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**The Relationship Between Collective Efficacy Beliefs and Building
Group Capacity**

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Abstract

The Relationship Between Collective Efficacy Beliefs and Building Group Capacity

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Recent research examining *collective efficacy beliefs* has generated a plethora of promising findings about their impact on group functioning. However, questions regarding the nature of collective efficacy beliefs across diverse educational organizations and theoretical constructs are understudied in this area of research. Therefore, the current study examines the relationship between collective efficacy beliefs and *building group capacity*. Self-reported data were collected from participants involved in a 10-month collaborative effort to enhance their proficiency in giving more effective presentations in order to strengthen their divisions capacity to improve educational achievement in schools. This top-down approach to building capacity is common, yet challenging to develop and evaluate, especially for organizations consisting of multiple infrastructures. Research findings using separate simple linear regression analyses

suggest that *perceived collective efficacy* highly predicts *group capacity*, as it accounted for nearly 76% of the variance in self-reported group capacity. In addition, *vicarious experience* was shown to highly predict collective efficacy beliefs and group capacity. Likewise, *perceived autonomy support* strongly predicted group capacity, however did not significantly predict collective efficacy beliefs, which has been implied in the recent literature (Brinson & Steiner, 2007; Goddard, Hoy & Hoy, 2004). These findings provide a foundation for future collective efficacy belief research and capacity building efforts in the nonprofit education sector.

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Chapter I: Introduction

Within Social Cognitive Theory, “*perceived collective efficacy* raises people’s vision of what they wish to achieve, enhances motivational commitment to their endeavors, strengthens resilience to adversity, and enhances group accomplishments” (Bandura, 2006). This construct was introduced by Bandura (1982) as “a group’s shared belief in its conjoint capabilities to organize and execute the course of action required to produce given levels of attainments” (Bandura, 1997, p.447) and originated from *self-efficacy perceptions*— “beliefs in one’s capacity to organize and execute the courses of action required to produce given attainments” (Bandura, 1997, p. 3). Recent advances in this line of research in work-related contexts have suggested that perceived collective efficacy is a promising construct to consider in building organizational capacity as it has been found to influence group potency and group performance (Stajkovic, Lee & Nyberg, 2009), work group effectiveness (Little & Madigan, 1997), and group goal attainment (Bandura, 1993; Goddard, 2001).

The practice of *capacity building* in the school improvement literature has been referred to as “a series of actions that lead to an increase in the collective power of a group to improve student achievement” or “meet more challenging standards” (Hoyle, Samek & Valois, 2008, p. 2; cited by Fullan, 2004). Research in this area is timely as nonprofit organizations are faced with a growing need to seek new and effective ways to advance critical services and attain established goals to state agencies, districts, and schools striving for educational reform. Considering the circumstances of an ever-

changing and complex society, an increasing number of grant-makers believe that investing in *organizational capacity building* helps leverage the impact of their charitable resources (Connolly & York, 2002; Porter & Kramer, 1999). Hence, there is a need for research that provides advanced awareness about evidence-based approaches to building capacity in the nonprofit education sector. However, there are several caveats to effectively developing and measuring capacity building efforts that must be addressed.

First, the overall nature of capacity building is highly determined by the objectives and needs of the organization that wishes to attain it. Thus, organizations have different ways of conceptualizing the purpose and process of building and evaluating capacity within their given field, subsequently creating much ambiguity in the literature. Nonetheless, most definitions closely match the purpose of increasing the collective power of an organization to fulfill its mission. Thus, the working definition of capacity building for the purpose of this report is—*helping an organization strengthen its collective power to create, enrich, and/or sustain its ability to efficiently carry out its declared mission.*

Second, the assumed role of the evaluator in capacity building efforts is to devise methods that provide evidence that the program has helped to build the capacity of the organization it serves (Beesely & Shebby, 2010). Recent research has suggested several multifaceted methods for evaluating organizational capacity that focus on measuring growth in individual and group level *cognitive, affective, and behavioral* aspects of development (Buono & Kerber, 2010; Connolly & York, 2002; Hoyle, Samek & Valois, 2008; Weiner, 2009). For example, one such method has been the use of a continuum of

capacity building evaluations that addresses multiple levels of an organization, seeks questions regarding short and long-term outcomes, and utilizes mixed methods for data collection (Connolly & York, 2002). According to this continuum, measuring longer-term outcomes in regards to organizational functioning is highlighted as being more meaningful, but harder to measure. Moreover, much of the capacity building research lacks sufficient evidence-based approaches for effectively evaluating sustained efforts.

Lastly, while recent research examining the impact of collective efficacy beliefs has generated a plethora of promising findings about their impact on strengthening organizational effectiveness, there is still a need for developing a deeper theoretical understanding of this construct across multiple educational levels and theoretical perspectives related to group functioning. This study responds to this call by providing a foundation for future research that wishes to examine the impact of collective efficacy beliefs on building capacity by investigating their theoretical relationship within the nonprofit education sector.

Simple linear regression is employed to assess predictable variation across a set of collective efficacy shaping constructs: *mastery experience*, *internal and external attributions*, *vicarious experience*, and *autonomy support*. Self-reported data from an online survey measuring these constructs in addition to perceived collective efficacy and group capacity are collected from participants involved in a 10-month collaborative effort to enhance their proficiency in giving more effective presentations in order to strengthen their divisions capacity to improve educational achievement in schools. Given their

theoretical similarities, it is anticipated that collective efficacy beliefs will significantly predict participants' group capacity to improve student achievement in schools.

Chapter II: Integrative Analysis and Interpretation

SOCIAL COGNITIVE THEORY & COLLECTIVE EFFICACY BELIEFS

According to a social cognitive theory perspective, *beliefs lead to actions*. The most fundamental assumption of social cognitive theory is that the choices that individuals and collectives make through the exercise of agency are influenced by the strength of their efficacy beliefs (Goddard et al., 2004). *Agency* represents the ways in which people practice some level of control over their own lives to produce certain attainments. Bandura (1989) conceptualized that “because judgments and actions are partly self-determined, people can effect change in themselves and their situations through their own efforts” (p. 1175). Bandura (1993) also noted that efficacy perceptions are not judgments of potential outcomes, but rather confided judgments of future actions to attain specific outcomes. Thus, efficacy belief constructs are empirically related in that they are “future-oriented judgments about capabilities to organize and execute the courses of action required to produce given attainments in specific situations or contexts” (Goodard, Hoy & Woolfolk Hoy, 2004, p.3).

There are three distinct forms of agency within social cognitive theory—*personal* (i.e., agency exercised individually), *proxy* (i.e., socially mediated mode of agency), and *collective* (interdependent efforts) (Bandura, 2000). *Collective agency* suggests, “a group’s attainments are the product not only of shared knowledge and skills of its different members, but also of the interactive, coordinative, and synergistic dynamics of their transactions” (Bandura, 2000, p.75-76). Within this perspective, *perceived collective efficacy* represents the beliefs of group members concerning “the performance capability of a social system as a whole” (Bandura 1997,

p.469). Analogous to self-efficacy beliefs, collective efficacy beliefs are associated with the “tasks, level of effort, persistence, shared thoughts, stress levels, and achievement of groups” (Goddard et al., 2004, p.8).

A substantial body of research has demonstrated that people motivate and guide their actions partly by their beliefs of personal efficacy (Bandura 1997; Bandura, 2000). Research in the school improvement literature have referred perceived collective efficacy to teachers’ judgments that the faculty, as a whole, in their school can effectively organize and execute the courses of action required to have a positive effect on students (Goddard et al., 2004). For example, decisions teachers make about their classroom practices are directly influenced by their sense of efficacy for teaching. Recent research has found that *teachers’ sense of efficacy* is a significant predictor of productive teaching practices, compared to teachers with lower self-efficacy beliefs (Allinder, 1994). In addition to teachers’ individual sense of efficacy beliefs, there is also the notion of *teachers’ collective efficacy beliefs* regarding perceptions about their faculties’ capabilities in accomplishing specific goals. Research has indicated that teachers who attain a stronger sense of collective efficacy are more likely to take personal action towards accomplishing school improvement efforts. According to this premise, teachers not only have self-referent efficacy perceptions but also beliefs about the conjoint capability of a school faculty as a whole (Goddard et al., 2004, p. 4). Thus, “just as teachers’ sense of efficacy partially explains the effect of teachers on student achievement, from an organizational perspective, a faculty’s sense of collective efficacy helps to explain the differential effect that school cultures have on teachers and students” (Goddard et al., 2004, p. 8).

Further in line with this research, several studies have found strong, positive relationships between collective efficacy beliefs within the school setting and student achievement, even when considering external factors beyond a school's control (i.e. low socioeconomic status) (Bandura, 1993; Goddard, Hoy & Hoy, 2000). In addition to student performance, collective efficacy beliefs have also shown to enhance teachers' commitment to school-community partnerships and commitment to their school(s) mission (Ross & Gray, 2006). Furthermore, within the business management literature, collective efficacy beliefs have been linked to group goal attainment (Mulvey & Klein, 1998; Sampson, Morenoff, & Earls, 1999), group potency and group performance (Stajkovic, Lee, & Nyberg, 2009), and work group effectiveness (Little & Madigan, 1997). In addition, when testing the multilevel relationship between teacher and collective efficacy beliefs, slightly more than 80% of the between-school variance in teachers' sense of efficacy was due to collective efficacy beliefs (Goddard, 2001). Thus, collective efficacy perceptions are important to group functioning because they compel members to take action in pursuit of desired organizational expectations and attainments. This organized capacity for action strengthens members' self-referent thoughts and consequently, their growth and power to produce results.

A logical explanation for the functioning of collective efficacy beliefs in facilitating group members' actions to accomplish group goals is the concept of social norms or expectations on individual behavior. Based on this premise, "norms develop in order to provide members of a community with some influence over the actions of others, particularly when those actions have consequences for the group" (Goddard et al., 2004, p. 9). Consequently, the collective

expectation for action in a group functions as a powerful aspect to an organization's operative culture and lies in the social persuasion it exerts on members within that culture.

SOURCES OF EFFICACY-SHAPING INFORMATION AT THE GROUP LEVEL

According to Bandura (1977), "perceived personal and collective efficacy differ in the unit of agency, but in both forms efficacy beliefs have similar sources, serve similar functions, and operate through similar processes" (p. 478). There are four types of efficacy-shaping information: *mastery experience*, *vicarious experience*, *social persuasion*, and *affective state*. While these sources have mainly been examined at the individual level, recent theoretical developments and empirical evidence have extended these and other similar constructs to the group level (Brinson & Steiner, 2007; Goddard, et al., 2004).

Mastery Experiences

Based on social cognitive theory, mastery experience has been considered the most powerful source of efficacy-shaping information (Goddard et al., 2004). According to this construct, learning can occur through actual performances and when these performances are successful, they become known as mastery experiences. "Within schools, teachers as a group experience success and failures" (Goddard et al., 2004, p.5). Past school successes build teachers' beliefs in the capability of the faculty and contribute to the expectation that performance will continue to be proficient in the future. In contrast, failures tend to undermine a sense of collective efficacy. Goddard (2001) found that mastery experience significantly influences collective efficacy beliefs. According to this finding, mastery experience (operationalized as prior school reading achievement) was a significant positive predictor of differences among

schools in perceived collective efficacy. Past school achievement was a stronger predictor of perceived collective efficacy than aggregated measures of school race (proportion of minority) and SES (operationalized as the proportion of students in a school who received a subsidized lunch). Interestingly, a third of this variation was unexplained, suggesting that in addition to mastery experience, there are other factors at play within organizations that may explain group variation in collective efficacy beliefs (Goddard et al., 2004). Thus, it is important to not only consider an organization's past performance experiences, but also other potential sources of efficacy-shaping information.

Attributions

Attributions play a critical role in the influence of mastery experience on collective efficacy beliefs. According to Usher & Pajares (2008), "success that can only be achieved with the help of others provides a weaker indication of one's personal ability than does success achieved on one's own" (p. 752). If success is attributed to internal or controllable causes, such as ability or effort, self-efficacy beliefs are enhanced. In contrast, if success is attributed to luck or the intervention of others, self-efficacy beliefs may not be strengthened (Bandura 1993). Hence, "perceptions of efficacy for various individual and collective pursuits arise from cognitive and metacognitive processing of the sources of efficacy belief-shaping information" (Goddard et al., 2004, p.6).

Vicarious Experiences

A vicarious experience "is one in which the skill in question is modeled by someone else that the observer can identify with" (Goddard et al., 2004, p.5). When this model performs well,

the efficacy beliefs of the observer are most likely enhanced. Opportunities such as watching others cope with threat and eventually succeed can generate expectations in observers that “they too can achieve some improvements in performance if they intensify and persist in their efforts” (Bandura, Adams & Beyer, 1977, p. 126). In regards to functioning at the group level, “practices such as observing other successful organizations, especially those that attain similar goals in the face of familiar opportunities and constraints, may also promote collective efficacy beliefs” (Goddard et al., 2004, p.5). For instance, observing successful educational programs offered by higher achieving schools or borrowing resources from other organizations are forms of vicarious learning. Still, the research on group learning is not nearly as developed as the work on individual learning, and thus “more research is needed to understand better how observational learning affects perceived collective efficacy in organizations” (Goddard et al., 2004, p.5).

Social Persuasions

As evident in human nature, organizational life is also filled with verbal exchanges that communicate expectations, sanctions, and rewards to members (Goddard et al., 2004). “Acts of social persuasion may entail encouragement of specific performance feedback from a supervisor or a colleague or it may involve discussions in the teachers' lounge, community, or media about the ability of teachers to influence students” (Goddard et al., 2004, p.6). The potency of persuasion depends on the authenticity, trustworthiness, and expertise of the persuader (Bandura, 1986). “Talks, workshops, professional development opportunities, and feedback about achievement can also inspire action” (Goddard et al., 2004, p. 6). While these verbal exchanges

have the power to encourage certain actions, they can also constrain others that are not adjacent to the group norms or expectations.

Autonomy Support

According to Weiner (2009), “commitment based on ‘want to’ motives reflects the highest level of commitment to implement organizational change” (p. 2). Furthermore, “when teachers have the opportunity to influence instructionally relevant school decisions, collective conditions encourage teachers to exercise organizational agency” (Goddard et al., 2004, p. 10). In addition, a study by Goddard (2002) found that, after adjusting for school context, a .41 standard deviation increase in the extent to which teachers reported making instructionally relevant school decisions (i.e. level of control over curriculum, instructional materials and activities, professional development, communication with parents, student placement, and disciplinary policy) was positively associated with a one standard deviation increase in perceived collective efficacy. According to this premise, schools that enable teachers to make instructionally relevant decisions tend to have higher levels of perceived collective efficacy. Motivational theorists suggest that practices that enable group members to exert influence and exercise organizational agency promote collective efficacy beliefs.

Affective State

Apparently, “just as individuals react to stress, so do organizations” (Goddard et al., 2004, p.6). The level of emotional arousal, generated either by anxiety or excitement, can either enhance or impede individual’s perceptions of self-capability. For example, immediate past performance on state-mandated tests, which is typically widely publicized, plays a key role in

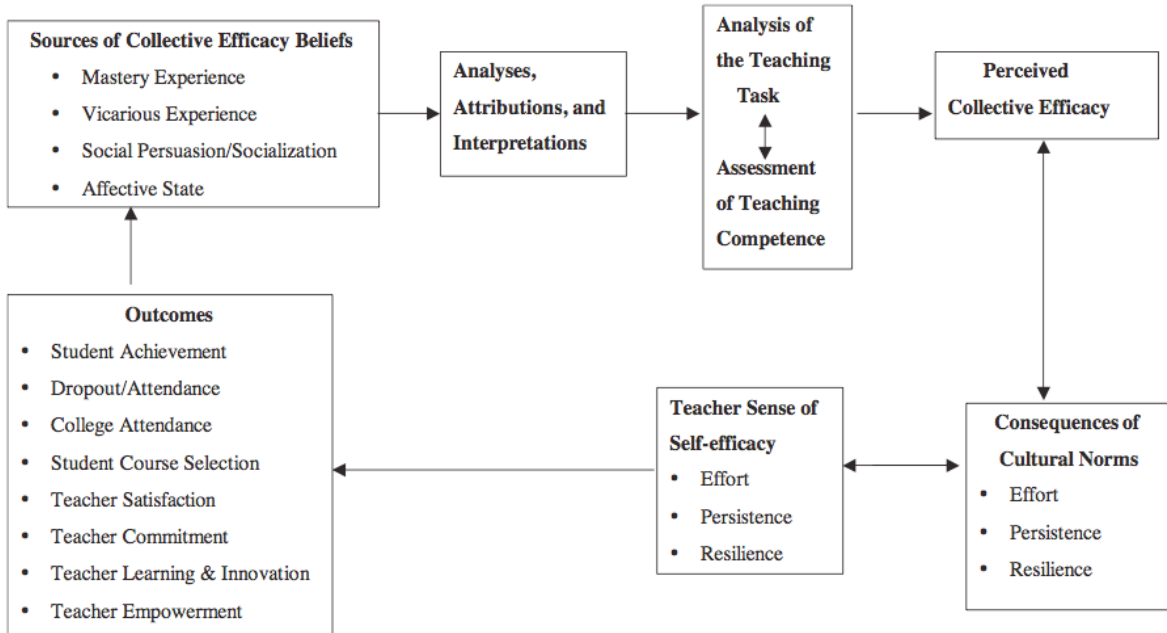
influencing the mood of local schools. Less efficacious organizations are more likely to react dysfunctional, which, in turn, increases the likelihood of failure, while more efficacious organizations are more likely to be resilient in the face of challenges or setbacks.

In theory, all sources of personal efficacy-shaping information may indeed hold at the group level, however, it may be that some sources are less germane, or at least less well understood, as explanations for how collective efficacy perceptions form and change (Goddard et al., 2004 p.5).

MODELS OF COLLECTIVE EFFICACY

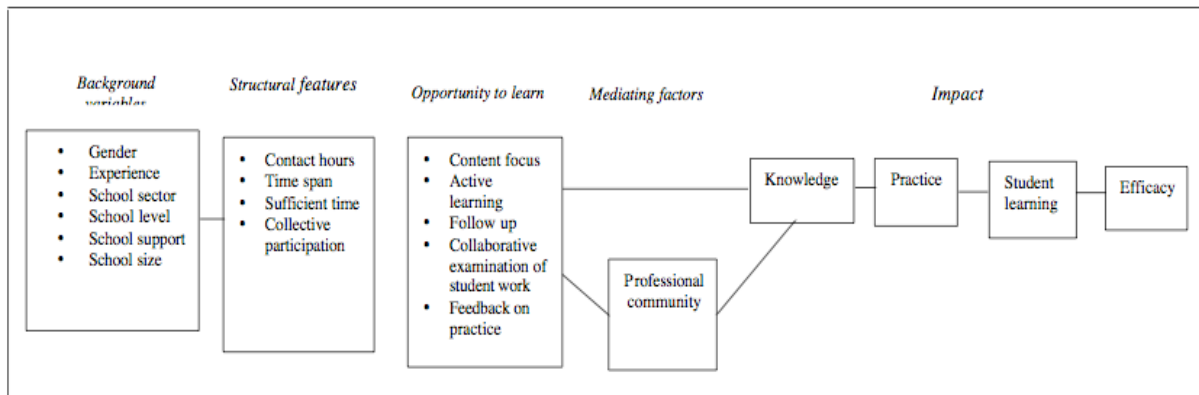
The model of collective efficacy employed by Tschannen-Moran, Woolfolk Hoy, and Hoy (1998), acknowledges that teachers' expectations for attainment are task and situation specific and dependent on the interaction of perceived competence to perform a given task and the context in which the task will take place (Bandura et al., 1977; Pajares, 1996).

Figure 1: A Hypothesized Formation and Influence of Collective Efficacy Beliefs in Organizations (see, Goddard, Hoy & Hoy, 2004)



Another model by Ingvarson, Meiers, & Beavis, (2005) includes contextual factors (e.g. school support), structural features of programs (e.g. length), process features (e.g., emphasis on content; active learning; examination of student work, feedback; follow-up), a mediating variable (level of professional community generated), and four outcome measures (knowledge; practice; student learning and efficacy) as facilitating efficacy beliefs.

Figure 2: Relationships between structure, learning processes and impact of professional development programs.



MEASURING COLLECTIVE EFFICACY BELIEFS

There are several approaches to measuring collective efficacy perceptions. One approach that is commonly used in the collective efficacy belief research is to aggregate measures of individual members' (self-) efficacy beliefs. This type of aggregate measure of self-efficacy beliefs would be a group mean of *self-referent* capabilities to execute the particular functions they perform in the group. Responses to "I"-referent statements would be averaged to assess the collective sense of efficacy of the group.

Another approach is to ask group members to come to a consensus about their sense of collective efficacy beliefs through a group discussion. Problems to this approach are increased susceptibility to social desirability bias that can undermine the validity of the assessment and mask the within-group variability in collective efficacy perceptions (Bandura, 1997; Goddard et al., 2004, p.6).

A third approach is to aggregate measures of individuals' perception based on *group-referent capability*. According to Bandura (2000), "perceived collective efficacy is not simply the sum of the efficacy beliefs of individual members, rather, it is an emergent group-level property. Thus, instead of teachers' referencing to "I" statements, they would be referencing to "We" statements of efficacy perceptions. These responses would then be averaged to assess the collective sense of efficacy in a school. This approach is aligned with Bandura's (1997) conceptualization that perceived collective efficacy is an emergent group-level attribute rather than simply the sum of members' perceived *personal* efficacies" (p.478).

More research is needed to fully understand what role agreement may play in the conception of perceived collective efficacy and its effects. "The preponderance of evidence to date, suggest that aggregates of individual perceptions of group capability do indeed tap into the perceived collective efficacy of organizations" (Goddard et al., 2004, p.7).

RELEVANT STUDIES

Alvi & McCormick (2008)

This study used a two-phase longitudinal design to investigate the functioning of collective cognitive activities, task interdependence, self-efficacy for group work, and collective orientation determinants of collective efficacy in small university groups. A sample of 145 university students in 40 work-groups performed interdependent academic tasks. The researchers used aggregated variables after testing for within-group agreement. Results from multiple regression analyses indicated that group members' perceptions of themselves as interdependent in the early stages of their group work and being assigned tasks interdependently during group

processes positively predicted high collective efficacy in the final stages of group work. Furthermore, collective efficacy was related to the group average of self-efficacy for group work, especially when perceptions of task interdependence were high. These findings suggest that strengthening perceptions of interdependence in the early stages of group work and assigning interdependent group tasks during group work may contribute to the development of high collective efficacy beliefs.

Stajkovic, Lee & Nyberg (2009)

In this meta-analytic review of 6,128 groups, 31,019 individuals, 118 correlations adjusted for dependence, and 96 studies, the authors examined the relationships among collective efficacy beliefs, group potency, and group performance. According to the authors group potency is “a generalized variable helpful to any task or demand a group may confront” (p.816), whereas, collective efficacy is linked to more specific activity domains (Bandura 1997). Results revealed that collective efficacy was significantly related to group performance ($r = .35$) and group potency was related to group performance ($r = .29$) and to perceived collective efficacy ($r = .65$). Structural equation analyses indicated that collective efficacy beliefs fully mediated the relationship between group potency and group performance. The findings from this research indicates that collective efficacy beliefs are highly related to other forms of group functioning, in this case, group potency and group performance. It would be interesting to see if a similar relationship would hold when linking perceived collective efficacy with group capacity.

APPROACHES TO BUILDING ORGANIZATIONAL CAPACITY

While there have been several multidimensional approaches identified in the literature for building capacity, a common theme among most methods seem to emphasize the need for *cognitive, affective, and behavioral* development.

Change Theory and Capacity Building

Change theory encompasses a wide range of approaches to organizational readiness for change and is often used as the overarching framework for understanding the specific process of capacity building (Harsh, 2010). According to some change experts “greater readiness leads to more successful change implementation” (Weiner, 2009, p. 5). Researches in this line of work have suggested that failure to establish sufficient organizational readiness for change accounts for nearly one-half of all unsuccessful, large-scale organizational change efforts (Kotter, 2006; Weiner, 2009). Based on this literature, “organization development and change are generally outcome based and involve a series of transitions between the current operational state and the desired change state” (Harsh, 2010, p.2).

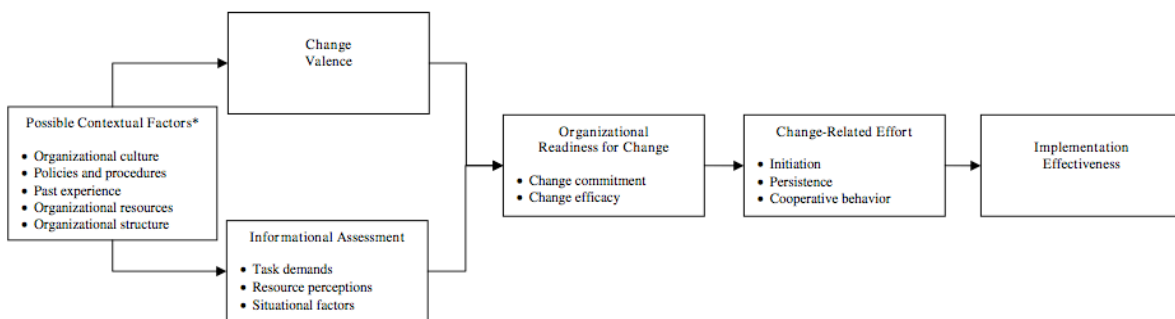
Change theory has also been distinctly conceptualized in relation to capacity building. As noted by Buono and Kerber (2004), *change capacity* is defined as — “ the ability of an organization to change not just once, but as a normal course of events in response to and in anticipation of internal and external shifts, constantly adapting to and anticipating changes in its environment” (p.10). According to this premise, change capacity is an ongoing capability that reflects a dynamic process of continuous learning and adjustment, enabling the organization to develop resilience to ambiguity and uncertainty, and the ability to implement desired change.

Buono and Kerber (2004) specify three intervening levels to building organizational change capacity: (1) *micro*-(understanding and acceptance of different approaches to change and enhancing willingness and ability to change); (2) *meso*-(creating a change facilitative infrastructure and ensuring appropriate resources); and (3) *macro*-(building a facilitative culture and ongoing strategizing). These intervening levels specify the need for both psychological and operational aspects to building organizational capacity.

Similarly, experts within the healthcare literature consider organization readiness for change as — “a critical precursor to the successful implementation of complex changes in healthcare settings” (Weiner, 2009, p. 2). From this research, various strategies for creating organizational readiness for change have been prescribed. However, methods for measuring the determinants or outcomes of organizational readiness for change have not been subject to extensive theoretical development or empirical study (Weiner, Amick & Lee, 2008). According to Weiner (2009), who follows a more psychological approach, organizational readiness for change is — “a multi-level and multi-faceted construct that can be more or less present at the individual, group, unit, department, or organizational level” (p. 2). Weiner defines readiness for change as organizational members’ shared commitment to implement a change (*change commitment*) and shared belief in their collective abilities to do so efficiently (*change efficacy*). Organizational members’ formulations of their change efficacy judgments are shaped by their perceptions of three determinants of implementation capabilities: *task demands* (i.e. members know what it takes to implement change), *resource availability* (i.e. organizations have the resources to implement change effectively), and *situational factors* (i.e. members can implement

change effectively given the organizations' current situation). Furthermore, change commitment and change efficacy are considered change specific constructs that are conceptually and empirically interrelated (Bandura 1997; Weiner, 2009). Weiner notes that this definition is similar to Bandura's (1997) notion of collective efficacy beliefs and goal commitment in that commitment to change refers to "organizational members' shared resolve to pursue the courses of action involved in change implementation" (Weiner, 2009, p.2). In essence, when organizational readiness for change is high, members' within that organization are more likely to take collective action to "initiate change, exert greater effort, exhibit greater persistence, and display more cooperative behavior" (Wiener, 2009, p.1). In addition to organizational change commitment and change efficacy, Wiener suggests that organizational members perceived value for impending specific changes (*change valence*) and *contextual factors* can also impact organizational capacity to implement change effectively (See Figure 1). Wiener's psychological approach strengthens the notion that efficacy beliefs play a significant role in building organizational capacity, which will be discussed further in this chapter.

Figure 3: *Determinants and Outcomes of Organizational Readiness for Change. (Weiner, 2009)*



* Briefly mentioned in text, but not focus of the theory

Types of Capacity Building

According to Harsh (2010), organizational capacity building is a “multifaceted nature of change that requires implementation of an evolving and spiraling process that incorporates all parts of the organization and recognizes that any change impacts the history, context, culture, and operation of the system” (p.6). Harsh also notes that capacity building requires a multidimensional approach to designing and implementing organizational initiatives and can be driven by both *internal* and *external* forces. From this research, Harsh emphasizes the importance of considering that there are generally four foundational types of capacity building in regards to educational change: *human capacity* (i.e. increasing intellectual proficiency and will), *organizational capacity* (i.e. interaction, collaboration, and communication among members of an organization), *structural capacity* (i.e. policies, procedures, and practices), and *material capacity* (i.e. fiscal resources, materials, and equipment needed to implement change) (p. 3). According to this theory, all four types of capacity are interdependent and need to be supported to maximize the ability of attaining an organization’s mission.

Stage Theory and Capacity Building

Stage theory is often used to “understand and manage the process of capacity building change” (Harsh, 2010, p.3). The process of stage theory is non-linear and can appear or reappear in subsequent stages of capacity building within an organization. In an analysis of five change models, Harsh indicated that stages or levels of capacity building implementation are comparable to many of the stages for implementing change. Harsh identifies four superordinate stages that can be applied to the process of capacity building: *Exploration* (i.e. identifying the need for

change and processes to achieve desired change), *Emerging Implementation* (i.e. identifying the personnel training needs and implementing newly acquired skills), *Full Implementation* (i.e. focusing on the impact and consequences of implementing targeted capacity building innovation), and *Sustainability* (i.e. refocusing efforts to continue desired practices and explore alternatives to using the innovation) (p.4).

Levels of Capacity Building

Furthermore, organizations need to successfully progress through *levels* of capacity to ensure full implementation of the capacity initiative, regardless of the type of capacity building (Harsh, 2010). From this theory, there are four levels of capacity building: *information, skills, structures, and processes*. Based on Hall and Hord's (2005) Concerns Based Adoption Model (CBAM), the first group of stages addresses the concerns and needs of the individuals within an organization (i.e. information and skills). The second group of stages addresses the management concerns involved in implementing a specific innovation (i.e. structures and processes). Once sufficient knowledge about the desired state to be attained is established, organizational members must acquire and use the skills necessary to implement the organizations' initiative, which leads to the third level of capacity building. At the third level, the information and skills are integrated into a supported structure that incorporates the new knowledge and gives staff a framework to implement the newly acquired skills. Finally, the organization needs to further develop and practice new or refined processes that will "operationalize the information, skills, and structures that will undergird the initiative" (p.5). These four levels are then repeated as the organization progresses through each stage of capacity building and emphasize the need for members within

an organization to take action in applying the knowledge and skills they have acquired in their capacity building efforts.

Outcomes of Capacity Building

Lastly, according to Harsh (2010), one of three types of change can occur: *first-order change* (Developmental), *second-order change* (Transitional), or *third-order change* (Transformational). In the first-order change, an organization implements changes that have already been established and shared within the schemata of the organization members. The second-order change occurs when an organization modifies its operations, thus modifying the shared schemata within their organization. The third-order change involves changing both the operational and schemata components of an organization and its employees. In general, the third-order change is considered the desired outcome of capacity building initiatives (Harsh, 2010). Again, the value for both psychological and operational change in an organization is emphasized here.

MEASURING ORGANIZATIONAL CAPACITY

Within the extensive literature on capacity building, several evaluation approaches have been suggested. One practical measurement in particular, composed by Connolly & York (2002), seemed to address the essential factors that have been emphasized across the literature in regards to cognitive, affective, and behavioral change at the individual and organizational level. In addition, this approach is geared towards evaluating capacity building within the nonprofit sector, which is where the heart of this study originates.

According to their multilayered Continuum of Capacity Building Evaluation, Connolly & York (2002) have suggested specific levels, questions, and methods for evaluating both short and long-term outcomes of capacity building efforts for nonprofit organizations (p.35). The first level suggests collecting information regarding *attendance/usage/participation* (i.e. How many and what types of people and organizations used the services, which services did they use, and what was the extent of their usage?) and *quality of service* (i.e. To what extent do the services reflect best practices and current knowledge?) for capacity building activities and engagements (e.g. trainings or consulting).

The second level is in regards to *short-term outcomes* (i.e. the direct result of capacity building engagement on individual participants), the authors suggest collecting data across three dimensions of individual change: (1) *cognitive change* (i.e. What did the participants learn as a result of the capacity building activities, and how did they do so?), *affective change* (i.e. To what extent and how have the attitudes and beliefs of participants, staff members, or community members changed regarding the problem or issue being addressed?), and *behavioral change* (To what extent and how did the participants, organization, or communities apply what was presented during training sessions and advised during consulting engagements? What have they done differently?).

The third level addresses *long-term outcomes* (i.e. the longer-term outcomes related to the organization, the organization's clients, and the community) and suggests collecting data across three dimensions of organizational change: (1) organizational management and governance, programmatic on the organizational level (i.e. In what ways, directly and/or

indirectly, was the quality of programs and services improved?), programmatic on the organization's clients level (i.e. What cognitive, affective, and/or behavioral changes have constituents shown as a result of receiving programs and services?), and community (i.e. How have nonprofit organizations improved, on the whole, in a given community?)

Recommendations for evaluation methods are also given across all three levels (e.g. through observations, self-reported surveys, focus groups, and interviews). The authors also note "how success is specifically measured will depend on the nature of the particular organization development work that is being carried out" (p. 36). In addition, "careful consideration should be given to the question of whether the construct's meaning, measurement, and functional relations change by moving the analysis down to intra-organizational level" (Weiner, 2009, p.5). In this case, it would be important to examine sufficient within-group agreement when measuring organizational readiness for change or organizational perceptions of group capacity.

SUMMARY

From a review of the literature, it is clear that capacity building is a complex and difficult construct to measure that requires a multidimensional approach to developing and evaluating its process. Several scholars within this line of research have determined that taking into consideration cognitive, affective, and behavioral changes are essential to helping an organization increase its ability to fulfill its mission. Given this perspective, it makes sense to investigate the empirical relationship between capacity building and collective efficacy beliefs.

Chapter III: Proposed Research Study

STATEMENT OF PURPOSE

From this research, it is clear that perceived collective efficacy promotes individuals' sense of efficacy and group functioning. The purpose of this investigation is to explore the relationship between collective efficacy beliefs and group capacity from participants involved in a 10-month collaborative effort to enhance their proficiency in giving more effective presentations in order to strengthen their division's capacity to improve educational achievement in schools. In addition, relationships between sources of efficacy-shaping information and collective efficacy beliefs will be explored to indicate which capacity building efforts or strategies were valuable in building group capacity.

The potential sources that are included in the analysis are: *mastery experience, internal and external attributions of mastery experience, vicarious experience, and perceived autonomy support*. These constructs have been suggested in the collective efficacy literature and have shown to significantly impact collective efficacy beliefs. Affective state will not be included in the analysis, as it has been specified as potentially being a less germane source of efficacy beliefs at the group level (Goddard et al., 2004, p. 6).

Bivariate Pearson product-moment correlations will be used to indicate the extent to which a linear relationship exists between two quantitatively measured variables. In addition to examining the magnitude of the correlation between variables, practical significance will also be taken into account by examining the strength of the relationships between the variables in question. Thus, separate simple linear regressions will be used to determine the extent to which

the sources of collective efficacy beliefs act as significant predictors of perceived collective efficacy and the extent to which perceived collective efficacy acts as a significant predictor of group capacity. The relationship strength of shared variance will be determined by the coefficient of determination with +/- 1.00 representing the strongest relationship (Meyers, Gamst & Guarino, 2006).

RESEARCH QUESTIONS, HYPOTHESES, AND RATIONALES

Four main research questions guided this investigation: 1) Is perceived collective efficacy correlated with group capacity, 2) Is there a correlation between internal vs. external attributions from a mastery experience and perceived collective efficacy, 3) Is there a correlation between vicarious experience and perceived collective efficacy, 4) Is there a correlation between perceived autonomy support and perceived collective efficacy? Developing a better understanding of these questions will help to inform research about the value and formation of collective efficacy beliefs in building organizational capacity through professional development and collaborative partnership work in education.

Research Question 1: Is perceived collective efficacy correlated with group capacity?

Hypothesis 1: There is a positive correlation between perceived collective efficacy and group capacity.

Rationale 1: Collective efficacy beliefs have been linked to group goal attainment (Mulvey & Klein, 1998; Sampson et al., 1999) group potency and group performance (Stajkovic, et al., 2009) and work group effectiveness (Little & Madigan, 1997). “The strong link between group performance and perceived collective efficacy can be explained by the resiliency with

which the efficacious pursue given goals” (Goddard et al., 2004, p.8). Thus, supporting the notion that beliefs about group capabilities would influence the actions taken to accomplish group goals, therefore increasing group capacity. In addition to social cognitive theory, motivation theory supports hypotheses that “when organizational readiness is high, organizational members will exhibit more pro-social, change-related behavior—that is, actions supporting the change effort that exceed job requirements or role expectations” (Weiner, 2009, p.5). Therefore, it is likely that collective efficacy beliefs are linked to building group capacity.

Research Question 2: Is there a correlation between internal or external attributions from a mastery experience and perceived collective efficacy?

Hypothesis 2: There is a positive correlation between internal attributions and a negative correlation between external attributions from a mastery experience and perceived collective efficacy beliefs.

Rationale 2: Based on the empirical evidence in the literature, mastery experience is known as the most powerful source of efficacy-shaping information and is important for organizations. A substantial body of research has emerged on organizational learning (Goddard et al., 2004) that suggests, just as individuals experience success and failures, so do organizations. It is these past experiences that build organizational beliefs about the capability of the members within the group. Goddard (2001) found that mastery experience (i.e. prior school achievement) was a positive significant predictor of differences among schools in perceived collective efficacy beliefs. However, individual attributions related to that mastery experience is also important to consider such that internal attributions related to individuals’ efforts and

strategies vs. external attributions related to luck or extensive help from others would promote higher collective efficacy beliefs.

Research Question 3: Is there a correlation between vicarious experience and perceived collective efficacy?

Hypothesis 3: There is a positive correlation between vicarious experience and perceived collective efficacy.

Rationale 3: “A vicarious experience is one in which the skill in question is modeled by someone else” (Goddard et al., 2004, p. 5). Just as observing successful individuals with similar characteristics succeed enhances students’ and teachers’ perceptions of self-efficacy, observing successful organizations may also enhance perceived collective efficacy. Therefore in the case of this study, individuals’ collective perceptions of observing others succeed at giving effective presentations may enhance their collective efficacy beliefs.

Research Question 4: Is there a correlation between perceived autonomy support and perceived collective efficacy?

Hypothesis 4: There is a positive correlation between perceived autonomy support and perceived collective efficacy.

Rationale 4: Within the autonomy support research, encouraging individuals to ask questions, make relevant choices, and gear their efforts towards building trust tend to promote positive motivational and emotional beliefs about engaging in a specific task. For example, motivation theorists suggest that individuals’ perceptions of their environment can either foster or hinder positive functioning (Stefanou, Perencevich, DiCintio, & Turner, 2004; Reeve, 2006).

In the school setting, instructional strategies that facilitate an *autonomously supportive* environment in which the instructor takes the students' perspectives, acknowledges their feelings, and provides opportunities for choice, while minimizing pressures and demands (Black & Deci, 2000; Stefanou, et al., 2004) are recommended in order to enhance students' self-determination and intrinsic motivation. This type of motivation is likely to occur at the group level as well.

Chapter IV: Method

PARTICIPANTS

Archival data was chartered by a private-nonprofit education research, development, and dissemination corporation based in the Southwest Texas region. Using sensitivity testing from G*Power with power = .80, sample size = 12, and alpha = .05 (two-tailed test), results indicated that an effect size of $\rho = .67$, $df = 10$, and critical $t = 2.28$ will be needed to meet these expectations, while protecting for Type I error for investigating point-biserial correlation analysis.

MEASURES

Collective Efficacy Beliefs. Modified items from the Intrinsic Motivation Inventory Competence Scale (Ryan & Deci, 1982) and the Patterns of Adaptive Learning Academic Self-Efficacy Scale were used to construct a 5-item instrument, measuring participants' perceived self-efficacy beliefs. This measurement was based on a on a 5-point Likert scale (1= *Strongly disagree*, 3= *Somewhat Disagree to Agree*, 5= *Strongly agree*). These items were then aggregated to assess members' collective sense of efficacy of their division (Cronbach's Alpha = .71; $M = 3.23$, $SD = .26$).

- I'm certain I can master the skills needed to give more effective presentations.
- I'm good at making effective presentations.
- I'm certain I can master the skills needed to give more effective presentations.
- I am certain that I am making a difference through the presentations that I make.

- I expect to be successful at giving effective presentations due to the strategies and skills I developed in collaboration with my ____ partner.

In addition to this scale, two before and after items were also used to assess the extent to which members of the organization gained perceptions of their divisions' staff to be proficient in presentation delivery methods. These items were based on a 5-point Likert scale (1= *Strongly disagree*, 3= *Somewhat Disagree to Agree*, 5= *Strongly agree*). Mean comparisons of the two items determined whether perceived collective efficacy beliefs were enhanced as a result of the partnership work and the item measuring participants' perceptions of collective efficacy beliefs after their partnership work was used to test its correlation with perceived capacity. Items included:

- Staff in our division are skilled in various presentation delivery methods.
- Before we began the partnership work, I thought staff in our division were skilled in various presentation delivery methods.

Mastery experience. To indicate participants' mastery experience, respondents were asked to recall their most recent presentation and report whether they perceived that experience as a successful one (Yes/No).

Think of your most recent presentation. In a few words, briefly describe the presentation:

- Do you believe the presentation you listed was a successful one?

Attributions. In addition to recalling a mastery experience, participants were asked to rate whether they attributed their performance to external or internal causes. These constructs are important to measure because they have been shown to either promote or undermine one's personal ability (Usher

& Pajares, 2008). These items were based on a 5-point Likert scale (1= *Strongly disagree*, 3= *Somewhat Disagree to Agree*, 5= *Strongly agree*).

External Attribution: Two items were originally used to assess participants' external attributions based on luck ($M = .36$, $SD = .51$) and exclusive help from others ($M = 2.27$, $SD = 1.10$), however, scale reliability analysis indicated that these two items were negatively correlated. In addition, there was missing data from participant responses to the item assessing external attributions due to luck, which has an impact on power. Therefore, only the item that assessed participants' external attributions based on exclusive help from others was used in the analysis.

- *External:* I believe my performance in this presentation was due to luck. (Excluded)
- *External:* I believe my performance in this presentation was due exclusively to the ____ staff.

Internal Attribution. Two items were used to assess participants' internal attributions based on their effort ($M = 3.50$, $SD = .67$) and use of selected strategies ($M = 3.25$, $SD = .62$).

- *Internal:* I believe my performance in this presentation was due to the effort I made to prepare.
- *Internal:* I believe my performance in this presentation was due to the presentation strategies that I selected and used.

Vicarious experience. Two items were used to assess participants' vicarious experience in regards to their observations of other successful or effective presentations (Cronbach's alpha = .94, $M = 3.13$, $SD = .05$)

- I observed other people I could identify with give successful presentations during the time I worked with my ____partner.

- I observed ____ staff modeling ways to give effective presentations.

Autonomy Support. The Learning Climate Questionnaire (LCQ) was adapted by Black & Deci (2000) from the Health-Care Climate Questionnaire (Williams, Grow, Freedman, Ryan & Deci, 1996). This 9-item scale measured the degree to which participants perceived their collaborative partner to support their autonomy. In the present study, the LCQ had (Cronbach's alpha = .97, $M = 3.67$, $SD = .11$). All items were based on a 5-point Likert scale anchored at ($1 = \text{Not at all true}$, $3 = \text{Moderately true}$, $5 = \text{Very true}$).

- My ____ partner helped me identify choices and options I could make with my presentation delivery method.
- I felt understood by my ____ partner.
- My ____ partner conveyed confidence in my ability to do well.
- My ____ partner encouraged me to ask questions.
- My ____ partner listened to how I wanted to do things.
- My ____ partner tried to understand my perspective before suggesting a new way to do things.
- I felt that I could really trust my ____ partner.
- My ____ partner encouraged me by praising my presentation ability and effort.
- My ____ partner provided me with useful feedback about my presentations.

In addition to this scale, participants were also asked to rate their perceived collective efficacy in regards to their divisions proficiency in giving effective presentations.

- ____ staff in our division are skilled in various presentation delivery methods.

- Before we began the partnership work, I thought ____ staff in our division were skilled in various presentation delivery methods.

Group Capacity. Participants rated their divisions capacity based on their responses to four items related to their conscious effort in integrating strategies they learned during their collaborative experience within their presentations, expectations for utilizing collaborative resources/networks, sharing strategies and techniques with their colleagues, and the extent to which they believed their division strengthened their capacity to achieve its mission of improving educational achievement in schools (Cronbach's alpha = .813, $M = 3.50$, $SD = .24$). These items were based on a 5-point Likert scale ($1 = Strongly\ agree$, $3 = Somewhat\ Disagree/Agree$, $5 = Strongly\ Agree$).

As a result of this partnership experience,

- I make a conscious effort to integrate the strategies that I learned in collaboration with my ____ partner within my presentations.
- I would feel comfortable asking my ____ partner for advice about a future presentation.
- I would share the strategies and techniques I learned in collaboration with my partner with other colleagues.
- To what extent do you believe this partnership experience has helped to build your division's capacity to strengthen educational achievement in schools?

PROCEDURES

This study was conducted with staff from an educational organization located in the Southwest Texas region that participated in a professional collaboration to strengthen their

proficiency in giving effective presentations in order to enhance their capacity to enhance student achievement. All participants were sent an online survey via email approximately one week after the end of their 10-month partnership experience. The 26-item survey took approximately 10-15 minutes to complete and was fully voluntary.

DATA ANALYSIS

Before proceeding with the data analysis, all variables were screened for possible code and statistical assumption violations. Data were screened for missing values on seven continuous variables (mastery experience, autonomy support, vicarious experience, external attribution, internal attribution, perceived collective efficacy, and group capacity). Inspection of frequency tables, descriptive statistics, and z-scores indicated no missing data or extreme outliers. Visual inspections of distributions in histograms, skewness and kurtosis exceeding a value of ± 3 , and Shapiro Wilk's test ($p > .05$) indicated no violation of normality. Levene's test indicated no violation of homogeneity of variance ($p > .05$) and an inspection of scatterplots satisfied the assumption of linearity. Lastly, there cannot be multicollinearity or highly correlated pairs of variables ($r > .80$). This issue was checked within the correlation matrix as well. Based on prior research according to Usher & Pajares (2006), this assumption should not be violated.

Chapter V: Results

Relationship Between Perceived Collective Efficacy and Group Capacity

As predicted, Pearson product-moment coefficients' determined that perceived collective efficacy was strongly related to group capacity ($r = .87^{**}$, $p < .001$). Furthermore, simple linear regression suggests that perceived collective efficacy accounted for nearly 76% of the variance in predicting group capacity ($R^2 = .76$, adjusted $R^2 = .74$, $p < .001$).

Relationship Between Mastery Experience, Attributions, and Perceived Collective Efficacy

Examination of the data indicated that all 12 participants recalled having a successful experience for their most recent presentations. Surprisingly, bivariate correlations indicated that reported external attributions to mastery experience were highly correlated with perceived collective efficacy ($r = .63^*$) and internal attributions to mastery experience were not. Simple linear regression analysis also suggested that external attributions related to a mastery experience being exclusively due to others accounted for nearly 39% of the variance in predicting perceived collective efficacy ($R^2 = .39$, adjusted $R^2 = .33$, $p < .05$).

Relationship Between Vicarious Experience and Perceived Collective Efficacy

Results indicated that vicarious experience was highly correlated with perceived collective efficacy ($r = .67^*$, $p < .01$). Interestingly, vicarious experience was also strongly related to self-reported perceptions of autonomy support ($r = .64^*$, $p < .05$), and group capacity ($r = .83^{**}$, $p = .001$). In addition, simple linear regression indicated that self-reported vicarious experience accounted for nearly 46% of the variance in predicting collective efficacy beliefs (R^2

= .45, adjusted $R^2 = .40$, $p < .05$) and 68% of the variance in predicting group capacity ($R^2 = .68$, adjusted $R^2 = .65$, $p = .001$).

Relationship Between Perceived Autonomy Support and Perceived Collective Efficacy

Surprisingly, perceived autonomy support was not a significant predictor of collective efficacy beliefs. However, it was strongly related to group capacity ($r = .66^*$, $p < .05$). Further analysis using simple linear regression indicated that perceived autonomy supported accounted for nearly 44% of the variance in predicting group capacity ($R^2 = .44$, adjusted $R^2 = .38$, $p < .05$).

Chapter VI: Discussion

SUMMARY

There are several contributions of this research. First, the strong relationship between perceived collective efficacy and organizational capacity is valuable for informing approaches to strengthening and measuring capacity building efforts. In addition, the significant relationship between vicarious experience and perceived collective efficacy supports previous research that has suggested this construct as a potential determinant of collective efficacy beliefs (Goddard et al., 2004). This study also unveiled some intriguing findings such that perceptions of autonomy support were not correlated or found to predict collective efficacy beliefs, but was found to significantly predict organizational capacity. Likewise, vicarious experience was also shown to strongly predict organizational capacity, even more so than collective efficacy beliefs. Furthermore, not internal attributions, but external attributions were shown to predict collective efficacy beliefs. While the findings from this exploratory study are valuable for grasping a deeper theoretical understanding about the relationships between these constructs, several cautions must be taken into consideration.

LIMITATIONS AND FUTURE RESEARCH

First and foremost, the correlations and predictions between the variables of interest in this study do not imply causation. For example, although significantly high correlations were found and simple regression analyses revealed significant predictions between variables, these results are still only indicators that these variables are related. Hence, it is important for future research to expand to more complex forms of statistical methods such as multiple regression,

multi-level modeling, or structural equation modeling are needed to make more validated judgments of the relationships found in this study.

Second, the current study utilized data from a relatively small sample size ($N = 12$ and specific group of individuals. Thus caution should be taken in regards to the possibility of inflated results, reduced power, and generalizing results to diverse populations. Future research that utilizes larger sample sizes from various organizations is needed to justify these relationships.

Third, the measurement approach of aggregating self-referent perceptions of efficacy beliefs to construct a measure of perceived collective efficacy has received much debate in the literature. Another approach that has been recommended in previous research (Bandura and Goddard et al., 2004) is to aggregate measures of individuals' perceptions based on *group-referent capability*. According to Bandura (2000), "perceived collective efficacy is not simply the sum of the efficacy beliefs of individual members, rather, it is an emergent group-level property. Thus, instead of individual members referencing to "I" statements, they would be referencing to "We" statements of efficacy perceptions. For example, "Teachers in this school have what it takes to educate students here" (Goddard et al., 2004, p.6). These responses would then be averaged to assess the collective sense of efficacy in a school. This approach is aligned with Bandura's (1997) conceptualization that perceived collective efficacy is an emergent group-level attribute rather than simply the sum of members' perceived *personal* efficacies" (p.478). Thus, to better capture the emergent properties of group interdependence, it may be more appropriate to conceive and assess perceived collective efficacy as an aggregate of individual

perceptions of group capability (Goddard et al., 2004, p.7). More research is needed to fully understand what role agreement may play in the conception of perceived collective efficacy and its effects. “The preponderance of evidence to date, suggest that aggregates of individual perceptions of group capability do indeed tap into the perceived collective efficacy of organizations” (Goddard et al., 2004, p.7).

Fourth, results regarding the relationship between collective efficacy beliefs and group capacity are highly dependent on the methods used to measure these constructs. While there has been scales developed that measure teachers’ collective efficacy beliefs within the school setting, there is a lack of psychometrically validated scales developed in the literature that measure the sources of collective efficacy beliefs outside of the school setting. Thus, in order to test the theoretical relationship in the current study, modified items and scales were developed to meet the specific goals of the study. In addition, while the potential source of affective state was not included in this analysis, it is important to consider for future research, especially in regards to its influence on the nature of collective efficacy beliefs when organizations are experiencing critical periods of transitioning or re-structuring due to shifts in policy or management. Further investigation of this construct is essential to understanding how organizations interpret, react, and bounce-back from adversity or challenges they may face in a volatile world. Furthermore, the question of “what is considered a successful mastery experience?” and how to effectively measure it in regards to internal vs. external attributions is another construct that needs further attention. If we know what facilitates collective efficacy within various organizations, we will be more likely to implement them and improve our efforts.

Lastly, it is important to consider the limitations for measuring group capacity in this study. The process of measuring capacity building efforts has been described in the literature as being a complex task (Harsh, 2010). Often times, the objectives for gaining organizational capacity are multileveled, multifaceted, and multidimensional. It is important for future research to consider to what extent collective efficacy beliefs are multifaceted across multiple sectors of an organization and how potent collective efficacy beliefs need to be in order to effectively develop and sustain group capacity. In addition, providing technical assistance and professional development in the nonprofit sector usually warrants limited sample sizes; therefore, it may be difficult to obtain an adequate sample to utilize more complex statistical methodologies. Finally, it would be interesting for future research to examine the reciprocal influence of collective efficacy beliefs in building organizational capacity from the perspective of the organization facilitating capacity building and the organization receiving capacity building assistance.

As changes in educational reform and resources become limited, it is timely and important to examine how organizations can be empowered to exert control over their circumstances. One way to achieve this is by strengthening the collective efficacy beliefs of the organization to increase its capacity to be efficacious and resilient in the face of critical shifts in their environment. Given the social cognitive theory assumption that the agentive choices of individuals and organizations are strongly influenced by efficacy beliefs, it is essential that future research construct a deeper theoretical understanding of what factors significantly contribute to the formation and potency of collective efficacy beliefs across diverse educational settings and populations.

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