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The relationship between school collective reflective practice and teacher physiological efficacy sources

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HIGHLIGHTS

- HLM Analysis of 661 teachers from 42 K-12 public, private and charter schools.
- Collective reflective practice provided less discomfort to external stimuli.
- Collective learning provided for less discomfort from internal stimuli.
- Collective decision making practices provided for less physiological discomfort.
- Active administrative leadership results in more physiological discomfort.

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ABSTRACT

This study used Hierarchical Linear Modeling to analyze the relationship between school organizational behaviors and practices (at the school level) on teachers' reports of internal and external physiological sources of efficacy. Six hundred sixty-one teachers from 42 schools in the United States were surveyed to measure both individual sources of teacher efficacy and their school's professional learning community organizational behaviors. Findings from this study support existing research which suggests a relationship between collaborative organizational culture and these efficacy sources. It also adds to existing research by demonstrating which efficacy sources have a positive or negative relationship to the organizational behaviors.

1. Introduction: the question of professional learning community behaviors as sources of teacher efficacy

Research considering teacher efficacy in the classroom and organization is broad and extensive (Klassen, Tze, Betts, & Gordon, 2011). Self-efficacy is not only important for the student learner to achieve success, but the self-efficacy of the professional teaching the student, as well as the collective efficacy of the professional community to which that student belongs is imperative for student success. Goddard, Hoy, and Woolfolk-Hoy (2000) supported this notion that through improved individual teacher efficacy, the entire culture of the organization improves. Such a school recognizes that when difficulties are faced together as professionals, collective solutions to these challenges are more apt to be found. They *learn* as a community.

The *Professional Learning Community* (PLC) organizational structure is well suited for this task. Within the PLC, certain organizational behaviors are expected. Teachers create common assessments to measure student outcomes. They take PLC time to analyze the data and adjust curriculum and teaching methods accordingly. These assessments are then compared to the overall mission and vision of the school as created by the PLC. When approached with teacher learning in mind, this reflective practice based on student outcome data can be transformative (Webster-Wright, 2009). However, professional learning communities are not always successful in their attempt to improve the efficacy and culture of professional staff members (Wells & Feun, 2007). Educational organizations need to approach collaborative time with a focus on teacher learning as well as student data analysis. It is the focus on organizational practice and how it relates to teacher efficacy sources that is in need of consideration. This study seeks to identify the relationship between the organizational behaviors

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most typically identified as part of collective reflective practice and sources of teacher efficacy.

2. Background

There are multiple ways of considering how learning occurs within the participants of any organization. How does an organization move organically toward change? What role does collective reflective practice play in this movement? For the purpose of this research, the focus was placed on the role of collective reflective practices that positively affect both internal and external physiological sources of *teacher efficacy* as they occur within the professional learning community or other organizational structures that support teacher collaboration.

2.1. Theoretical framework defining teacher efficacy

Albert Bandura (1995) defines self-efficacy as, "…beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations" (p. 2). Social Cognitive Theory is a learning theory that takes into account multiple internal and external components to one's ability to learn. Individual or self-efficacy is only one component of the larger theoretical construct. Bandura (1997) states there are four areas that most affect efficacy expectations: performance accomplishments (also referred to as mastery experience), vicarious experience, verbal (social) persuasion, and physiological (emotional) arousal.

Physiological arousal refers to the "emotional states" that people may rely on to judge their own capabilities (Bandura, 1995, p. 4). They interpret their stress reactions and tension as signs of vulnerability to:

> poor performance…Mood also affects people's judgments of their personal efficacy…[another] way of altering efficacy beliefs is to enhance physical status, reduce stress and negative emotional proclivities, and correct misinterpretations of bodily states (Bandura, 1995, pp. 4–5).

In short, one's physiological (emotional) states are part of the efficacy picture. The stimuli for these physiological states can be internal or external. The interpretation of these states is what informs the efficacy of the individual.

Internal sources that could create a physiological (emotional) response are a result of meta-cognition, or internal, cognitive processing. "Information that is relevant for judging personal efficacy…is not inherently instructive," (Bandura, 1995, p. 5) but rather it is the selection of this information through cognitive processing that allows it to be interpreted by the individual. When physiological and emotional responses occur as a result of personal reflection or in comparison to perceived peer expectations, these responses have the potential of informing personal efficacy.

Likewise, physiological (emotional) responses may occur as a result of external stimuli. The presentation of student outcome data, administrative observations, peer or parent observations could all stimulate positive or negative physiological responses. How these responses are interpreted can also potentially inform personal efficacy.

In the United States, as stakes become higher for teachers to achieve greater student outcomes there are multiple opportunities for positive and negative physiological responses to occur from a variety of internal and external sources. It must be recognized that these physiological responses do not occur in a vacuum, but rather may actually be shaping the sense of efficacy one carries as a teacher and as a teaching community. Bandura (1995) states that…

> those who harbor a low sense of efficacy become more and more erratic in their analytical thinking and lower their aspirations, and the quality of their performance deteriorates. In contrast, those who maintain a resilient sense of efficacy set themselves challenging goals and use good analytic thinking, which pays off in performance accomplishments (p. 6).

In her book, *Helping Teachers Learn* (p. xxiii) Drago-Severson (2004) considered six traditional and less traditional models of PD. She then compared the differences between these models regarding informational learning as was usually the case with PD, and transformational learning, that learning which was most apt to bring about change within the adult. Drago-Severson (2004) defined *transformational learning* as, "learning that helps adults better manage the complexities of work and life" (p. xxii).

Comparing Drago-Severson's definition of transformational learning, with Bandura's (1995) definition of efficacy, "…beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations" (p. 2), one cannot help but see the parallel. Although efficacy is a belief regarding one's capability to adapt, and transformational learning is the outcome of the adaptation, we also know that it is through a series of positive, mastery experiences, including outcomes, that personal efficacy is increased.

Research has considered the process of a "co-constructed" learning environment to determine how the individual reacts on others within the environment and visa-versa for the purpose of team learning. However, some elements of this research declare that learning within an organizational environment "appears to be more complex than originally theorized" (Van den Bossche, Gijselaers, W., Segers, M., Woltjer, G. & Kirschner, P., 2011). In addition, research may further consider the differences in perception of teacher efficacy based on gender, ethnicity and other cultural considerations (Flores & Clark, 2004; Pang, 2006). Regardless of the context or research focus, as we look to organizational behaviors to improve teacher practice and student outcomes, we should answer the call of research (Klassen et al., 2011) for a greater understanding of efficacy sources.

2.2. Teacher efficacy and teacher learning: a review of the literature

The relevance of teacher efficacy as it relates to student achievement has been thoroughly researched since the RAND Corporation studies of the early 1970s (Armor et al., 1976; Berman & McLaughlin, 1977). Based on Rotter's (1966) theory of *Locus of Control* and the predecessor to Bandura's work, the study clarified and measured teacher efficacy from a response to two statements (Ashton, Webb, & Doda, 1983):

1. When it comes right down to it a teacher can't really do much because most of the student's motivation and performance depends on his or her home environment.
2. If I really try hard, I can get through to even the most difficult or unmotivated students.

These two questions represented two factors of individual teacher efficacy. The first question reflected how much the teacher believes they can overcome external environmental challenges. The second question reflected the factor of internal efficacy. In other words, to what capacity did the teacher believe they had within themselves the ability to manage educational challenges?

Criticisms have been made regarding how to most accurately measure efficacy in general or the four affects, specifically. Before a review of research regarding teacher efficacy could be addressed, it was first necessary to consider how these concepts had been measured.