

# The Role of Motivational Structures in Teacher Professional Learning Communities

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**Abstract:** This study draws on the vast literature on teacher professional learning communities and a dominant motivation theory (Achievement Goals Theory). We examine the relations between the school professional culture, the goal structures of its professional learning communities (PLCs), and teacher collaboration. We used structural equation modeling (SEM) to analyze data collected through surveys from 785 teachers from elementary schools participating in an Israeli national PLC program. The findings show that: (a) teachers perceived relational goals as the most important goals for their PLC; and (b) while school culture predicted mastery, performance, and relational goals structures, only mastery goals significantly predicted teacher collaboration. These findings suggest that PLCs aiming to promote teacher learning through collaboration should focus more on learning goals than on sheer social goals.

**Keywords:** Teacher learning, professional development, professional learning communities, motivation, goals structures, school culture.

## Introduction

Professional learning communities (PLCs) are becoming increasingly popular as a model for teacher workplace professional learning (Carpenter, 2015; Tam, 2015). Research consistently demonstrates the potential benefits of PLCs in supporting teachers' professional development and improving their instruction and students' learning (Stoll et al., 2006; Vescio, Ross, & Adams, 2008). However, not all PLCs are successful in facilitating teacher learning. Research highlights collaboration as imperative for teacher learning in PLCs, alongside other features such as focus on student learning, reflective dialogue, and shared values and norms (Bryk et al., 2010; Vescio et al., 2008). While studies demonstrate the relationship between school professional culture, collaboration in PLCs, and teacher professional development (Bolam et al., 2005; Bryk et al., 2010; Carpenter, 2015), we lack a good understanding of additional PLC characteristics that may impact teachers' collaboration and, hence, their learning.

Theories of motivation in education underscore the crucial role motivation plays in shaping learning processes and outcomes, including collaboration. Specifically, achievement goal theory suggests that goals structures (i.e., the environmental emphasis on certain achievement goals) influence the goals people adopt and, in turn, their learning (Ames, 1992; Meece, Anderman, & Anderman, 2006). Thus, we hypothesize that PLCs' goals structures can predict teacher collaboration within them and that the goals structures mediate the relationship between the school professional culture and teacher collaboration. We examine our hypothesis using survey data collected from elementary schools teachers participating in an Israeli national PLCs program.

## Background and theoretical framework

### Professional learning communities

Developing PLCs has become a hot topic in many countries (Bryk et al., 2010; Tam, 2015; Vescio et al., 2008). PLCs are groups of teachers seeking to improve classroom teaching and student learning by "sharing and critically interrogating their practice in an ongoing, reflective, collaborative, inclusive, learning-oriented, growth-promoting way" (Stoll et al., 2006, p. 222). Findings demonstrate the potential of PLCs to facilitate teacher learning and improve teaching (Vescio et al., 2008). For example, Bolam et al.'s (2005) study of PLCs in 393 schools in England found a positive impact of participating in PLCs on teaching practice. Furthermore, they found a positive significant relationship between the strength of the PLC and student achievement. Similarly, Bryk et al.'s (2010) large-scale, longitudinal study of school reform in Chicago indicates that strong PLCs improve teachers' instruction and their student outcomes.

While different scholars highlight different features as essential to PLC success, they generally agree that professional collaboration between teachers is key to their learning in the PLC. Such collaboration involves exchange of teaching materials and instructional "tips," but also the ability to challenge each other's ideas and practices and manage disagreements (Grossman, Wineburg, & Woolworth, 2001; Hargreaves, 2003; Horn, Garner, Kane, & Brasel, 2017). Research on PLCs has consistently found that teachers reported an increase in collaboration as they participated in learning communities (Vescio et al., 2008). However, developing teacher

collaboration is no easy task, and scholars have addressed the challenges of overcoming conflicting norms of privatism, individualism, and contrived collegiality (Hargreaves, 2003; Lortie, 1975; Little, 1982). Where instruction is considered a private practice, teachers hesitate to collaborate with their colleagues on instruction, and in particular, they resist exposing their practice to peer scrutiny and joint deliberation. Teachers in such professional culture are concerned that this type of collaboration in the PLC may reflect badly on them (Authors, 2019); furthermore, these concerns might be intensified in a school culture that promotes competition among colleagues rather than collaboration (Talbert, 2010). Accordingly, scholars highlight the importance of socio-emotional support in the PLC, including mutual trust and respect, loyalty to and identification with the community, and acknowledgment of possible dissent and uncertainty (Authors, 2018; Stoll et al., 2006). At the same time, scholars note that vexing relationships can lead teachers to avoid professional disagreements and prevent them from critically examining problems of practice and challenging each other's ideas (Authors, 2019; Grossmann et al., 2001). As mentioned, research suggests that school culture, school leadership, and professional norms impact the success of PLCs and collaboration within them (Bolam et al., 2005; Bryk et al., 2010; Carpenter, 2015). However, we still lack a good understanding of PLC characteristics that impact teacher collaboration and mediate the effects of school culture on teacher collaboration in PLCs. One such characteristic that has not received research attention is teacher motivation in the PLCs.

### Achievement goals structures in professional learning communities

Achievement Goal Theory focuses on the goals that drive learning, positing that the reasons why people learn affect the way they learn (Ames, 1992). The theory distinguishes between mastery and performance goals orientations. Mastery-oriented learners learn because they want to improve their competence, knowledge, understanding, and skills and achieve mastery. Such an orientation has been associated with a broad array of desirable cognitive, behavioral, and affective learning characteristics (Senko, Hulleman, & Harackiewicz, 2011). Performance-oriented learners learn because they want to demonstrate competence, either striving to outperform others and make a positive impression (performance-approach goals) or striving to avoid negative impressions and doing worse than others (performance-avoidance goals). While the evidence regarding performance approach is inconclusive, scholars agree that performance-avoidance goals are unproductive particularly for collaborative learning (Senko et al. 2011). Educational climate can influence learners' goals orientation by emphasizing certain goals and de-emphasizing others. Such environmental emphases are referred to as goals structures (Ames, 1992), and they have been found to vary across educational environments (Authors, 2013; Meece et al., 2006).

Most research on goal orientation has focused on students, while teacher goal orientation has been largely ignored. An exception is Butler's (2007, 2012) seminal work, in which she suggested that teacher goal orientation *for teaching* consists of five distinct factors (mastery, ability-approach, ability-avoidance, work-avoidance and relational goals), which predict perceptions of help-seeking and its frequency. In the present study, we adapted Butler's scales to study teachers' perceptions of their PLC goals structures, that is, to examine whether teachers perceive their PLC as emphasizing professional development goals (mastery), demonstration of professional competence (performance-approach), avoidance of demonstrating lack of competence (performance-avoidance), avoidance of burdening teachers with extra work (work-avoidance), and nurturing social relationships among community members (relational goals). We hypothesize that these PLC goals structures predict teacher collaboration within the PLCs and that PLC goals structures mediate the relationship between school professional culture and teacher collaboration (and, hence, their learning).

### Methods

This study is part of an ongoing design-based implementation research project aiming to advance teacher learning in elementary school PLCs. We have been collaborating over the past five years with two Israeli school districts, the Ministry of Education and a philanthropic foundation. In this project, leading teachers, who are in-school PLC coordinators, are expected to facilitate weekly 90-minute in-school PLC meetings. The leading teachers participate in a biweekly workshop, where they are introduced to tools for facilitating PLC meetings (see Segal, Lefstein, & Vedder-Weiss, 2018; Vedder-Weiss, Ehrenfeld, Ram, & Pollak, 2018; Vedder-Weiss, Segal, & Lefstein, 2019). The PLCs typically consist of 4 to 10 teachers. Some are discipline-focused (e.g., math PLC and science PLC), while others focus on a certain pedagogical topic (motivation, evaluation, etc.) or a certain grade level.

### Data collection

Data was anonymously collected from 785 teachers in 28 state elementary schools participating in the program. Participant age ranged from 20 to 65 ( $M = 39.20$ ,  $SD = 9.51$ ), with 86% female and 14% male. Teachers' experience ranged from 1 to 43 years ( $M = 39.20$ ,  $SD = 9.81$ ). Teachers completed a printed Likert type survey

administered to them in their schools. Confirmatory Factor Analysis (CFA) validated the scales. Reliability for all scales was high ( $.84 > \alpha > .74$ ). The survey measured:

**Teachers' perceptions of the school professional culture.** We adapted 15 items from Bryk et al. (2010) and the OECD 2013 Teaching and Learning International Survey (TALIS; OECD, 2014) to assess the school professional culture in terms of its emphasis on professional learning and collaboration, including, for example, "My school management encourages teachers to implement new practices they've learned" and "In my school, teachers have many opportunities to learn from each other."

**Teachers' perceptions of their PLC's achievement goals structures.** We developed 18 items drawing on Butler's (2007, 2012) scales. Teachers were asked to rate for each item how much it describes what the teachers participating in their PLC consider an important goal for their PLC. Four items measured mastery goals structures (e.g., "to discuss problems of practice"), four items measured performance-approach goals (e.g., "to commend outstanding teachers"), four items measured performance-avoidance goals (e.g., "to avoid exposing teaching difficulties"), three items measured work-avoidance goals (e.g., "to save teachers from bearing extra tasks"), and three items measured relational goals (e.g., "to develop good relationships among teachers").

**Teachers' collaborative practices.** We adapted eight items from TALIS 2013 (OECD, 2014) and Bryk et al. (2010) to assess the frequency of different types of collaboration practices between members of the PLC, including, for example: "How many times this year have you discussed classroom management, order, and discipline with other teachers?" and "How many times this year have you collaboratively developed instructional materials or activities with other teachers?"

## Statistical analyses

To compare between teachers' assessments of the different goals structures, we compared their means. To test the hypothesized mediation model, we used structural equation modeling (SEM), using AMOS21 (Arbuckle, 2006). We examined whether school professional culture predicted PLCs' achievement goals structures, which in turn predicted collaborative practices (Figure 1).

## Central findings

On average, teachers perceived relational goals as the most important goals for their PLC ( $m=4.38$ ;  $SD=.70$ ), closely followed (but significantly lower;  $t=7.99$ ,  $p<.001$ ) by mastery goals ( $m=4.22$ ;  $SD=.63$ ), and then performance-approach ( $m=3.80$ ;  $SD=.84$ ), work avoidance ( $m=2.94$ ;  $SD=1.09$ ), and performance-avoidance goals ( $m=2.38$ ;  $SD=1.04$ ).

The SEM analysis of the mediation model did not include work-avoidance goals, because they did not significantly correlate with either school culture or collaborative practices. The model exhibited an acceptable fit to the data ( $\chi^2(4) = 36.35$ ,  $p < .001$ ;  $NFI = .98$ ;  $CFI = .98$ ;  $TLI = .90$ ;  $RMSEA = .08$ ). The analysis shows that teachers' perception of their school's professional culture predicted their perception of their PLC's achievement goals structures. More specifically, it positively predicted mastery ( $\beta = .50$ ,  $C.R. = 19.01$ ,  $p < .001$ ), performance-approach ( $\beta = .27$ ,  $C.R. = 9.15$ ,  $p < .001$ ) and relational goals ( $\beta = .44$ ,  $C.R. = 15.99$ ,  $p < .001$ ) and negatively predicted performance-avoidant goals ( $\beta = -.09$ ,  $C.R. = -3.01$ ,  $p = .003$ ). That is to say, the more teachers perceived their school as emphasizing collaborative professional learning, the more they perceived their PLC as oriented towards learning, demonstrating competence, and nurturing social relationship and less oriented towards avoiding demonstrating lack of ability. While these four goals structures were all predicted by the school culture, only mastery goals mediated the relationship between the school culture and teachers' collaboration; that is, only mastery goals significantly predicted collaborative practices ( $\beta = .22$ ,  $C.R. = 6.49$ ,  $p < .001$ ). Performance avoidance also negatively predicted teachers' collaborative practices ( $\beta = -.05$ ,  $C.R. = -1.92$ ,  $p = .05$ ); however this relation was relatively marginal ( $\beta < .1$ ).

## Discussion

The findings suggest that in schools that emphasize professional learning and collaborations in general, the PLCs tend to emphasize both social (relational) goals and learning (mastery) goals as central to their activity. However, only learning goals mediate the effect of the school culture on the PLC's success in terms of teachers' actual collaborations.

Research on teacher learning within PLCs addresses the tension between developing a supporting social space and developing a professionally advancing space (e.g., Grossman et al., 2001). The findings of this study indicate that mere emphasis on social goals does not promote professional collaboration, even with a strong professional school culture, whereas emphasis on learning goals does. The findings suggest that productive professional collaboration requires that teachers share the goal of learning, even when this involves socially (and emotionally) uncomfortable situations (such as uncertainty, disagreements, and criticism), and that sharing the

goal of developing social cohesion is not enough. Given previous research indicating that collaboration is imperative for teacher learning in PLCs, these findings suggest that when a tension arises between social goals and learning goals, learning goals should be prioritized. This has implications for the design and facilitation of PLC processes. It suggests that PLC leaders should, for example, invest more in engaging the community in critical examination of problems of practice (thus emphasizing that the community's goal is professional learning) than in distinct structured social activities, such as social games (which emphasize relational goals).

## Contribution

This study advances our understanding of PLC characteristics that have the potential to advance teacher collaboration and, hence, their professional learning. It highlights the role of teacher motivation for learning, a topic seldom considered in teacher learning literature, and offers a measurement tool to assess it. In alignment with the theme of the conference (interdisciplinary), it also demonstrates the benefits of combining sociological theory and measures with psychological theories and measures.

## References

- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology*, 84(3), 261-271.
- Bryk, A. S., Sebring, P. B., Allensworth, E., Easton, J. Q., & Luppescu, S. (2010). *Organizing schools for improvement: Lessons from Chicago*. University of Chicago Press.
- Butler, R. (2007). Teachers' goal orientations and associations with teachers' help seeking: Examination of a novel approach to teacher motivation. *Journal of Educational Psychology*, 99(2), 241-252.
- Butler, R. (2012). Striving to connect: Extending an achievement goal approach to teacher motivation to include relational goals for teaching. *Journal of Educational Psychology*, 104(3), 726-742.
- Carpenter, D. (2015). School culture and leadership of professional learning communities. *International Journal of Educational Management*, 29(5), 682-694.
- Grossman, P., Wineburg, S., & Woolworth, S. (2001). Toward a theory of teacher community. *Teachers College Record*, 103(6), 942-1012.
- Hargreaves, A. (2003). *Teaching in the knowledge society*. Buckingham: Open University Press.
- Horn, I. S., Garner, B., Kane, B. D., & Brasel, J. (2017). A taxonomy of instructional learning opportunities in teachers' workgroup conversations. *Journal of Teacher Education*, 68(1), 41-54.
- Little, J. W. (1982). Norms of collegiality and experimentation: Workplace conditions of school success. *American Educational Research Journal*, 19(3), 325-340.
- Lortie, D. C. (1975). *Schoolteacher: A sociological study*. Chicago: University of Chicago Press.
- Louis, K. S., & Marks, H. M. (1998). Does professional community affect the classroom? Teachers' work and student experiences in restructuring schools. *American Journal of Education*, 106(4), 532-575.
- Meece, J. L., Anderman, E. M., & Anderman, L. H. (2006). Classroom goal structure, student motivation, and academic achievement. *Annual Review of Psychology*, 57, 487-503.
- OECD (2014), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, TALIS, OECD Publishing, Paris.
- Segal, A., Lefstein, A., & Vedder-Weiss, D. (2018) Appropriating protocols for the regulation of teacher professional conversations. *Teaching and Teacher Education*, 70, 215-226.
- Senko, C., Hulleman, C. S., & Harackiewicz, J. M. (2011). Achievement goal theory at the crossroads: Old controversies, current challenges, and new directions. *Educational Psychologist*, 46(1), 26-47.
- Stoll, L., Bolam, R., McMahon, A., Wallace, M., & Thomas, S. (2006). Professional learning communities: A review of the literature. *Journal of Educational Change*, 7(4), 221-258.
- Talbert, J. E. (2010). Professional learning communities at the crossroads: How systems hinder or engender change. In *Second international handbook of educational change* (pp. 555-571). Springer.
- Tam, A. C. F. (2015). The role of a professional learning community in teacher change: A perspective from beliefs and practices. *Teachers and Teaching*, 21(1), 22-43.
- Vedder-Weiss, D., Ehrenfeld, N., Ram, M., & Pollak, I. (2018). Productive framing of pedagogical failure: How Teacher framings can facilitate or impede learning from problems of practice. *Thinking Skills and Creativity*, 30, 31-41.
- Vedder-Weiss, D., Segal, A., & Lefstein, A. (2019). Teacher face-work in discussions of video recorded classroom practice: Constraining or catalyzing opportunities to learn? *Journal of Teacher Education*, 70(5), 538-551.
- Vescio, V., Ross, D., & Adams, A. (2008). A review of the impact of professional learning communities on teaching practice and student learning. *Teaching and Teacher Education*, 24(1), 80-91.