied to investigate the link between professional learning community practices and organizational learning levels in secondary schools. The findings revealed that teachers perceive both professional learning community practices and organizational learning in their schools at a high level. Additionally, a strong, positive, and significant correlation was identified between organizational learning levels and professional learning community practices, highlighting a meaningful association between these practices and organizational learning in formal secondary education settings.

Keywords: Professional learning community, secondary education, organizational learning

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Introduction

Problem Statement

The concept of learning plays a profound role in organizational transformation as well as structuring. In the modern era, where change and development are imperative for organizational continuity, organizations must constantly strive to improve themselves and acquire new practices and understandings through their experiences. Organizations can implement innovative practices expected of them by harnessing the individual learning of their employees.

Schools, which have a vibrant systematic structure (Senge et al., 2022), like other organizations, aim to enrich their organizational learning by sharing individual and community-based knowledge and learnings within the school, with the condition of deriving maximum benefit from them, in order to keep up with technological and economic changes, demonstrate the desired level of effectiveness and competitiveness, and achieve a continuously rising performance trajectory. Additionally, schools endeavour to adapt to conditions of continuous and rapid change by increasing their learning capacities (Şahin, 2014).

Organizational learning at the organizational level surpasses individual learning within the organization and requires a process. It facilitates organizational renewal and progress. In organizations that are evolving and constantly restructuring, as learning experiences are shared, knowledge and skills develop, thereby enabling organizational progress (Aydemir, 2018).

Organizational learning is an understanding that operates on the premise that an organization is a social structure, emphasizing collaboration and solidarity as essential for the organization's sustainability, rather than merely sharing information. Individuals within organizations experience surpassing their individual capabilities (Barutçugil, 2004).

Facilitating the organizational development of schools is achievable through ensuring the individual teacher progress. It is expected that the teachers' learning to improve themselves within the framework of professional activities and collaborations in schools, will be reflected in schools at an organizational level and contribute to organizational development during the course of organizational learning. In this context, the relatively recent concept of "professional learning communities" in the field holds the potential to enhance the effectiveness of organizational development and progress.

Organizational Learning

The notion of organizational learning, which has garnered significant attention in the literature, has been interpreted and defined in diverse ways by researchers. When examining the explanations and definitions provided by various researchers, it should be noted that researchers have not reached a consensus on defining this concept and have put forth different perspectives on organizational learning (Callan, 2009).

Easterby-Smith and Lyles (2011) express organizational learning as "the most efficient use of knowledge in organizations," while Argyris and Schön (1996), looking at the concept from another angle, define it as "being able to see events from a new perspective." Schwandt and Marquardt (2000), on the other hand, argue that organizational learning, which they claim arises from social synergy, goes beyond the sum of individual learning within the organization

and contributes to the process of processing information within the organization. Other frequently cited definitions explaining organizational learning include the balance between pre-existing and newly acquired knowledge (Levinthal and March, 1993) and the notion that organizational learning consists of knowledge, methods, or practices acquired through any means within the organization (Argyris and Schön, 1996).

Among these interpretations, the most highlighted aspect is that organizational learning involves transforming experiences into knowledge through both individual and collective learning within a social framework (Argyris and Schön, 1978). In this context, organizational learning has gained significance as the process of transforming experiences into knowledge for social organizations.

When considering the formation and characteristics underlying organizational learning, it can be observed that the assumptions of four pairs of scholars who have made notable contributions to the domain of organizational learning (Argyris and Schön, 1978; Daft and Weick, 1984; Fiol and Lyles, 1985; Levinthal and March, 1993) are summarized in five main points (Referenced in: Collinson and Cook, 2016). These five fundamental assumptions, which are related to each other in some aspects in interpreting organizational learning, can be listed as follows:

- ✓ Organizational learning is closely associated with individual, team, or organizational-level learning and has a multidimensional structure (Yavaş, 2012).
- ✓ Organizational learning necessitates research in areas such as testing assumptions, identifying errors, and evaluating overall functioning.
- ✓ Organizational learning involves a shared understanding among the members of the organization to evaluate the cause-and-effect link between the organization's facilities and their outcomes (Collinson and Cook, 2016).
- ✓ Organizational learning reflects both cognitive and behavioral changes, which can be described as double-loop learning.
- ✓ The learning at organizational level means shaping the existing order as well as the understanding within the organization in light of new knowledge and practices (Yavaş, 2012).

The fundamental principles at the core of organizational learning can be summarized under the headings of multidimensional learning, research, shared understanding, behavioral and cognitive change, and the integration of new knowledge.

For organizational learning to occur, the knowledge acquired within the organization needs to go through some systematic stages. The most commonly used model for the organizational learning process, which can also be defined as the process of processing information obtained through organizational activities and their outcomes, was proposed by Huber (1991). This model describes four stages in the organizational learning process: acquisition of knowledge, distribution of knowledge, interpretation of knowledge, and organizational memory (Güzen, 2020).

The first necessary stage for organizational learning to take place is the acquisition of knowledge. Organizations utilize a wide range of sources, from customer surveys to performance and activity evaluations, research and development studies, and insights from other organizations, to acquire information. In the stage of acquiring knowledge, organizations

employ various learning methods such as innate learning, experimental learning, indirect learning, learning through imitation, and learning through research (Huber, 1991).

In the next step in which the organizational learning continues, known as the distribution of knowledge, different units within the organization share information related to the organization's functioning with each other through various means, often resulting in comparisons and inferences to generate new knowledge. In the distribution of knowledge stage, technical, formal, or informal channels can be preferred. However, for knowledge sharing within the organization to be effective, the organizational structure must be conducive to knowledge sharing (Güzen, 2020).

Huber (1991) explains the next stage of organizational learning, the interpretation of knowledge, by starting with the interpretation of knowledge itself. The act of interpretation can be expressed as "assigning meaning to information" or "developing a common perception of the developmental process of events" (Huber, 1991). In this stage, organizational members transform and restructure the information they receive through their personal perspectives, experiences, and mental maps. In this context, the accurate interpretation, meaningful understanding, and effective restructuring of acquired and transmitted knowledge are of great importance in ensuring organizational learning (Akgedik, 2016).

Regarding the final stage of the organizational learning process, organizational memory encompasses the transfer of acquired and interpreted knowledge within the organization to its memory (Yavaş, 2012). In this stage, which can also be defined as the storage of information acquired by the organization for future use, organizations function similarly to computers, assuming the functions of storing and recalling information when needed (Huber, 1991).

According to researchers, organizational learning occurs at different levels within the organization. These interconnected types of learning are classified as individual, team-level, and organizational-level learning (Kayan, 2022).

Individual-level learning is a form of learning that draws strength from the idea that everyone has the ability to acquire knowledge through interpersonal interaction experiences and can continuously transform this knowledge into learning (Marsick and Watkins, 1996). On an individual basis within the institutions, learning is the process by which organizational employees cognitively interpret, experience, and ultimately adapt their knowledge and learning within the context of its outcomes to behavioral forms (Odor, 2018).

Team-level learning involves the learning gains achieved by teams with specific tasks coming together to achieve predetermined goals, through sharing individual learnings, knowledge, skills, and personal experiences among team members (Alanoğlu, 2014). According to researchers, employee teams within organizations access new knowledge through continuous learning and experiencing, and by sharing these acquisitions with team members, they enable development and renewal within cycles of trial and error and experiencing (Marsick and Watkins, 1996).

Organizational-level learning occurs through the sharing of knowledge, skills, and experiences gained by employee teams at the group level within the organization with other members of the organization, allowing team-level learning to be shared with those within the organization who need these gains (Odor, 2018). According to Marsick and Watkins (1996), Organizational-level learning involves more than just the cumulative learning of individuals and teams. While it is not mandatory for individuals to continuously learn to ensure the continuity of organizational learning, continuous sharing and interaction within the organization are

necessary. In other words, organizational-level learning is a systematic structure created by the synergy of all shared gains within the organization (Kayan, 2022).

Professional learning communities, as defined by DuFour (2004), are "groups of educators who aim to develop the education and instruction quality." The concept of "professional learning community" has not become a common practice at schools of the Ministry of National Education and has not been fully adapted to the existing education system yet. However, considering the functioning of schools, practices based on professional learning communities are frequently encountered. More concretely, teams such as school management teams, school teacher councils, subject teacher councils, subject coordinators' councils, branch teacher councils, which are united around the aim of achieving a better quality in education and raising school success, can be cited as examples of professional learning communities (MEB, 2018). The gains achieved through the collaboration and joint efforts of all these councils can directly impact the organizational learning achievements of schools as a whole and consequently their performance.

Studies on professional learning communities date back to as early as 1988 on the international scale. Abundant research focusing on the positive functions of professional learning communities can be found in the field. The idea of professional learning communities was first introduced in the United States (US) and has been widely studied in the US as well. Vescio, Ross, and Adams (2008) evaluated eleven experimental studies on how teachers' participation in professional learning community practices affects students' learning levels. As a result of their review, they claimed that teachers involved in professional learning communities enhance their instructional skills, conduct their work in a more student-centered manner, and make progress in terms of overall cultural awareness, collaboration capacity, teacher leadership, and continuous professional learning and development (Altun, 2020).

Schools as learning organizations

Global changes have significantly impacted the social and economic realms of society, as well as all types of organizations, including schools. As societal changes reflect upon schools, they have compelled the school environment and management to adapt to change, essentially, to become learning organizations (Celep, 2021). Learning schools are organizations that continuously improve learning both on the individual and organizational scale, encouraging employees that engage in learning. In schools aiming to increase organizational success by adapting to changes, a holistic perspective on learning has been adopted. The current state of the school is compared with the desired state, evaluated comprehensively, and new plans are made based on the information obtained (Clarke, 2000).

According to Bowen et al. (2007), evaluating schools within the framework of learning organizations helps activate the creative and active processes schools need to implement essential change priorities, thereby assisting schools in harnessing their potential to the desired level. Only through such efforts can schools undertake initiatives capable of bridging the significant gap between school success and life success.

Learning schools can be defined as institutions where there is an effective communication network among teachers, where generating creative and collaborative solutions to internal issues takes precedence, and where both teachers and the school as a whole are focused on continuous improvement (DeRoberto, 2011). Celep (2021), in his book "Organizational Learning in Educational Organizations," discusses the main characteristics of

learning schools regarding learning organizations. The fundamental features of learning schools can be outlined as follows:

- ✓ Learning schools increase their potential for enhancing school success by acquiring innovative practices that adapt to the changing world.
- ✓ Continuous performance and capacity improvement processes are active in learning schools.
- ✓ In learning schools, individual learning and learning derived from interpersonal interactions are interconnected.
- ✓ Learning schools are closely related to other schools in order to sustain their development from different perspectives.
- ✓ In learning schools, individual mistakes are seen as learning opportunities, and all employees are encouraged to learn.
- ✓ Open communication prevails in learning schools, and employees are in constant dialogue.
- ✓ Learning activities in learning schools are carried out in an atmosphere of mutual respect and trust.
- ✓ Learning schools have teams of employees who embrace creative thinking methods to achieve a common vision that everyone is committed to.
- ✓ In learning schools, the concept of "we" is dominant over the concept of "I," and participation in decision-making is essential.

In learning schools, teachers are actively involved in a continuous process of professional learning to acquire fundamental skills such as teaching and learning, collaboration, organizing the learning environment effectively, creating continuous learning opportunities, adapting to the change process, and demonstrating commitment to ethical purposes.

Professional Learning Communities

Professional Learning Communities (PLC), which requires collaborative learning among colleagues, enable teachers to make significant progress in their professional development (Bakioğlu & Bayhan, 2017). The concept of a "professional learning community," inherently focused on a structured interaction and team-based learning, has become an inevitable practice in educational organizations due to its direct impact on teacher quality and academic capabilities of the students (Hord, 1997).

Professional Learning Community (PLC) is a relatively new concept in the literature that is continuously evolving. International evidence suggests that the development of education largely resides in the individual and collective capacity of teachers and their connection to the school-wide potential used to promote student learning. Therefore, enhancing school capacity is crucial. Capacity consists of a combination of perseverance, skills, boosting learning, institutional aspects as well as cultural and supportive factors. This complex framework enables individuals, teams, whole school communities, and educational systems to participate in and maintain learning throughout time. The development of professional learning

communities offers an important solution for strengthening capacity for lasting improvement in schools.

In this regard, since its emergence, the concept of professional learning communities has garnered significant attention in the field and has become one of the crucial factors vital for educational organizations (Stoll et al., 2006).

The concept of Professional Learning Community (PLC), enriched by significant researchers in the literature, has been defined from various perspectives. According to Hord (1997), the term Professional Learning Community (PLC) is used to describe school staff collaborating to enhance student success. In such schools, teachers share a common vision, work environment, learning experiences, decision-making processes, and open communication policies towards students to improve their academic capacities. Therefore, PLC practices, when evaluated in terms of the holistic functioning of the school, are considered highly effective for overall school quality improvement and are a powerful key to teacher and student success.

The initial studies on Professional Learning Communities (PLC) were mainly conducted by researchers in the United States. Although research on the development stages of PLC has also been conducted in the United Kingdom, significant studies that form the basis of the concept are of American origin. A chronological examination of the emergence of Professional Learning Communities reveals that researchers such as Rosenholtz (1989) with "learning-rich schools," Little and McLaughlin (1993) with "professional learning teams in effective schools," Kruse et al. (1994) with "school-based learning groups," Newman and Wehlage (1995) with "professional communities in schools," Hord (1997) with "professional learning community," DuFour and Eaker (1998) with "professional learning community," and Bolam et al. (2005) with "effective professional learning community" have contributed to enriching the scope of PLC through their studies (Altun, 2020).

Certain practices have been observed in schools implementing successful PLC applications (Lieberman and Miller, 2011). Although these practices are diverse, they can be categorized under specific headings (Cansoy and Parlar, 2011).

Reflective discussions: School principals and teachers organize brief and purposeful meetings to address issues encountered in the school.

Sharing of exemplary practices: Teachers assist in the professional development of their colleagues by sharing their best practices, teaching methods, and techniques with other teachers.

Collective focus: Teachers operate under the belief that all students can learn and, when necessary, they hold each other accountable.

Collaboration: Working together encourages teachers to use new techniques and materials.

Common norms and values: Teachers participating in PLC practices act around shared values and harmoniously with each other.

Establishing a meeting schedule: A routine meeting plan is prepared for teachers to share their experiences.

Reducing solitary work time: Teachers' physical proximity to each other is increased through teacher lounges and collective activities.

Organizing formal meetings: Formal meetings that promote unity and sharing are included to support teachers' instructional effectiveness.

Supporting effective communication: Technological communication infrastructure is updated to maintain effective communication among teachers.

Norm-based supervision: Instead of predefined rigid rules, shared norms are available for teachers to supervise each other within the natural flow of the teaching process.

Innovative and development-oriented approach: Change and development activities conducted in the school are embraced and supported by all employees.

Respect for expertise: Teachers are considered experts in their professional field, and therefore, their work is respected and appreciated.

Creating knowledge accumulation: PLC practices focus on both the intellectual and skill aspects of teacher expertise, and collaboration is fostered for novice teachers to specialize in the profession.

Demonstrating inclusive behavior: School principals exhibit behaviours that encourage learning for all students and teachers rather than distant and formal behaviours.

Importance of socialization: Socialization activities are organized to integrate new teachers into the existing PLC (Kruse et al., 1995; Lieberman and Miller, 2011).

In schools where teachers actively engage in practices based on the principles underlying PLC, the following efforts prevail within the framework of a continuous learning approach: focusing on student and teacher learning, prioritizing teacher development, maintaining learning activities through experiential learning, having shared goals, engaging in collective discussions and evaluation meetings, employing reflective thinking and open communication techniques, and striving to achieve concrete results with realistic solutions (Dufour and Eaker, 1998).

In schools demonstrating PLC characteristics, teachers:

- ✓ Work diligently to develop a clear focus on shared goals and application issues,
- ✓ Regularly gather and dedicate time to establish colleague connections built on trust and transparency,
- ✓ Establish routines and practices that foster open dialogue and clarification,
- ✓ Participate in activities such as problem solving, observation, mutual support, giving advice, and peer teaching and learning,
- ✓ Consciously coordinate and concentrate on activities that promote learning for both adults and students within the school.
- ✓ Utilize cooperative questioning to encourage proof-based discussions,
- ✓ Generate an action theory,
- ✓ Create a set of core strategies to link their learning with student learning (Lieberman and Miller, 2011).

The prominent basic aim of professional learning communities (PLCs) is to increase student academic learning and success. Studies by Vescio et al. (2008) have put forward the idea that PLC practices directly affect student achievement through focusing the relationship

between teachers' engagement in PLCs and student success, determining that PLC practices support student capacity and increase the student success at school (Vescio et al., 2008). Additionally, according to research on the relationship between student fulfillment and PLC practices, it has been observed that while PLC practices increase student achievement, increased student achievement also enhances PLC activity in schools (Kayan, 2022).

In addition to the mentioned behaviours of PLC teachers, three important characteristics possessed by teachers working in schools successfully implementing PLC practices have been identified. These include the "inclusive sense of membership," which protects and supports all teachers within the professional learning community, "mutual trust, respect, and support" demonstrated at every stage of PLC practices, and the establishment of "healthy and open communication networks" within the PLC, all of which are significant elements observed in the behavior model of PLC teachers (Watson, 2012).

Many researchers who have conducted researches regarding professional learning communities have linked the emergence and development of PLCs to Peter Senge's concept of the "learning organization" discussed in Senge's book "The Fifth Discipline" which was published in 1990, asserting that this work contributed to the recognition of the PLC structure in the literature (Bolam et al., 2005; Cansoy and Parlar, 2017; Hord, 2004). In addition to Senge, researchers such as Bolam et al. (2005), who argue that increasing student achievement depends on teacher learning, DuFour et al. (2006), who emphasize collaboration among teachers and encourage reflective and constructive thinking to promote learning for students, and Stoll and Louis (2007), who advocate for teachers to work in groups that support collaboration and reflective learning to boost student learning, have contributed to enriching the concept of PLC in the literature. Furthermore, DuFour and Eaker (1998) have provided detailed explanations of the PLC concept, further enhancing the understanding of PLCs.

There are relatively few studies on professional learning communities on the national scope. Considering that the first study dates back to 2014 (Derviřođulları, 2014), examining PLCs and their effectiveness is relatively new. Derviřođulları (2014) examined the dimensions of PLCs through teacher views. Kalkan (2015) addressed the relationship between PLC activities in primary schools and hierarchical structure and organizational trust. Öđdem (2015) examined the relationship between team leadership and school climate in primary schools and PLC activities. Ekinçi (2018) focused on the relationship between PLC activities and psychological attachment and contextual performance among high school teachers. Cücemen (2018) compared PLC activities and collaboration levels in primary schools.

Saçmaliođlu (2019) aimed to reveal 21st-century skills through PLC practices among physical education teachers. Karakaya Yıldırım (2019) evaluated teachers' experiences through online PLC practices with a group of English teachers. Ađsu (2020) aimed to increase the professional skills of mathematics teachers in a private high school through a developed PLC model and achieved the goal. Altun (2020) examined the contribution of PLC practices to sustainable professional development and found that PLC activities bring significant gains in terms of continuous professional development for teachers. Çopur (2020) suggested that PLC activities have a pleasurable effect on not only teachers' professional skills but also on student academic learning.

Professional learning community practices that have relatively recently emerged in the national literature and are still being explored. In this research, previously unexamined professional learning community structures and organizational learning have been examined

together from a relational perspective. This study, which examines the relationship between PLCs and organizational learning, along with seven studies investigating the status of secondary education institutions as PLCs among about twenty studies conducted on PLCs in Türkiye, is expected to contribute to the literature by providing insight into possible future studies on the relationship between PLCs and organizational learning.

The Purpose and the Significance of the Study

This study aims to elucidate the relationship between professional learning community practices and organizational learning in secondary education institutions. The following sub-problems are targeted to be addressed in line with this aim:

1. What is the level of perception among teachers working in secondary schools in Alanya district of Antalya province regarding professional learning community practices?
2. What is the level of perception among teachers working in secondary schools in Alanya district of Antalya province regarding organizational learning?
3. According to the opinions of secondary school teachers participating in the research, is there a significant relationship between professional learning community practices and organizational learning?

Methods

Research Design

This study, which seeks to clarify the relationship between professional learning community activities in secondary education institutions and organizational learning, as well as the direction of this relationship, is a quantitative study using the correlational survey model. Its goal is to identify the presence and degree of changes observed in two or more variables simultaneously (Karasar, 2006).

Population and Sample

The population of this research consists of a total of 1205 teachers serving in different branches in state secondary schools in Alanya district of Antalya province during the 2021-2022 academic year. The sample size was identified as "278" according to the "Sample Sizes Determined for Different Margin of Errors Table" by Büyüköztürk et al. (2008), and the sample consists of 305 teachers chosen unbiasedly through simple random sampling from the specified population.

When the individual features of the participants are examined, it is observed that 53.4% are female and 46.6% are male, 66.9% have undergraduate degrees, and 33.1% have postgraduate education. When the professional experiences of the participants are examined, it is determined that 10.2% have 0-5 years, 12.5% have 6-10 years, 19.3% have 11-15 years, 26.2% have 16-20 years, and 31.8% have 21 years and above of seniority. When the periods spent by the participants in the schools where they work are considered, it is determined that 40.7% have 0-5 years, 29.8% have 6-10 years, 16.7% have 11-15 years, and 12.8% have 16 years and above of service periods. According to the types of schools where they work, the

participants are distributed as follows: 36.7% in Anatolian High Schools, 26.9% in Science and Social Sciences High Schools, 23% in Vocational and Technical High Schools, and 13.4% in Imam Hatip High Schools.

Data Collection Instruments

In this research, two scales were administered to the participants in order to determine the relationship between professional learning community practices in secondary education institutions and organizational learning, and the status of this relationship according to certain variables: the "Professional Learning Community Scale" and the "Learning Organization Profile Scale."

The Professional Learning Community Scale (PLCS) was developed by Olivier, Hipp, and Huffman (2003) with 6 dimensions and 52 items. Öğdem (2015) adapted this scale into Turkish with 48 items and conducted reliability and validity studies. To determine the validity of the scale, Öğdem (2015) initially conducted Exploratory Factor Analysis (EFA), which revealed that the factor structure differed from the original factor structure of the scale, and 4 items with multiple loadings were identified. Subsequently, Confirmatory Factor Analysis (CFA) was conducted. In the second level of CFA, 4 items (17th, 16th, 18th, and 19th) were identified to have multiple loadings and were removed from the scale. The fit indices of the final scale were calculated as follows: RMSEA=0.071, NFI=0.96, CFI=0.97, GFI=0.82, and RMR=0.050. Based on these values, it was observed that the fit indices of the newly developed scale model met the criteria for good fit. The final scale consists of 6 dimensions and 48 items: the first dimension, supportive and inclusive leadership, comprises 11 items (1st to 11th); the second dimension, shared values and vision, consists of 5 items (12th to 16th); the third dimension, collective learning and practices, includes 10 items (21st to 30th); the fourth dimension, shared personal practices, comprises 7 items (31st to 37th); the fifth dimension, supportive conditions - relationships, consists of 5 items (38th to 42nd); and the sixth and final dimension, supportive conditions - structure, includes 10 items (43rd to 52nd) (Öğdem, 2015). The reliability coefficients obtained from the data of this study indicate high internal consistency among the items of the scale: .97 for the supportive and inclusive leadership subscale, .95 for the shared values and vision subscale, .97 for the collective learning and practices subscale, .96 for the shared personal practices subscale, .95 for the supportive conditions - relationships subscale, and .97 for the supportive conditions - structure subscale.

The Learning Organization Profile Scale (LOPS), developed by Bowen, Ware, Rose, and Powers (2007) as a dimension of the School Success Profile (SSP), was adapted into Turkish by Şahin, Çakır, and Öztürk (2014). Consisting of two basic components, "Actions" and "Sentiments," this scale forms the sub-dimensions of the actions component as; team orientation, innovation, participation, information flow, tolerance for mistakes, and results orientation; while common purpose, respect, commitment, trust, mutual support, and optimism constitute the sub-dimensions of the sentiments component. This scale consists of 36 items with 12 sub-dimensions, each with 3 items, is a 6-point Likert-type scale. The construct validity of the scale was tested using Confirmatory Factor Analysis (CFA). Based on the results of the factor analysis, it was determined that the factor loadings ranged from 0.63 to 0.87, and the variance values varied between 0.25 and 0.61. The fit indices of the scale were calculated as follows: RMSEA=0.08, NFI=0.97, CFI=0.98, IFI=0.99, RFI=0.98, GFI=0.81, and AGFI=0.78. Compared to the predetermined fit indices for CFA, it was found that the new scale model

exhibited a high level of fit, indicating that the factor structure of the Turkish version of the original scale was compatible with the factor structure of the original scale. The reliability coefficients obtained from the data of this *study* for the sub-dimensions of the "Actions" component of LOPS were as follows: .95 for team orientation, .95 for innovation, .93 for participation, .94 for tolerance for mistakes, and .94 for results orientation. The reliability coefficients for the sub-dimensions of the "Sentiments" component of LOPS were found to be as follows: .93 for common purpose, .95 for respect, .94 for commitment, .96 for trust, .96 for mutual support, and .95 for optimism. These reliability coefficients present a high level of internal consistency among the items of the scale.

Data Collection Process

The "Professional Learning Community Scale" and the "Learning Organization Profile Scale" used in this study were administered to subject teachers working in public high schools in the district of Alanya in Antalya province, both through interviews done in person and online. The responses given by the participants were then transformed into numerical data and transferred to the Jamovi data analysis program.

Data Analysis

The data of the research were analyzed using the Jamovi data analysis program. Initially, descriptive statistics were generated using arithmetic mean and standard deviation values to evaluate the perception levels of teachers working in secondary schools regarding professional learning community practices and organizational learning. In the research, skewness coefficients of the total scores and sub-dimension scores obtained from the teacher participants working at public secondary schools were examined, and it was observed that the values of the total scores fell between -1 and +1. The skewness coefficients of the variables falling between -1 and +1 indicate that the scores largely exhibit a normal distribution (Büyüköztürk, 2020). In this context, it is seen that the total scores of the scales have a normal distribution. To determine whether there is multicollinearity among the variables, VIF (Variance Inflation Factor) values were examined using the Jamovi data analysis program. Upon examination, the obtained VIF values exceeded the threshold value of 10 in the sub-dimensions of "Shared values and vision," "Collective learning and practices," "Supportive conditions - relationships," and "Supportive conditions - structure," indicating the presence of multicollinearity. Therefore, instead of conducting multiple regression analysis, the approach of calculating multiple correlation coefficients was adopted for data analysis.

Ethical Issues

Ethical approval for this study was obtained from Alanya Alaaddin Keykubat University Ethics Committee with the decision number 50076 dated 07.01.2022.

Findings

Examination of Teachers' Perceptions Regarding Organizational Learning

Teachers' perceptions regarding organizational learning, the fundamental elements of organizational learning "actions" and "sentiments," and their conceptions of the sub-dimensions have been examined, and the findings obtained in this regard are provided in Table 1.

Table 1

Findings Regarding the Total Scores of LOPS and its Basic Components

| Variables | n | Min. | Max . | \bar{X} | SS |
|------------------|-----|------|-------|-----------|------|
| Actions Total | 305 | 18 | 108 | 80 | 24.4 |
| Sentiments Total | 305 | 18 | 108 | 83 | 24.8 |
| LOPS Total | 305 | 36 | 216 | 163 | 48.7 |

When Table 1 is examined, the scores of teachers on the dimensions of "actions" and "sentiments," which are fundamental components of organizational learning, are compared; it is observed that the total score averages of teachers' sentiments dimension ($\bar{X}=83$) are higher than the total score averages they obtained from the actions dimension ($\bar{X}=80$).

The scores of the sub-dimensions of the fundamental components of organizational learning, actions, and sentiments, were also examined. The mean and standard deviations of the scores obtained by teachers from the "actions" component sub-dimensions are provided in Table 2.

Table 2

The Mean and Standard Deviations of Teachers' Organizational Learning Action Component Sub-Dimensions

| Action Sub-dimensions | n | Min. | Max. | \bar{X} | SS |
|-----------------------|-----|------|------|-----------|------|
| Team Orientation | 305 | 3 | 18 | 12.2 | 4.19 |
| Innovation | 305 | 3 | 18 | 12.2 | 4.23 |
| Involvement | 305 | 3 | 18 | 12.0 | 4.15 |
| Information Flow | 305 | 3 | 18 | 12.3 | 4.21 |
| Tolerance for Error | 305 | 3 | 18 | 12.2 | 4.12 |
| Results Orientation | 305 | 3 | 18 | 12.4 | 4.11 |

Upon examining Table 2, it is observed that among the scores obtained by teachers from the action component sub-dimensions of organizational learning, the highest averages are in the results orientation dimension ($\bar{X}=12.4$). The average scores of teachers for other sub-dimensions of the action component are determined as follows: information flow ($\bar{X}=12.3$), team orientation ($\bar{X}=12.2$), innovation ($\bar{X}=12.2$), tolerance for error ($\bar{X}=12.2$), and involvement ($\bar{X}=12.0$).

The mean and standard deviations of the total scores for the sentiments component sub-dimensions of teachers' organizational learning have been examined and are provided in Table 3.

Table 3

The Mean and Standard Deviations of The Total Scores for The Sentiments Component Sub-Dimensions of Teachers' Organizational Learning

| Sentiments Sub-dimensions | n | Min. | Max. | \bar{X} | SS |
|----------------------------------|----------|-------------|-------------|-----------------------------|-----------|
| Common Purpose | 305 | 3 | 18 | 12.3 | 4.14 |
| Respect | 305 | 3 | 18 | 12.6 | 4.28 |
| Cohesion | 305 | 3 | 18 | 12.4 | 4.17 |
| Trust | 305 | 3 | 18 | 12.5 | 4.22 |
| Mutual Support | 305 | 3 | 18 | 12.6 | 4.18 |
| Optimism | 305 | 3 | 18 | 12.6 | 4.22 |

When Table 3 is examined, it is observed that teachers' highest average scores for the sub-dimensions of the sentiments component of organizational learning are obtained from the respect ($\bar{X}=12.6$), mutual support ($\bar{X}=12.6$), and optimism ($\bar{X}=12.6$) sub-dimensions. These average scores obtained by teachers from the sub-dimensions of respect, mutual support, and optimism, which are sub-dimensions of the sentiments component of organizational learning, are followed by the average scores obtained from the sub-dimensions of trust ($\bar{X}=12.5$), cohesion ($\bar{X}=12.4$), and common purpose ($\bar{X}=12.3$), respectively. When comparing the averages obtained from the sub-dimensions of teachers' organizational learning sentiments, it is observed that the average scores obtained from the sub-dimensions of respect, mutual support, and optimism ($\bar{X}=12.6$) are higher and equal to each other than the average scores obtained from the sub-dimensions of trust ($\bar{X}=12.5$), cohesion ($\bar{X}=12.4$), and common purpose ($\bar{X}=12.3$), which are other sub-dimensions of the sentiments component.

Examining Teachers' Perceptions of Professional Learning Community Practices

The Table and findings regarding the perceptions of teachers on the Professional Learning Community Scale and its sub-dimensions are provided in Table 4.

Table 4

The Mean and Standard Deviations Regarding the Sub-Dimensions of The Professional Learning Community Scale for Teachers

| Sub-dimensions | n | Min. | Max. | \bar{X} | SS |
|-------------------------------------|----------|-------------|-------------|-----------------------------|-----------|
| Shared and supportive leadership | 305 | 11 | 55 | 3.5 | 1.03 |
| Shared values and vision | 305 | 5 | 25 | 3.5 | 1.07 |
| Collective learning and application | 305 | 10 | 50 | 3.5 | 1.02 |
| Shared personal practices | 305 | 7 | 35 | 3.4 | 1.03 |
| Supportive conditions-relationships | 305 | 5 | 25 | 3.5 | 1.06 |
| Supportive conditions-structures | 305 | 10 | 50 | 3.4 | 1.03 |

When examining Table 4, it is observed that the highest average scores among the dimensions of teachers' professional learning community are for "shared and supportive

leadership," "shared values and vision," "collective learning and application," and "supportive conditions-relationships," all of which are equal ($\bar{X}=3.5$). Following these, the average scores obtained by teachers for the dimensions of "shared personal practices" ($\bar{X}=3.4$) and "supportive conditions-structures" ($\bar{X}=3.4$) are observed.

The Examination of the Relationship Between Professional Learning Community Practices and Organizational Learning

In this section, the relationship between organizational learning and professional learning community practices was examined using the "Learning Organization Profile Scale" and the "Professional Learning Community Scale" scores obtained from the participating teachers. Firstly, the relationship and direction between teachers' Professional Learning Community Scale (PLCS) scores and the organizational learning (OL) and its core components "actions" and "sentiments" were investigated. Subsequently, the existence and direction of the relationship between the PLCS sub-dimensions and the OL core components "actions" and "sentiments" were examined.

The examination of the relationship between teachers' perceptions of Professional Learning Community Scale (PLCS) and its core components "actions" and "sentiments" with their perceptions of Learning Organization Profile Scale (LOPS)

The analysis of the relationship between teachers' perceptions of organizational learning and its core components, "actions" and "sentiments," with their perceptions of professional learning community practices, was conducted using the Pearson correlation coefficient technique. The relevant correlation values and findings are provided in Table 5.

Table 5

The Correlation Values Between Teachers' Perceptions of Organizational Learning, Its Core Components, and Perceptions of Professional Learning Community Practices

| Dimensions | LOPS Total (r) | PLCS Total (r) | Actions Total (r) |
|-------------------------|----------------|----------------|-------------------|
| LOPS Total | | | |
| PLCS Total | .85*** | | |
| Actions Total | .99*** | .85*** | |
| Sentiments Total | .99*** | .83*** | .96*** |

p<.001

When examining Table 5, a positively strong and significant correlation ($r=0.85$, $p<0.001$) was found between teachers' perceptions of organizational learning and their perceptions of professional learning community practices. According to Table 5, there is also a positively strong and significant correlation ($r=0.85$, $p<0.001$) between teachers' conceptions of the "actions" component of organizational learning and their perceptions of professional learning community practices. Analyzing the relationship between teachers' conceptions of the "sentiments" component of organizational learning and their perceptions of professional

learning community practices, a positively strong and significant correlation ($r=0.83$, $p<0.001$) was identified.

The relationship and direction between teachers' conceptions of the sub-dimensions of the "actions" component of organizational learning and the sub-dimensions of professional learning community practices were analyzed using the Pearson product-moment correlation coefficient technique. The relevant correlation values and findings are provided in Table 6.

Table 6

The Correlation Values and Relationships Between Teachers' Conceptions of the LOPS Actions Component Sub-Dimensions and The Conceptions of the Professional Learning Community Scale Sub-Dimensions

| | TO | IN | IV | IF | TE | RO | SSL | SVV | CLA | SPP | SCR | SCS |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----|
| IN | .95*** | | | | | | | | | | | |
| IV | .93*** | .92*** | | | | | | | | | | |
| IF | .94*** | .94*** | .93*** | | | | | | | | | |
| TE | .94*** | .94*** | .94*** | .94*** | | | | | | | | |
| RO | .94*** | .94*** | .92*** | .95*** | .95*** | | | | | | | |
| SSL | .78*** | .79*** | .78*** | .79*** | .80*** | .80*** | | | | | | |
| SVV | .80*** | .80*** | .79*** | .80*** | .81*** | .80*** | .93*** | | | | | |
| CLA | .81*** | .81*** | .78*** | .81*** | .82*** | .81*** | .90*** | .94*** | | | | |
| SPP | .77*** | .76*** | .75*** | .77*** | .78*** | .77*** | .85*** | .89*** | .92*** | | | |
| SCR | .77*** | .78*** | .76*** | .78*** | .80*** | .77*** | .86*** | .90*** | .92*** | .92*** | | |
| SCS | .80*** | .80*** | .80*** | .81*** | .82*** | .81*** | .90*** | .91*** | .91*** | .89*** | .93*** | |

*** $p < .001$

A-TO: Actions-Team Orientation Dimension Total Score

A-IN: Actions-Innovation Dimension Total Score

A-IV: Actions-Involvement Dimension Total Score

A-IF: Actions-Information Flow Dimension Total Score

A-TE: Actions-Tolerance for Errors Dimension Total Score

A-RO: Actions-Results Orientation Dimension Total Score

SSL: Shared and Supportive Leadership Dimension Total Score

SVV: Shared Values and Vision Dimension Total Score

CLA: Collective Learning and Application Dimension Total Score

SPP: Shared Personal Practices Dimension Total Score

SCR: Supportive Conditions-Relationships Dimension Total Score

SCS: Supportive Conditions-Structures Dimension Total Score

When examining Table 6, a statistically meaningful positive correlation ($r=0.78$, $p<0.001$) was found between teachers' conceptions of the "team orientation" sub-dimension of organizational learning actions and their conceptions of the shared and supportive leadership sub-dimension of professional learning community practices. Similarly, a statistically meaningful positive correlation ($r=0.80$, $p<0.001$) was observed between teachers' conceptions of the shared values and vision sub-dimension of professional learning community practices and their conceptions of the collective learning and practices sub-dimension. Additionally, a statistically meaningful positive correlation ($r=0.81$, $p<0.001$) was found between teachers' conceptions of the collective learning and practices sub-dimension of professional learning community practices and their conceptions of the shared personal practices sub-dimension. Moreover, a statistically meaningful positive correlation ($r=0.77$, $p<0.001$) was identified between teachers' conceptions of the shared personal practices sub-dimension of professional learning community practices and their conceptions of the supportive conditions-relationships sub-dimension. Finally, a statistically meaningful positive correlation ($r=0.80$, $p<0.001$) was observed between teachers' conceptions of the supportive conditions-structures sub-dimension of professional learning community practices and their conceptions of the team focus sub-dimension.

Teachers' conceptions of the "innovation" sub-dimension of organizational learning actions were found to have a statistically meaningful positive correlation ($r=0.79$, $p<0.001$) with their conceptions of the shared and supportive leadership sub-dimension of professional learning community practices. Similarly, a statistically meaningful positive correlation ($r=0.80$, $p<0.001$) was observed between teachers' conceptions of the shared values and vision sub-dimension of professional learning community practices and their conceptions of the collective learning and practices sub-dimension. Additionally, a statistically meaningful positive correlation ($r=0.81$, $p<0.001$) was found between teachers' conceptions of the collective learning and practices sub-dimension of professional learning community practices and their conceptions of the shared personal practices sub-dimension. Moreover, a statistically meaningful positive correlation ($r=0.76$, $p<0.001$) was identified between teachers' conceptions of the shared personal practices sub-dimension of professional learning community practices and their conceptions of the supportive conditions-relationships sub-dimension. Finally, a statistically meaningful positive correlation ($r=0.78$, $p<0.001$) was observed between teachers' conceptions of the supportive conditions-structures sub-dimension of professional learning community practices and their conceptions of the renewal sub-dimension.

Teachers' conceptions of the "involvement" sub-dimension of the "actions" component of organizational learning were found to have a statistically meaningful positive correlation ($r=0.78$, $p<0.001$) with their conceptions of the shared and supportive leadership sub-dimension of professional learning community practices. Similarly, a statistically meaningful positive correlation ($r=0.79$, $p<0.001$) was observed between teachers' conceptions of the shared values and vision sub-dimension of professional learning community practices and their conceptions of the collective learning and practices sub-dimension. Additionally, a statistically meaningful positive correlation ($r=0.78$, $p<0.001$) was found between teachers' conceptions of the collective learning and practices sub-dimension of professional learning community practices and their conceptions of the shared personal practices sub-dimension. Moreover, a statistically meaningful positive correlation ($r=0.75$, $p<0.001$) was identified between teachers' conceptions of the shared personal practices sub-dimension of professional learning community practices and their conceptions of the supportive conditions-relationships sub-dimension. Finally, a statistically meaningful positive correlation ($r=0.76$, $p<0.001$) was

observed between teachers' conceptions of the supportive conditions-structures sub-dimension of professional learning community practices and their conceptions of the participation sub-dimension.

Teachers' conceptions of the "information flow" sub-dimension of the "actions" component of organizational learning were found to have a statistically meaningful positive correlation ($r=0.79$, $p<0.001$) with their conceptions of the shared and supportive leadership sub-dimension of professional learning community practices. Similarly, a statistically meaningful positive correlation ($r=0.80$, $p<0.001$) was observed between teachers' conceptions of the shared values and vision sub-dimension of professional learning community practices and their conceptions of the collective learning and practices sub-dimension. Additionally, a statistically meaningful positive correlation ($r=0.81$, $p<0.001$) was found between teachers' conceptions of the collective learning and practices sub-dimension of professional learning community practices and their conceptions of the shared personal practices sub-dimension. Moreover, a statistically meaningful positive correlation ($r=0.77$, $p<0.001$) was identified between teachers' conceptions of the shared personal practices sub-dimension of professional learning community practices and their conceptions of the supportive conditions-relationships sub-dimension. Finally, a statistically meaningful positive correlation ($r=0.78$, $p<0.001$) was observed between teachers' conceptions of the supportive conditions-structures sub-dimension of professional learning community practices and their conceptions of the information flow sub-dimension.

Teachers' conceptions of the "tolerance for errors" sub-dimension of the "actions" component of organizational learning were found to have a statistically meaningful positive correlation ($r=0.80$, $p<0.001$) with their conceptions of the shared and supportive leadership sub-dimension of professional learning community practices. Similarly, a statistically meaningful positive correlation ($r=0.81$, $p<0.001$) was observed between teachers' conceptions of the shared values and vision sub-dimension of professional learning community practices and their conceptions of the collective learning and practices sub-dimension. Additionally, a statistically meaningful positive correlation ($r=0.82$, $p<0.001$) was found between teachers' conceptions of the collective learning and practices sub-dimension of professional learning community practices and their conceptions of the shared personal practices sub-dimension. Moreover, a statistically meaningful positive correlation ($r=0.78$, $p<0.001$) was identified between teachers' conceptions of the shared personal practices sub-dimension of professional learning community practices and their conceptions of the supportive conditions-relationships sub-dimension. Finally, a statistically meaningful positive correlation ($r=0.80$, $p<0.001$) was observed between teachers' conceptions of the supportive conditions-structures sub-dimension of professional learning community practices and their conceptions of the tolerance for mistakes sub-dimension.

Teachers' conceptions of the "result orientation" sub-dimension of the "actions" component of organizational learning were found to have a statistically meaningful positive correlation ($r=0.80$, $p<0.001$) with their conceptions of the shared and supportive leadership sub-dimension of professional learning community practices. Similarly, a statistically meaningful positive correlation ($r=0.80$, $p<0.001$) was observed between teachers' conceptions of the shared values and vision sub-dimension of professional learning community practices and their conceptions of the collective learning and practices sub-dimension. Additionally, a statistically meaningful positive correlation ($r=0.81$, $p<0.001$) was found between teachers' conceptions of the collective learning and practices sub-dimension of

professional learning community practices and their conceptions of the shared personal practices sub-dimension. Moreover, a statistically meaningful positive correlation ($r=0.77$, $p<0.001$) was identified between teachers' conceptions of the shared personal practices sub-dimension of professional learning community practices and their conceptions of the supportive conditions-relationships sub-dimension. Finally, a statistically meaningful positive correlation ($r=0.81$, $p<0.001$) was observed between teachers' conceptions of the supportive conditions-structures sub-dimension of professional learning community practices and their conceptions of the result orientation sub-dimension.

The analysis of the relationship between teachers' conceptions of the sub-dimensions of the "sentiments" component of organizational learning and the sub-dimensions of professional learning community practices was conducted using the Pearson product-moment correlation coefficient technique. The relevant correlation values and findings are provided in Table 7.

Table 7

The Correlation Between Teachers' Conceptions of the Sub-Dimensions of the "Sentiments" Component of Organizational Learning and The Sub-Dimensions of Professional Learning Community Practices

| | CP | RS | CH | TR | MS | OP | SSL | SVV | CLA | SPP | SCR | SCS |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----|
| RS | .94*** | . | | | | | | | | | | |
| CH | .96*** | .96*** | . | | | | | | | | | |
| TR | .94*** | .96*** | .97*** | . | | | | | | | | |
| MS | .94*** | .97*** | .96*** | .96*** | . | | | | | | | |
| OP | .95*** | .94*** | .96*** | .95*** | .94*** | . | | | | | | |
| SSL | .78*** | .77*** | .79*** | .78*** | .78*** | .79*** | . | | | | | |
| SVV | .79*** | .78*** | .80*** | .79*** | .79*** | .80*** | .93*** | . | | | | |
| CLA | .81*** | .80*** | .82*** | .81*** | .81*** | .81*** | .90*** | .94*** | . | | | |
| SPP | .76*** | .73*** | .76*** | .75*** | .74*** | .76*** | .85*** | .89*** | .92*** | . | | |
| SCR | .78*** | .75*** | .78*** | .77*** | .76*** | .78*** | .86*** | .90*** | .92*** | .92*** | . | |
| SCS | .80*** | .77*** | .80*** | .79*** | .78*** | .80*** | .90*** | .91*** | .91*** | .89*** | .30*** | . |

*** $p < .001$

S-CP: Sentiments-Common Purpose Dimension Total Score

S-RS: Sentiments-Respect Dimension Total Score

S-CH: Sentiments-Cohesion Dimension Total Score

S-TR: Sentiments-Trust Dimension Total Score

S-MS: Sentiments-Mutual Support Dimension Total Score

S-OP: Sentiments-Optimism Dimension Total Score

SSL: Shared and Supportive Leadership Dimension Total Score

SVV: Shared Values and Vision Dimension Total Score

CLA: Collective Learning and Application Dimension Total Score

SPP: Shared Personal Practices Dimension Total Score

SCR: Supportive Conditions-Relationships Dimension Total Score

SCS: Supportive Conditions-Structures Dimension Total Score

When Table 7 is examined; there is a significantly positive and high-level relationship ($r=0.78$, $p<0.001$) between teachers' conceptions of the "common purpose" sub-dimension of organizational learning and their conceptions of the sub-dimension of shared and supportive leadership in the professional learning community; there is a significantly positive and high-level relationship ($r=0.79$, $p<0.001$) between teachers' conceptions of the "common purpose" sub-dimension of organizational learning and their conceptions of the sub-dimension of shared values and vision in the professional learning community; there is a significantly positive and high-level relationship ($r=0.81$, $p<0.001$) between teachers' conceptions of the "common purpose" sub-dimension of organizational learning and their conceptions of the sub-dimension of collective learning and practices in the professional learning community; there is a significantly positive and high-level relationship ($r=0.76$, $p<0.001$) between teachers' conceptions of the "common purpose" sub-dimension of organizational learning and their conceptions of the sub-dimension of shared personal practices in the professional learning community; there is a significantly positive and high-level relationship ($r=0.78$, $p<0.001$) between teachers' conceptions of the "common purpose" sub-dimension of organizational learning and their conceptions of the sub-dimension of supportive conditions-relationships in the professional learning community; there is a significantly positive and high-level relationship ($r=0.80$, $p<0.001$) between teachers' conceptions of the "common purpose" sub-dimension of organizational learning and their conceptions of the sub-dimension of supportive conditions-structure in the professional learning community.

Teachers' conceptions of the "respect" sub-dimension of organizational learning are significantly and positively correlated with their conceptions of the sub-dimension of shared and supportive leadership in the professional learning community ($r=0.77$, $p<0.001$). Similarly, there is a significantly positive correlation between teachers' conceptions of the "respect" sub-dimension and their conceptions of the sub-dimension of shared values and vision in the professional learning community ($r=0.78$, $p<0.001$). Furthermore, a significantly positive correlation is observed between teachers' conceptions of the "respect" sub-dimension and their conceptions of the sub-dimension of collective learning and practices in the professional learning community ($r=0.80$, $p<0.001$). Additionally, a significantly positive correlation is found between teachers' conceptions of the "respect" sub-dimension and their conceptions of the sub-dimension of shared personal practices in the professional learning community ($r=0.73$, $p<0.001$). Moreover, there is a significantly positive correlation between teachers' conceptions of the "respect" sub-dimension and their conceptions of the sub-dimension of supportive conditions-relationships in the professional learning community ($r=0.75$, $p<0.001$). Finally, a significantly positive correlation is identified between teachers' conceptions of the "respect" sub-dimension and their conceptions of the sub-dimension of supportive conditions-structure in the professional learning community ($r=0.77$, $p<0.001$).

Teachers' conceptions of the "cohesion" sub-dimension of organizational learning are significantly and positively correlated with their conceptions of the sub-dimension of shared and supportive leadership in the professional learning community ($r=0.79$, $p<0.001$). Similarly, there is a significantly positive correlation between teachers' conceptions of the "cohesion" sub-dimension and their conceptions of the sub-dimension of shared values and vision in the professional learning community ($r=0.80$, $p<0.001$). Furthermore, a significantly positive correlation is observed between teachers' conceptions of the "cohesion" sub-dimension and their conceptions of the sub-dimension of collective learning and practices in the professional learning community ($r=0.82$, $p<0.001$). Additionally, a significantly positive correlation is found between teachers' conceptions of the "cohesion" sub-dimension and their conceptions of the

sub-dimension of shared personal practices in the professional learning community ($r=0.76$, $p<0.001$). Moreover, there is a significantly positive correlation between teachers' conceptions of the "cohesion" sub-dimension and their conceptions of the sub-dimension of supportive conditions-relationships in the professional learning community ($r=0.78$, $p<0.001$). Finally, a significantly positive correlation is identified between teachers' conceptions of the "cohesion" sub-dimension and their conceptions of the sub-dimension of supportive conditions-structure in the professional learning community ($r=0.80$, $p<0.001$).

There is a significant and positive correlation between teachers' conceptions of the "trust" sub-dimension of organizational learning and their conceptions of the sub-dimension of shared and supportive leadership in the professional learning community ($r=0.78$, $p<0.001$). Similarly, a significantly positive correlation is observed between teachers' conceptions of the "trust" sub-dimension and their conceptions of the sub-dimension of shared values and vision in the professional learning community ($r=0.79$, $p<0.001$). Additionally, there is a significantly positive correlation between teachers' conceptions of the "trust" sub-dimension and their conceptions of the sub-dimension of collective learning and practices in the professional learning community ($r=0.81$, $p<0.001$). Moreover, a significantly positive correlation is found between teachers' conceptions of the "trust" sub-dimension and their conceptions of the sub-dimension of shared personal practices in the professional learning community ($r=0.75$, $p<0.001$). Furthermore, there is a significantly positive correlation between teachers' conceptions of the "trust" sub-dimension and their conceptions of the sub-dimension of supportive conditions-relationships in the professional learning community ($r=0.77$, $p<0.001$). Finally, a significantly positive correlation is identified between teachers' conceptions of the "trust" sub-dimension and their conceptions of the sub-dimension of supportive conditions-structure in the professional learning community ($r=0.79$, $p<0.001$).

There is a significant and positive correlation between teachers' conceptions of the "mutual support" sub-dimension of organizational learning and their conceptions of the sub-dimension of shared and supportive leadership in the professional learning community ($r=0.78$, $p<0.001$). Similarly, a significantly positive correlation is observed between teachers' conceptions of the "mutual support" sub-dimension and their conceptions of the sub-dimension of shared values and vision in the professional learning community ($r=0.79$, $p<0.001$). Additionally, there is a significantly positive correlation between teachers' conceptions of the "mutual support" sub-dimension and their conceptions of the sub-dimension of collective learning and practices in the professional learning community ($r=0.81$, $p<0.001$). Moreover, a significantly positive correlation is found between teachers' conceptions of the "mutual support" sub-dimension and their conceptions of the sub-dimension of shared personal practices in the professional learning community ($r=0.74$, $p<0.001$). Furthermore, there is a significantly positive correlation between teachers' conceptions of the "mutual support" sub-dimension and their conceptions of the sub-dimension of supportive conditions-relationships in the professional learning community ($r=0.76$, $p<0.001$). Finally, a significantly positive correlation is identified between teachers' conceptions of the "mutual support" sub-dimension and their conceptions of the sub-dimension of supportive conditions-structure in the professional learning community ($r=0.78$, $p<0.001$).

There is a significant and positive correlation between teachers' conceptions of the "optimism" sub-dimension of organizational learning and their conceptions of the sub-dimension of shared and supportive leadership in the professional learning community ($r=0.79$, $p<0.001$). Similarly, a significantly positive correlation is observed between teachers'

conceptions of the "optimism" sub-dimension and their conceptions of the sub-dimension of shared values and vision in the professional learning community ($r=0.80$, $p<0.001$). Additionally, there is a significantly positive correlation between teachers' conceptions of the "optimism" sub-dimension and their conceptions of the sub-dimension of collective learning and practices in the professional learning community ($r=0.81$, $p<0.001$). Moreover, a significantly positive correlation is found between teachers' conceptions of the "optimism" sub-dimension and their conceptions of the sub-dimension of shared personal practices in the professional learning community ($r=0.76$, $p<0.001$). Furthermore, there is a significantly positive correlation between teachers' conceptions of the "optimism" sub-dimension and their conceptions of the sub-dimension of supportive conditions-relationships in the professional learning community ($r=0.78$, $p<0.001$). Finally, a significantly positive correlation is identified between teachers' conceptions of the "optimism" sub-dimension and their conceptions of the sub-dimension of supportive conditions-structure in the professional learning community ($r=0.80$, $p<0.001$).

Results, Discussion and Recommendations

In this study examining the relationship between PLC practices and organizational learning in secondary education institutions, organizational learning, the basic components of organizational learning "actions" and "sentiments," and teacher perceptions identified in PLCs and their sub-dimensions have been examined in detail within the framework of each research question. Seeing the results of this research, it has been inferred that teachers have a high perception of organizational learning and PLC practices. It has been detected that teachers' conceptions of the sentiments component of organizational learning are higher than the actions component. Furthermore, teachers' perceptions of PLC practices are higher in the dimension of "shared and supportive leadership" among the sub-dimensions of PLCs. Wahlstrom and Louis (2008) suggested in their study conducted in the United States that shared leadership behaviours are among the factors that affect the effectiveness of teacher practices and support teacher development. In this regard, the prominence of shared and supportive leadership dimension is similar to this study. Gnechten (2011) also demonstrated in his study that PLC practices not only support teachers' professional development but also enhance leadership qualities and collaboration.

As a result of this study aiming to identify the relationship between PLC practices and organizational learning, a significantly positive relationship has been identified between organizational learning, the basic components of organizational learning "actions" and "sentiments," and PLC practices and their sub-dimensions. Therefore, PLC practices directly and positively affect organizational learning.

Schools, as learning organizations, must share the learning behaviours they acquire through experience and practice throughout their operation to provide the organization with a continuous mechanism for development. This mechanism should have a learning process where all elements work together seamlessly and flawlessly. In this context, the participation of each teacher working in schools in this development process is an indispensable element. According to Silins and Mullford (2002), schools must develop systems and practices that ensure the continuity of individual learning of all teachers to enhance their organizational learning capacities and achieve the targeted academic performance.

When evaluated in terms of the principles of professional learning communities (PLCs), there is no formation within the Turkish National Education System that fully matches the same structure. On the other hand, main groups showing similarities to PLC practices are school, district, and provincial subject area meetings. These groups gather three times a year at specified times during the academic year within the framework of the principles prescribed by the Turkish Ministry of National Education (MoNE, 2018). Although subject area meetings aim to provide professional development, they may not be sufficient to foster the educational qualifications up to the desired level due to attempting to do so within limited time frames and with limited resources.

Another practice showing similarities to professional learning communities is the "English Together" project launched by the Ministry of National Education in collaboration with the British Council and Sabancı Foundation in 2019. Initially aimed at developing English teachers in middle schools within "professional development communities," this project involved establishing professional learning communities in various schools in Ankara and opening trainer training programs in various provincial centers of Türkiye. The "English Together" project, announced through official letters calling for applications from each province, aims to provide professional guidance, especially in foreign language teaching methods and techniques, to English teachers who apply for training sessions held both online and face-to-face in the United Kingdom at regular intervals. It emphasizes creating a learning environment through the sharing of experiences and practices among participants and providing pedagogical guidance activities to achieve professionalization in the field. Initiated to support the professional development and pedagogical guidance of middle school English teachers, this project began accepting applications for trainer training from secondary school English teachers as of 2021 (MoNE, 2022). Since the relevant project is quite new, its positive effects on schools have not been sufficiently observed. Therefore, its contributions to organizational learning require long-term monitoring. On the other hand, although this project aimed solely at the professional development of English teachers is quite comprehensive in terms of English language teaching, it does not cover all members of the school, making it difficult to be sufficient for organizational learning in the long run.

Although there is no comprehensive professional learning community (PLC) application in Türkiye, there are significant findings obtained through short-term PLC activities implemented within the scope of some studies based on teacher perceptions of PLCs. In his study conducted at the elementary level, Kayan (2022) observed teachers' perceptions of PLCs and the effects of these conceptions on student success using the pre-test-post-test method. Within the research, teachers involved in PLC practices showed increased pedagogical competencies, and while there was no difference in the pre-tests of students in classes taught by teachers at the beginning of the study, significant differences were identified in their post-tests. In this regard, Kayan's (2022) study reflects the positive relationship between PLC practices and student achievement, which is a prerequisite for organizational learning. Like this research, teachers working in Science and Social Sciences high schools, who admit students based on centralized exam scores, had higher perceptions of PLCs and organizational learning compared to teachers in other secondary schools.

Due to the relatively few studies conducted domestically to examine the relationship between PLC practices and organizational learning, foreign studies have been examined in detail, and studies supporting the main argument of this research have been explained. Unlike domestic studies, many foreign studies have found that the activities carried out by PLCs have

a significant impact on students' academic achievement and, consequently, on the level of organizational learning in schools.

The study most similar to this research in terms of its results and its main research question, which clearly demonstrates the relationship between professional learning community (PLC) practices and organizational learning, belongs to Psychoyos (2012). In his study conducted in Panama, Psychoyos (2012) served as a PLC facilitator in schools with medium and low socioeconomic status. He compared the professional and pedagogical development of teachers who participated in monthly PLC training sessions under the ProED 2011 PLC program with those who did not participate. According to the findings, teachers who participated in monthly PLC activities acquired innovative pedagogical knowledge and shared it with their colleagues at school. They also made changes to classroom teaching environments and activities. Teachers who participated in PLC activities obtained new strategies, practices, and ideas to incorporate into their teaching activities at school. On the other hand, teachers who did not participate in PLC activities did not show renewal in teaching methods or classroom activities, and they were also found to be insufficient in terms of shared vision and professional sharing. According to Psychoyos (2012), PLC practices based on the principle of "teachers learn from teachers" indicate future improvements in the organizational learning capacities of schools in Panama. The results suggested by this study directly support the conclusion of this research that PLC practices positively influence organizational learning.

Carter (2008), aiming to better identify the effects of PLCs on learning levels, particularly for student groups with low learning levels and learning risks, conducted PLC practices with teachers of a group of middle school students with low academic achievement and learning difficulties. Carter (2008) clearly demonstrated the results of these studies using the pre-test-post-test technique. According to the results, students in the study group made significant improvements in key academic skills such as reading and mathematics, especially through the activities of teachers who adapted the skills acquired through PLC practices to the classroom teaching environment. Carter's (2008) study provides evidence that PLC practices are directly linked to student success. As schools, as learning organizations, aim to enhance organizational success by supporting progressive learning for not only teachers but also for students, Carter's (2008) study, which examines the positive relationship between PLC practices and student achievement, is similar to this research's findings regarding the positive and high-level relationship between PLC practices and organizational learning.

Thomas (2018) conducted research in five middle schools located in the state of Wisconsin, USA, examining the relationship between teachers' perceptions of Professional Learning Community (PLC) practices and student achievement, which is an indicator of organizational learning. The study found that in all five schools sampled, teachers had high perceptions of PLC practices, and because of PLC behaviours reflected in classroom instructional activities, high levels of academic achievement were observed. The research, which shows that as teachers' positive perceptions of PLC practices increase, student achievement also increases, supports the positive relationship between PLC practices and student achievement, a result also presented in this study. Additionally, the examination of teachers' perceptions of PLC and organizational learning (OL) revealed a positive relationship, fundamentally supporting the positive relationship between PLC practices and OL, which aims to increase student achievement.

Eyanagho (2019) conducted a study in middle schools in Texas, investigating teachers' perceptions of PLC practices and how they evaluated their work in terms of PLC practices.

The study revealed the impact of various elements of PLC practices, such as instructional activities in their classrooms, sharing with colleagues, providing feedback to each other, mentoring activities, monitoring student learning progress, and assessing instruction, on student achievement. It was determined that elements of PLC practices, such as shared values and vision, collective learning and practices, shared personal practices, supportive conditions-relationships, and supportive conditions-structure, promote continuous learning and increase student achievement. Moreover, based on this study, it was noted that examining PLC practices in secondary education institutions would also be beneficial. When evaluated within the framework of increasing student achievement, both PLC and OL processes aim to enhance student achievement. Therefore, based on the conclusion of this study that there is a high-level positive relationship between PLC practices and organizational learning, it can be expected that PLC practices in secondary education institutions, due to their association with organizational learning, will increase student achievement.

Özkan (2016) conducted research in elementary schools in Kansas, examining the effects of professional learning community (PLC) practices on student achievement. According to the results of the study, the activities in which teachers participating in PLC practices were involved both within and outside the school increased students' academic success. The high-level positive relationship between PLC practices and organizational learning (OL) identified as a result of this research is significant in terms of enhancing student achievement.

Yates (2014) and Anderson (2020) suggested in their research that teachers participating in PLC communities and sharing their experiences at the school and classroom levels showed significant and desired changes in their professional competencies. They demonstrated high-level skills such as professional confidence, transferring innovative practices to instructional environments, and collaborating with colleagues around a shared vision and sharing. These researchers considered these professional competencies as expected outcomes that directly increase students' academic levels. The higher perceptions of PLC and OL among teachers working in schools admitting students through centralized examination systems and serving more successful students in Science and Social Sciences high schools can be associated with the findings of these two studies.

Wang (2016), through a study conducted in two successful secondary schools in China, found that PLC practices were fully followed in schools. School principals showed sensitivity to the sub-dimensions of PLC and took on instructional leadership roles. Moreover, this process contributed to organizational learning and increased school success. This study, which demonstrates the impact of PLC practices on increasing school success by enhancing organizational learning, directly highlights the high-level positive relationship between PLC and OL.

Ramirez (2020), in a study conducted in California, suggested that school principals could better support teachers' professional development and consequently students' achievements by adapting their behaviours related to PLC practices and its sub-dimensions to leadership skills. Similarly, Wahlstrom and Louis (2008) proposed in their research that the shared and supportive leadership behaviours, one of the sub-dimensions of PLC practices, demonstrated by school administrators supported teachers' professional development, improved instructional performance, and ultimately raised student achievement. Both studies, by demonstrating the direct effectiveness of PLC practices on organizational learning, are similar to this study.

The prioritized goals within the "2023 Education Vision" published by the Ministry of National Education of Türkiye, such as "reducing the achievement gap between secondary education institutions," are supported by studies emphasizing the significant contributions of PLC practices. Unlike traditional development practices that force teachers to develop individually and limit them to their own classroom experiences, PLCs can be the key to achieving educational skills through access to experiences and good practices at national school, district, provincial and even school levels and collaboration among students. Schools can convert their individual resources into organizational gains through well-planned PLC mechanisms, thus raising students' academic achievement to desired levels. In this context, teachers need continuous and well-planned PLC mechanisms to support their professional development. Organizational learning can be achieved to the extent of the effectiveness of PLC practices.

The study clearly demonstrates that PLC practices carried out in high schools can have a significant and positive impact on organizational learning. With reference to studies demonstrating the direct relationship between organizational learning and academic achievement, it can be said that to increase academic success and ultimately organizational learning levels in all types of high schools, existing PLC practices should be expanded and conducted more regularly.

This research was carried out with the participating high school teachers at service in public secondary schools in Alanya district of Antalya province, Türkiye. Since the research results are limited to the answers given by the teachers, it would be useful to apply it in different provinces and districts with a larger sample group, including private secondary schools. The study was carried out with the participation of teachers working in secondary schools, and school administrators were not included in the sample group. If the participation of school administrators, support staff and even parents is ensured in the research, more information can be provided about the organizational learning and PLC functioning in the school.

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