1 Collective Teacher Efficacy

Among the types of thoughts that affect action, none is more central or pervasive than people's judgments of their capabilities to deal effectively with different realities. (Bandura, 1986, p. 21)

Amazing things happen when a school staff shares the belief that they are able to achieve collective goals and overcome challenges to impact student achievement. Ranking as the greatest factor impacting student achievement (Hattie, 2016), collective teacher efficacy deserves the attention of every educator, everywhere. Collective teacher efficacy refers to the "collective self-perception that teachers in a given school make an educational difference to their students over and above the educational impact of their homes and communities" (Tschannen-Moran & Barr, 2004, p. 190). When teachers share that belief, it outranks *every other factor* in regard to impacting student achievement including socioeconomic status, prior achievement, home environment, and parental involvement.

Fostering collective teacher efficacy should be at the forefront of a planned strategic effort in all schools and school districts. Educators' beliefs about their ability to reach *all* students, including those who are unmotivated or disengaged, should be openly shared, discussed, and collectively developed. Given its effect on student achievement, strengthening collective teacher efficacy should be a top priority relevant to everyone in the field of education. Regardless of the subject area you teach, whether you belong to a staff in a large school or small school, a school located in an urban or a rural area, whether your students qualify for free and reduced lunch or come from affluent neighborhoods, have Individual Education Plans (IEPs) or are English language learners (ELLs), or whether you are a formal or informal leader, it is important to consider how collective teacher efficacy beliefs come to fruition through the practices of educators. It is also important to understand the negative effects that occur when staffs do not share a sense of collective efficacy.

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In this first chapter, readers are introduced to the concept of collective teacher efficacy and the effect size research that demonstrates the strong link between collective teacher efficacy and student achievement. Readers are introduced to sources that shape collective efficacy beliefs.

WHAT IS COLLECTIVE TEACHER EFFICACY?

I recently met with school improvement teams at two secondary schools. Both schools' results on the Ontario Secondary School Literacy Test (OSSLT) were below the provincial average. The conversation at the first school was driven by the teachers sitting around the table. It centered on research, school-wide strategies, lessons learned from past experiences, and progress monitoring. Teachers' voices were heard because they were instrumental in determining next steps, which included designing professional learning for their peers.

Although the conversation at the second site was also driven by teachers, it was remarkably different. The teachers expressed concerns about burnout and the majority of the conversation was centered on the high-needs population they were trying to serve. The school had a high percentage of students with IEPs and ELLs. In addition, the majority of students came from low socioeconomic backgrounds. Unlike the staff at the first school who identified steps they could take to improve student learning, the staff at the second school felt there was nothing left to try, indicating "there is nothing that we can do to make a difference with these kids."

The staff at the first school faced similar demographic challenges but did not let that deter them. They believed that through their collaborative efforts, they could help students achieve—in measurable ways. This team demonstrated a strong sense of collective efficacy. The school improvement team at the second site believed that their efforts were in vain. Their belief was that student achievement could not be advanced—no matter what they did and regardless of whether they worked together or alone. There was no collective efficacy among this staff.

When teachers believe that together they and their colleagues can impact student achievement, they share a sense of collective teacher efficacy. Collective teacher efficacy refers to "the judgments of teachers in a school that the faculty as a whole can organize and execute the courses of action required to have a positive effect on students" (Goddard, Hoy, & Woolfolk Hoy, 2004, p. 4). Collective efficacy is high when teachers believe that the staff is capable of helping students master complex content, fostering students' creativity, and getting students to believe they can do well in school.

To better understand collective teacher efficacy, it is useful to consider the concept of *self-efficacy*, introduced almost 40 years ago by Bandura (1977). Bandura (1977) described a self-efficacy expectation as "the conviction that one can successfully execute the behavior required to produce outcomes" (p. 193). It is the belief, on the part of an individual, that he or she can perform the necessary activities to attain a desired outcome. Self-efficacy expectations are context specific. For example, a person might believe that he or she is capable of achieving a certain amount of weight loss. That efficacy expectation might shift during a time when the individual is staying at an all-inclusive resort.

Teacher self-efficacy refers to a teacher's belief that he or she can perform the necessary activities to influence student learning. Protheroe (2008) noted that the term *teacher efficacy* references "a teacher's sense of competence—not some objective measure of actual competence" (p. 43). These beliefs are also context specific and are formed as teachers weigh their perceptions of personal competence based on the task demands for a given situation (Goddard, 2001). For example, a teacher might feel that she is capable of increasing students' ability to master procedures and concepts in mathematics but is not as capable when it comes to teaching students how to develop a well-structured argument in an English class.

In the past decade, a more recent construct, *collective efficacy*, has received attention from researchers. Similar to an individual's belief in his or her competence, collective efficacy deals with a group's beliefs in its competence for successful outcomes. Researchers, for example, have examined the consequences of collective efficacy on responses to neighborhood problems (Browning, Burrington, Leventhal, & Brooks-Gunn, 2008; Wells, Schafer, Varano, & Bynum, 2006), and how collective efficacy affects political interests (Reichert, 2015) and environmental behavior (Bonniface & Henley, 2008).

As noted earlier, *collective teacher efficacy* refers to teachers in a school characterized by an attitude that together they can make a difference for students. It too is context specific because beliefs are formed based on an analysis of teachers' perceptions about the teaching competence of the school staff, the difficulties inherent in the educational task facing the school, as well as the supports available in the setting (Goddard, 2001). Goddard, Hoy, and Woolfolk Hoy (2000) noted that "analogous to self-efficacy, collective teacher efficacy is associated with the tasks, level of effort, persistence, shared thoughts, stress levels, and achievement of groups" (p. 482).

The concept of *collective teacher efficacy* has also received increased attention from educational researchers since the time Bandura (1993) demonstrated that the effect of perceived collective efficacy on student achievement was stronger than the link between socioeconomic status and student achievement. Consistent findings have been reported in a number of studies since. For example, Ramos, Silva, Pontes, Fernandez, and Nina (2014) conducted a systematic review of research published between 2000 and 2013 on collective teacher efficacy. Thirty-nine percent of the articles reviewed investigated the relationship between collective teacher efficacy and student performance. In every one of these studies a positive correlation between the two constructs was found. Ramos et al. (2014) also noted that when collective efficacy beliefs were elevated, the negative effects of sociodemographic aspects were reduced. Goddard et al. (2000) found that collective teacher efficacy was a more significant predictor of student achievement than socioeconomic status in both mathematics and reading in elementary schools. In a study examining mathematics achievement in high schools, Hoy, Sweetland, and Smith (2002) found that collective efficacy "was more important in explaining school achievement than socio-economic status" (p. 89). Moolenaar, Sleegers, and Daly (2012) found that "perceived collective efficacy was positively associated with increased language achievement, above the influence of socioeconomic status" (p. 257) in elementary schools.

WHY IS COLLECTIVE TEACHER EFFICACY IMPORTANT?

In addition to socioeconomic status, there are hundreds of other factors that influence student achievement. How does collective teacher efficacy compare to other factors? Like socioeconomic status, some of these contributions come from the home, such as parental involvement and home environment. Some include contributions from the students themselves, such as students' estimates of their own performance (also known as *students' expectations*), prior achievement, and motivation. Other factors that influence achievement come from teachers and teaching approaches. A few examples include teacher–student relationships, teacher clarity, feedback, homework, and prompting for metacognition. Finally, other factors influencing achievement include contributions from the school and the curriculum, such as collective teacher efficacy, school size, school leadership, and/or school programs including play, phonics, and mathematics programs to name a few. With so many possible influences, the following questions come to mind:

1. Which influences have the *greatest impact* on student achievement?
2. How strong is the link between collective teacher efficacy and student achievement?

> An effect size emphasizes the difference in magnitude of given approaches for purposes of comparison. An effect size of 0 reveals that the influence had no effect on student achievement. The larger the effect size, the more powerful the influence. Hattie (2009) suggested an effect size of 0.2 is relatively small, an effect size of 0.4 is medium, and an effect size of 0.6 is large. Readers should keep this in mind as they consider the effect sizes for the various influences reported throughout this book.

At the beginning of his career, John Hattie set out to determine the answer to the first question and in 2009 published *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement*. Hattie continues to update his synthesis, which now includes an additional 400 studies. Recently, Hattie ranked collective teacher efficacy as the number *one* factor influencing student achievement (Hattie, 2016) based on a meta-analysis by Eells (2011). Eells's (2011) meta-analysis demonstrated that collective efficacy and student achievement were strongly related with an effect size of 1.57. According to the Visible Learning Research (Hattie, 2012), this is more than double the effect size of feedback.

Table 1.1 displays some of the factors that influence student achievement and their effect sizes. With an effect size of 0.52, socioeconomic status is a powerful influence, as compared to school leadership (0.39) or homework (0.29), for example. Collective teacher efficacy, however, is beyond three times more powerful and predictive than socioeconomic status. It is also greater than three times more likely to influence student achievement than student motivation and concentration, persistence, and engagement.

Collective teacher efficacy, as an influence on student achievement, is a contribution that comes from the school—not the home and not the students themselves. It is more than double the effect of prior achievement and more than triple the effect of home environment and parental involvement. This supports Marzano's (2003) conclusion, based on his analysis of

Table 1.1 Factors Influencing Student Achievement and Their Effect Size

INFLUENCE	EFFECT SIZE
Collective teacher efficacy	1.57
Self-reported grades/student expectations	1.44
Teacher clarity	0.75
Feedback	0.75
Teacher-student relationships	0.72
Metacognitive strategies	0.69
Prior achievement	0.65
Phonics instruction	0.54
Socioeconomic status	0.52
Home environment	0.52
Play programs	0.50
Parental involvement	0.49
Motivation	0.48
Concentration/persistence/engagement	0.48
School size	0.43
Mathematics programs	0.40
School leadership	0.39
Homework	0.29

Source: Adapted from Hattie, J. (2012). *Visible learning for teachers: Maximizing impact on learning.* New York, NY: Routledge; and Hattie, J. (2016, July). *Mindframes and Maximizers.* 3rd Annual Visible Learning Conference held in Washington, DC.

research conducted over thirty-five years, that "schools that are highly effective produce results that almost entirely overcome the effects of student backgrounds" (p. 7). Research shows that at the school level, collective teacher efficacy beliefs contribute significantly to the school's level of academic success.

Bandura (1977) noted that "the strength of people's convictions in their own effectiveness is likely to affect whether they will even try to cope with given situations" (p. 193). Efficacy beliefs are very powerful as they guide our actions and behavior. Efficacy beliefs help to determine our focus, response to challenges, and effort expenditure. "Perceptions of collective efficacy directly affect the diligence and resolve with which groups choose to pursue their goals" (Goddard et al., 2004, p. 8). If educators' realities are filtered through the belief that they can do very little to influence student achievement, then it is very likely these beliefs will be manifested in their practice. If, however, teachers share a sense of collective efficacy, research demonstrates it is the greatest factor that impacts student achievement (Hattie, 2016).

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To foster collective teacher efficacy as part of a planned strategic effort for improving student achievement, it is important to understand how collective efficacy beliefs are formed. Collective teacher efficacy is malleable and shaped through the cognitive processing and interpretation of events based on causal attributions and the group's assessment of the task and competency of the team. These ideas along with four sources of collective efficacy are addressed in the section that follows.

> "A theory that denies that thoughts can regulate actions does not lend itself readily to the explanation of complex human behavior." (Bandura, 1986, p. 15)

EFFICACY SHAPING INFORMATION

It is promising to know that beliefs about our capabilities to impact student outcomes can be adjusted. How exactly are efficacy beliefs influenced? There are four sources that shape an individual's efficacy beliefs. Causal attributions also significantly contribute to collective sense of efficacy (Bandura, 1993). Along with causal attributions and the four sources of efficacy information, collective sense of efficacy is shaped through task analysis, including factors that constitute or inhibit success, the context, materials, and resources required for success (Goddard et al., 2004).

> "People process, weigh, and integrate diverse sources of information concerning their capability, and they regulate their choice of behavior and effort expenditure accordingly." (Bandura, 1977, p. 212)

Four Sources of Efficacy

Four sources shaping collective efficacy beliefs include mastery experiences, vicarious experiences, social persuasion, and affective states (Bandura, 1986; Goddard et al., 2004). The most powerful source of collective teacher efficacy is mastery experiences. Basically, when teams experience success (mastery) and attribute that success to causes within their control, collective efficacy increases and teams come to expect that effective performances can be repeated. Goddard et al. (2004) explained that teachers experience successes and failures and "past school successes build teachers' beliefs in the capability of the faculty, whereas failures tend to undermine a sense of collective efficacy" (p. 5). Past levels of school success help influence a staff's belief in their capability to make a difference for students.

> "After strong efficacy expectations are developed through repeated success, the negative impact of occasional failures is likely to be reduced." (Bandura, 1977, p. 195)

The second most powerful source of collective efficacy is vicarious experiences. When school staffs see others who are faced with similar opportunities and challenges perform well, expectations are generated that they too can overcome obstacles. Collective teacher efficacy is enhanced when teams of educators observe success in school environments similar to their own. Vicarious experiences can occur through site visits, watching video, networking, or reading about it.

The third source, social persuasion, has the potential to influence collective efficacy when groups are encouraged by credible and trustworthy persuaders to innovate and overcome challenges. The more believable the source of the information, the more likely are efficacy expectations to change (Bandura, 1977). Adams and Forsyth (2006) noted that social persuasion "depends on establishing norms of openness, collaboration, and cooperation" (p. 631). Social persuasion at the collective level consists of members of the school staff persuading other teachers that they constitute an effective team. Goddard et al. (2000) noted that the more cohesive the faculty, the more likely they are to be persuaded by sound arguments.

The fourth and least influential source, affective states, includes feelings of excitement or anxiety associated with an individual's perceptions of his or her capability or incompetence. Goddard et al. (2004) noted that although there is little research on the impact of affective states on organizations, "affective states may influence how organizations interpret and react to the myriad challenges they face" (p. 6). Tschannen-Moran and Barr (2004) refer to this as "the emotional tone of the organization" (p. 190).

Finally, Bandura (1977) noted that "people rely partly on their state of physiological arousal in judging their anxiety and vulnerability to stress" (p. 198).

Easton High School is faced with the challenge that 4 years in a row reading comprehension scores on the state test remain stagnant and below the state standard. The school is located in an urban area with high poverty rates and single parent households. The school improvement team is tasked with the challenge to create a plan to increase reading comprehension scores over the next 2 years. There is no collective efficacy among the Easton High School staff. Below are excerpts from the dialogue that ensued during the team's first meeting.

Teacher A: "If we can get *all* teachers to buy into teaching reading comprehension strategies in their classrooms, students will be exposed to strategies more often."

Teacher B: "We've tried that and there has not been a great deal of support. The problem is we have too many kids who can't be taught. They are reading below grade level. When they show up, they are not engaged and they don't complete their assignments but just getting them in the door is even a challenge. School is not their priority."

Teacher C: "I agree. I only had 15 out of 25 students show up for period four today. They just aren't motivated and without support from the parents, it's out of my hands."

Teacher A: "So what is our plan? What are we going to suggest to the staff to improve reading comprehension scores?"

Teacher C: "Let's get back to basics and water down the curriculum!"

In this example, the team attributes failure to external causes—mainly the students and their situations.

Ashton High School just received its results from the state's annual literacy test. Although they had experienced small but incremental gains over the past 2 years, this year their scores declined slightly, placing them below the state average. A team of teachers have been asked to examine the scores and determine what steps to take to ensure that all students are successful in the next administration of the test. The school has a large population of students with free and reduced lunch and a disproportionate percentage of students with special education needs compared to other schools in the area. The sense of perceived collective teacher efficacy among the Ashton High School is very strong. Following are excerpts from the dialogue that ensued during the team's first meeting.

> **Teacher A:** "It's unfortunate that our scores declined this year. The staff will be disappointed. It wasn't due to our efforts. We all worked really hard and offered a ton of extra support to students. We'll have to figure out what else we can do to support students."
>
> **Teacher B:** "Yes, we still have a long way to go. The tutoring program was pretty successful, and we have data to support its impact. I think we need to get that back in place by next week."
>
> **Teacher C:** "I agree, and when we surveyed the students last year, they indicated that they found the Homework Helpline and feedback based on the practice test really helpful. The problem was that we weren't able to give everyone feedback and, for those who did receive it, it was a month after they wrote the practice test. If we can put a system in place to ensure students get more timely feedback, then that would be good."
>
> **Teacher A:** "I read an article last week about close reading. I wonder if we share it with the staff at the next staff meeting. It's a simple strategy that I think people would be willing to try."
>
> In this example, the team attributes failure to internal causes—mainly the team's improvement strategies.

Causal Attributions

Human beings perceive and attribute various causes when considering factors that contribute to their success and/or failure. Attributions can be internal or external. From a student's perspective, two main internal sources of attribution are effort and ability. A student might attribute success and/or failure to how much time she studied for a test. On the other hand, she may think it was her ability (or lack of ability) to master complex ideas that led to her success and/or failure. Teachers also make causal appraisals when it comes to students' successes and failures. These causal appraisals are also attributed to either internal factors or external factors. External attributions include influences from the home (e.g., family structure), the curriculum (e.g., arts programs, extracurricular programs, whole language programs, etc.), and the school (e.g., class size, open versus traditional classrooms, etc.). Since in this case, the cause is being appraised by the *teacher*, external factors would also include influences from the student (e.g., student's effort, ability, prior achievement, attitude, etc.). Internal attributions, from a teacher's perspective, include an appraisal of *his* or *her* ability and effort.

When teachers attribute students' successes and failures to internal factors rather than external factors, they in turn, believe their actions impact student achievement. Collective efficacy is related to causal attributions of student outcomes. Staffs who are inefficacious attribute their failures to lack of ability. They believe they are not capable of meeting the needs of their students. On the other hand, when staffs see themselves as highly efficacious, they ascribe failure to their use of insufficient strategies and/or not enough effort. Bandura (1993) noted that "causal attributions affect motivation, performance, and affective reactions mainly through beliefs of self-efficacy" (p. 128). Groups act on their beliefs about what they can accomplish as well their beliefs about the likely outcomes of their performance. When staffs lack a sense of collective efficacy, they do not pursue certain courses of action because they feel they lack the capabilities to achieve positive outcomes.

Another way in which teachers' sense of efficacy is related to causal attributions of student outcomes is that "teachers with high sense of efficacy are more willing to take responsibility for student successes and failures than teachers who score low on teaching efficacy measures" (Georgiou, Christou, Stavrinides, & Panaoura, 2002, p. 585). Georgiou et al. (2002) noted that "teachers' causal attributions of their students' successes and failures are very important, since they influence students' own attributions through teacher behavior" (p. 584). Furthermore, the authors noted that "attributions make a major contribution to the forming of expectancies that teachers hold for students' future academic success" (p. 584). Readers will learn more about expectancy effects in Chapter 2.

"People infer high self-efficacy from successes achieved through minimal effort on difficult tasks, but they infer low self-efficacy if they had to work hard under favorable conditions to master relatively easy tasks." (Bandura, 1986, p. 402)

Goddard et al. (2000) noted that "the major influences on collective teacher efficacy are assumed to be the attributional analysis and interpretation of the four sources of information—mastery experience, vicarious experience, social persuasion, and affective state" (p. 486). The authors explained that organizations focus attention on the teaching task and teaching competence and assess those two areas in terms

"[T]he attributional analysis and interpretation of mastery experiences, vicarious experiences, social persuasion, and affective states constitute processes through which the organization assesses the teaching task and faculty competence" (Goddard et al., 2000, p. 503). Perceptions of collective efficacy are formed when teachers weigh analysis of the teaching tasks and perceptions of group competence in relation to one another.

of organizational capacity to succeed in teaching students. Collective efficacy beliefs are shaped based on this assessment.

IN CONCLUSION

To influence collective efficacy beliefs, it is important for leaders to understand that several factors are at work in shaping beliefs. School leaders should be cognizant of these factors and nurture them. These factors are revisited and examined throughout this book. Ways to foster collective efficacy beliefs are outlined in Chapter 3, and explicit connections regarding professional learning designs that help shift casual attributions from external sources to internal sources are made throughout Chapter 4. Opportunities for building efficacy through mastery and vicarious experiences are also shared.

In the next chapter, research that demonstrates the productive teaching behaviors that are positively associated with teacher efficacy is shared. Student achievement is improved through the collective actions of teachers. Highly efficacious staffs are characterized by high expectations, effort, and persistence in overcoming the most difficult challenges. Teachers utilize more student-centered teaching approaches, are more open to change, and are willing to undertake challenging activities. Parental participation is more likely to be encouraged, and teachers are more committed to the school as an organization.