

# **SELF-EFFICACY: HOW CONFIDENT ARE YOU THAT YOU WILL SUCCEED?**

by

MARY WONG SIEW LIAN

## **ABSTRACT**

*The purpose of this paper is to provide a better understanding of self-efficacy, a form of self-referent thought that mediates knowledge and action. The role of self-efficacy beliefs in regulating human functioning is first discussed, followed by clarification concerning the conceptual difference between self-efficacy and other expectancy beliefs such as self-concept and self-esteem. Next, development of self-efficacy beliefs and the various sources of self-efficacy information that contribute towards shaping an individual's self-efficacy are discussed. An explanation concerning how self-efficacy beliefs are assessed is also included. Research findings concerning self-efficacy beliefs are then presented followed by suggestions for further research.*

## **INTRODUCTION**

The role of self-referent thought in psychosocial functioning has often been neglected in psychological research. Prior to the work of Bandura on self-efficacy and behavior (Bandura, 1977), much of psychological theories and research have focused on issues concerning acquisition of knowledge or performance of response patterns. In 1986, the publication of "Social foundations of thought and action: A social cognitive theory" by Bandura further advanced the idea that 'what people think, believe, and feel affects how they behave' (p. 25). Self-efficacy is therefore a relatively new construct in academic research (Multon, Brown, & Lent, 1991; Schunk, 1991, 1994).

The Social Cognitive theory (Bandura, 1986) is the overarching theoretical framework of the self-efficacy construct. Within this perspective, self-efficacy is viewed as one of the personal processes that interact in reciprocal fashion with behavioral processes and environmental events. Bandura (1986, p. 391) defined self-efficacy beliefs as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances." Besides the knowledge and skills that one possesses, what individuals believe about themselves and about their competence influence their efforts in accomplishing a task. School students' self-efficacy beliefs about their academic capabilities influence their learning behavior and academic attainment.

### **SELF-EFFICACY BELIEFS AND HUMAN FUNCTIONING**

According to Bandura (1993), self-efficacy beliefs influence how people feel, think, motivate themselves and behave. People with low self-efficacy may believe that things are tougher than they really are, a belief that fosters stress, depression, and a narrow vision of how best to solve a problem. High self-efficacy, on the other hand, helps create feelings of serenity in approaching difficult tasks and activities. Pajares (1996b) observed that people engage in tasks in which they feel competent and confident and avoid those in which they do not.

Most courses of behavior are initially shaped in thought. People's beliefs about their personal efficacy affect their thought processes in goal setting and planning when facing a task. People's beliefs in their efficacy influence the types of anticipatory scenarios they construct and rehearse in their minds. For example, Bandura (1993, p. 118) said, "those who have a high sense of self-efficacy visualize success scenarios that provide positive guides and supports for performance. Those who doubt their efficacy visualize failure scenarios and dwell on the many things that can go wrong".

Research shows that self-efficacy beliefs play a central role in the self-regulation of motivation (Schunk, 1984, 1989). As Bandura (1993) noted, most human motivation is cognitively generated. People motivate themselves and guide their actions through the exercise of forethought. They form beliefs about what they can do, they anticipate likely outcomes of prospective actions, set goals, and plan courses of action designed to realize what they want to accomplish. People's belief about what they can do therefore motivates them to work at completing a task. Conversely, their beliefs about failure give them no motivation to work at a task. Zimmerman, Bandura and Martinez-Pons (1992) found that the more capable students judged themselves to be, the more challenging the goals they set for themselves.

Self-efficacy beliefs also help determine what challenges people will undertake, how much effort they will expend in the endeavor, and how long they will persevere in the face of obstacles and failures (Pajares, 1996b). The higher the sense of self-efficacy, the greater the effort, persistence, and resilience. However, as Bandura (1986) observed, this may not always be the case. For example, some students may possess the necessary skill and high self-efficacy required to achieve, but they may choose not to because they lack the necessary incentives. Bandura (1993, 1997) noted that efficacy beliefs also influence the amount of stress and anxiety individuals experience as they engage in a task, and ultimately, the level of accomplishment they realize. People who believe they can exercise control over threats do not conjure up disturbing thought patterns. But people who believe they cannot manage threats experience high anxiety arousal and dwell on their coping deficiencies. Pajares (1997) observed that a strong sense of efficacy enhances human accomplishment and personal well being in countless ways. People with a strong sense of personal competence approach difficult tasks as challenges to be mastered rather than as threats to be avoided.

### **THE CONCEPTUAL DIFFERENCE BETWEEN SELF-EFFICACY AND OTHER EXPECTANCY BELIEFS**

The conceptual difference between self-efficacy and other expectancy beliefs such as self-concept and self-esteem is often wrongly assumed to be the same. Pajares (1997) noted that some researchers use the two terms, self-efficacy and self-concept, synonymously while others described self-concept as a generalized form of self-efficacy. There have also been others who defined academic self-concept as self-perceptions of ability and suggested that one reason why these self-percepts affect performance is because of their effect on students' effort, persistence, and anxiety.

Pajares (1996d) explained that self-efficacy and self-concept are similar in that they are self-percepts or beliefs about one's perceived capability. However, they differ in that self-efficacy is defined in more specific terms than self-concept. Self-efficacy differs from self-concept in that the former is a context-specific assessment of competence to perform a specific task whereas the latter is measured at a broader

level of specificity. A typical self-concept item, "Mathematics makes me feel inadequate," differs markedly from a self-efficacy question that may begin with "How confident are you that you can answer this question correctly?" Self-concept judgments, therefore, can be domain-specific but are not task-specific, while self-efficacy judgments are both task- and domain-specific.

According to Marsh, Walker, and Debus (1991), another distinction between the two constructs is the source of an individual's judgment. Self-concept judgments are based on social and self-comparisons, or "frame of reference effects". For example, by comparing one's own performance with those of others ("I am better at Science than most of my classmates") and also by comparing one's own performance in related areas ("I am better at Science than English") an individual develops a judgment of self-concept. Self-efficacy judgments, on the other hand, focus on the specific ability to accomplish the criterial task. Therefore for self-efficacy, frame of reference effects do not play a prominent role.

Self-esteem is another form of self-referent thought that should be distinguished from perceived self-efficacy as the two concepts represent quite different phenomena. According to Bandura (1986, p. 410), "self-esteem pertains to the evaluation of self-worth, which depends on how the culture values the attitudes one possesses and how well one's behavior matches personal standards of worthiness." Perceived self-efficacy, however, is concerned with the judgment of personal capabilities. Judgments of self-worth (i.e., self-esteem) and self-capabilities (i.e., self-efficacy) have no uniform relation. As Bandura (1986, p. 410) observed, "individuals may regard themselves as highly efficacious in an activity from which they derive no pride (e.g., a skilled combat soldier) or judge themselves inefficacious at an activity without suffering a loss of self-worth (e.g., an inept skater)."

According to Stajkovic and Luthans (1998), another difference is that self-esteem is often portrayed as a global construct that represents a person's self-evaluations across a wide variety of different situations. In contrast, self-efficacy is the individual's conviction about a task- and context-specific capability. Self-esteem also tends to be more stable, an almost trait-like variable, whereas self-efficacy is a dynamic construct that changes over time as new information and task experiences are obtained.

Woolfolk (1998, p.73) defined self-esteem as "the value each of us places on our own characteristics, abilities and behaviors" and stressed that it is different from self-efficacy in that self-efficacy refers to "a person's sense of being able to deal effectively with a particular task."

## **DEVELOPMENTAL ANALYSIS OF SELF-EFFICACY**

According to Bandura (1986), development of perceived self-efficacy starts at an early age. Through self-observation and recognition, infants are able to note that if they behave in certain ways, certain things happen. For example, if they shake the crib or scream, they bring adults. Infants learn from these experiences to exercise control over the environment. When they realize that their actions make events occur, they begin to develop causal efficacy. Repeated experience of producing effects by actions lead to the early development of self-efficacy. As children grow older, they gain self-knowledge of their capabilities in broadening areas of functioning. They develop, appraise and test their physical capabilities, social competencies, linguistic skills, and cognitive skills. Initial efficacy experiences are centered in the family but as the child's social world expands, peers play an increasingly important role in the child's development of self-efficacy.

Flammer (1995, p. 69), who defined self-efficacy beliefs as “one of a type of beliefs known as control beliefs” described the evolution of self-efficacy in five developmental levels. Level One (event schema) consists of the first perceived life events to be impacted by activities of the self such as sucking and moving of the head. Level Two (causal schema), which begins at around 6 months of age, involves a noticeable development of interest in secondary effects caused by the activities of the self. Level Three (attribution of causes) begins at age two and defines the distinction between self and others’ actions. Typical behavior involves refusing help and saying no to direction by others. Level Four (personal achievement) is between ages two and a half and three and a half. It features recognition of successful self-effort. At this age, children will seek to complete tasks on their own without the help of others who might share the credit for attainment. Level Five (control belief), which is completed by the age of ten years, involves the development of concepts of global ability, effort intensity, task difficulty, and compensation of effort and ability. Flammer (1995) explained that while the process of developing control beliefs are complete by age ten, the extension of developing self-conceptions such as self-esteem, self-control, maintaining values, and dealing with issues of changing and declining abilities, continue the process of defining and reformulation of control beliefs.

In the family system, the self-efficacy of parents and the kind of family environment they provide can influence self-efficacy development. According to Schneewind (1995), parental beliefs in their abilities to carry out parental duties toward their children serve as models to positively impact children’s own feelings of self-efficacy and associated control beliefs. Bandura (1995) noted that parents with high-perceived self-efficacy are positive influences on the development of ability and mastery experiences that lead to higher self-efficacy in their children. Over protective parents who curb their children’s freedom and explorations undermine development of abilities and hence self-efficacy. Bandura (1986) said that the family structure also plays an important role in influencing self-efficacy development. Family size, birth order, and sibling constellation patterns create different social references for comparative appraisal. For example, firstborns and only children have different bases for judging their capabilities than children with older brothers and sisters.

When children start schooling, the influence of peer interactions on self-efficacy development comes strongly into play. As Bandura (1986) observed, a vast amount of social learning occurs, for better or for worse, through peer observations and interactions. Because peers serve as a major agency for the development and validation of self-efficacy, disrupted or impoverished peer relationships can adversely affect the growth of personal efficacy. The school environment also plays an important role in the cultivation and social validation of cognitive efficacy. School is the place where children’s cognitive competencies are developed, tested, evaluated and socially compared.

Educational practices and classroom structures affect the development of social and cognitive competencies. Bandura (1997, p. 175) noted that, “there are a number of school practices that tend to convert instructional experiences into educational inefficacy”. Some of these practices are ability grouping, socially competitive grading, and comparative evaluation. Research (Rosenholtz & Rosenholtz, 1981) has shown that the self-efficacy of less able students suffer most when social comparative evaluations rather than self-comparative appraisals are made. It has also been found that teacher’s sense of self-efficacy, that is, the belief that they can have a positive effect on student learning, is related to the classroom management approaches they use (Woolfolk, Rosoff, & Hoy, 1990). Teachers who believe in their ability to effectively teach create classroom conditions that build mastery experiences and

self-directive skills for students, thus enhancing their self-efficacy. The actions of teachers and peers therefore play a very important role in shaping a child's perceived self-efficacy.

According to Bandura (1997, p. 163), "different periods of life present certain prototypic competency demands for successful functioning. Changing aspirations, time perspectives, and social arrangements over the course of the life span alter how people structure, regulate, and evaluate their lives in the lifelong journey". Adolescents, for instance, must learn to master new skills and the ways of adult society. They must learn to deal with heterosexual relationships and the task of choosing a career. Adulthood brings with it challenges of marital relationships, parenthood and careers. During the middle years, most people realize the limits of their capabilities and learn to scale down their ambitions, while with advancing age, self-efficacy problems center on reappraisal and misappraisal of capabilities. For example, the elderly may experience a declining sense of self-efficacy due to declining physical abilities. This declining sense of self-efficacy leads to self-perpetuating processes that result in declining cognitive and behavioral functioning. Bandura (1986) further added that the social systems (e.g., the family, school community, and workplace) that a person goes through at different periods in life play a crucial role in the development of perceived self-efficacy. These diverse efficacy influences operate in an interrelated fashion to shape the individual's perception of his or her ability to succeed.

### **SOURCES OF SELF-EFFICACY INFORMATION**

People's conceptions of their self-efficacy, whether accurate or faulty, are developed and verified through various sources of self-efficacy information. These include enactive attainments, vicarious experiences, verbal persuasions, and physiological states or emotional arousal. According to Bandura (1986), enactive attainment or actual experience is the most influential source from which individuals develop self-efficacy beliefs. This is because enactive attainments provide the most authentic evidence of whether one can muster what it takes to succeed (Bandura, 1997). Success raises self-efficacy and failure lowers it, especially if failures occur before a sense of efficacy is firmly established. A resilient sense of efficacy requires experience in overcoming obstacles through perseverant effort.

Another source of self-efficacy information is vicarious experiences. Vicarious experience is second hand experience produced through observing the actions of others. Vicarious experience is weaker than enactive attainment, but when people are uncertain about their own abilities or when they have limited prior experience, they are more sensitive to it (Bandura, 1986). The strength of the effect of vicarious experiences on a person's self-efficacy appraisal depends on social comparison processes. As Bandura (1986) observed, seeing similar others succeed or fail at a task can affect such individual's self-efficacy beliefs. Seeing a skilled person fail by the use of insufficient strategies can boost self-efficacy in observers who believe they have more suitable strategies at their command. Conversely, observing a similar person barely succeed despite the most adroit tactics may lead observers to reevaluate the task as much more difficult than they had previously assumed it to be.

Verbal persuasions also play an important part in the development of self-efficacy beliefs. Bandura (1986) noted that it is widely used to get people to believe they possess capabilities that will enable them to achieve what they seek. Teachers, for example, can raise or inhibit students' percepts of efficacy by suggesting whether or not they have the capabilities to succeed in a given task (Bouffard-Bouchard, 1989).

According to Bandura (1997), persuasory efficacy information is usually conveyed in evaluative feedback. For example, evaluative feedback highlighting personal capabilities raises efficacy beliefs, and feedback that children have improved through effort enhances perceived efficacy. Just as positive persuasions may work to encourage and empower, negative persuasions may work to defeat and weaken self-beliefs. As Pajares (1997) observed, it is usually easier to weaken self-efficacy beliefs through negative appraisals than to strengthen such beliefs through positive encouragement.

According to Bandura (1997), somatic indicants (such as sweating, tension, shakes), physiological indicants (such as fatigue, windedness, aches and pains) and mood states also provide information about self-efficacy beliefs. Such emotional arousal affects a person's self-efficacy beliefs and hence their performance at tasks. Bandura (1997) said that the efficacy value of the arousal depends on the individual's judgment of the situation. It is not the sheer intensity of emotional or physical reactions that is important but rather how they are perceived or interpreted. Those who are inclined to perceive their arousal as stemming from personal inadequacies are more likely to lower their self-efficacy than those who regard their emotional arousal as a common transitory reaction that even the most competent persons experience. In the present study, selected low, average, and high self-efficacy students were interviewed to gain insights into how the various sources of self-efficacy information affected their perceptions of self-efficacy and which source of self-efficacy information had the greatest impact on their science self-efficacy beliefs.

### **ASSESSMENT OF SELF-EFFICACY BELIEFS**

Self-efficacy beliefs are usually assessed by asking individuals to report the level, generality, and strength of their confidence to accomplish a task or succeed in a certain situation. According to Bandura (1986), level refers to the level of task difficulty that a person believes he or she is capable of executing (e.g., from simple to moderately difficult tasks). The second dimension, generality, refers to the extent to which self-efficacy beliefs relate to, or transfer across a wide range of tasks or domains. Strength of self-efficacy refers to whether judgment about the magnitude or level of difficulty is strong (likely to persevere in the face of obstacles) or weak (easily give up). The stronger the sense of personal efficacy, the greater the perseverance and the higher the likelihood that the activity will be performed successfully.

Bandura (1986, 1997), however, has cautioned researchers attempting to predict academic outcomes from students' self-efficacy beliefs that to increase accuracy of prediction, they would be well advised to follow theoretical guidelines regarding specificity and correspondence of self-efficacy assessment. Task-specific judgments of self-efficacy are superior to both domain-specific assessments and omnibus measures of general self-efficacy. This is because task-specific measures require students to generate judgments with a clear academic activity or task in mind. Generalized self-efficacy instruments basically assess people's general belief that they can make things happen without specifying what these things are. As Pajares (1996a) observed, when students do not know with any degree of accuracy what it is they are expected to do, the judgments on which they will base their capability to do it will be nebulous at best.

In academic settings, self-efficacy instruments usually ask students to rate their confidence to solve specific mathematics problems (Pajares & Miller, 1994), or perform particular reading or writing tasks (Zimmerman & Bandura, 1994), or engage in certain self-regulatory skills (Zimmerman et al., 1992). The individual is required to

rate his or her confidence (level of self-efficacy) in performing a specific task on a scale ranging from 1 or 10 (uncertain) to 10 or 100 (certain) at 1 or 10-point intervals. The sum of the confidence ratings for the whole instrument is the strength of self-efficacy of the individual. For example, in assessing students' mathematics problem-solving self-efficacy, students are required to respond, on a 6-point scale, to the question "How confident are you that you could give the correct answer to the following problems without using a calculator?" [followed by 20 algebra or geometry problems...] (Pajares & Miller, 1994), or students are asked to rate, on a 10-point scale, their self-efficacy for writing skills in answer to the question "How confident are you that you can perform each of the following writing skills?" [8 skills presented... ] (Shell, Murphy, & Bruning, 1989). In a study involving 350 undergraduates, Pajares and Miller (1994) found that item specific math self-efficacy beliefs were more predictive of mathematics problem solving than were domain-specific self-concept beliefs.

### **RESEARCH ON SELF-EFFICACY**

In academic settings, self-efficacy research has focused primarily on areas such as (1) the influence of self-efficacy on college majors and career choice, (2) gender differences in self-efficacy, (3) teacher efficacy, and (4) self-efficacy beliefs and related psychological constructs, and academic motivation and achievement. Research in the first area has explored the link between self-efficacy beliefs and college majors and career choice, particularly in mathematics. Researchers (Hackett, 1985; Lent, Lopez, & Beischke, 1991; Matsui, Ikeda & Ohnishi, 1989; Matsui, Matsui & Ohnishi, 1990) found that undergraduates chose college majors and careers in areas in which they felt most competent and avoided those in which they believed themselves less competent or less able to compete. Researchers (Pajares & Miller, 1995) have also reported that the mathematics self-efficacy of college undergraduates is more predictive of their mathematics interest and choice of math-related courses and majors than either their prior math achievement or math outcome expectations.

There have also been studies on the relationship between gender and self-efficacy. However, this relationship has not been explored as thoroughly as that between gender and academic performances. These gender-related studies have also been mainly on mathematics self-efficacy. While recent findings (Eisenberg, Martin, & Fabes, 1996) suggest that gender differences in mathematics achievement are either diminishing or practically nonexistent, some contemporary researchers have found that gender differences in mathematics confidence of American students may still be prevalent. It seems that girls and boys report equal confidence in their math ability during the early elementary school years, but by high school, boys are more confident than girls (Eccles, 1983). Even by middle school, boys rate themselves more efficacious than do girls (Pintrich & DeGroot, 1990; Zimmerman & Martinez-Pons, 1990). Meanwhile, in a number of studies at the college level (Lent & Hackett, 1987; Pajares & Miller, 1994, 1995), male undergraduates have reported higher mathematics self-efficacy than did female undergraduates.

Studies in the third area have been on the relationship between teacher efficacy and their instructional practices. According to Ashton (1985, p. 142), teachers' sense of efficacy refers to "their belief in their ability to have a positive effect on student learning". Researchers (Ashton & Webb, 1986; Gibson & Dembo, 1984; Woolfolk et al., 1990) have reported that teachers' beliefs of personal efficacy affect their instructional activities and their orientation toward the educational process. Teachers

with high instructional efficacy create mastery experiences for their students whereas teachers with low instructional efficacy undermine students' cognitive development as well as students' judgments of their own capabilities. Woolfolk et al. (1990) found that teachers with a low sense of efficacy tend to hold a custodial orientation that takes a pessimistic view of students' motivation. They emphasize rigid control of classroom behavior and rely on extrinsic inducements and negative sanctions to get students to study. The stronger the teacher's sense of personal efficacy, the more humanistic the teacher's student control orientation and the more the teacher supported student autonomy in solving classroom problems. Teacher efficacy therefore is an important construct in teacher education. Teacher-educators need to continue to explore how teacher efficacy develops and how teacher education programs can be structured to help preservice teachers develop high teacher efficacy.

Studies in the fourth area have investigated the relationships among efficacy beliefs and psychological constructs, and academic motivation and achievement. There have been studies that explored the relationship between self-efficacy beliefs and goal setting (Wood & Locke, 1987), modeling (Schunk, 1981, 1987), problem-solving (Bouffard-Bouchard, 1989), reward contingencies (Schunk, 1983), self-regulation (Zimmerman & Bandura, 1994; Zimmerman & Martinez-Pons, 1990), social comparisons (Bandura & Jourden, 1991), and anxiety and self-concept (Pajares & Miller, 1994, 1995).

Pajares, Britner and Valiante (2000) recently reported on two studies that they carried out on the relation between different types of achievement goals (namely task goals, performance-approach goals, and performance-avoid goals) and self-beliefs of middle school students in writing and science. Their findings showed that for both studies, task goals (i.e., learning or mastery goals) were associated positively with self-efficacy, self-concept, and self-efficacy for self-regulation, while performance-approach goals were associated positively with self-concept and performance-avoid goals were associated negatively with self-concept and self-efficacy for self-regulation. The findings from the studies reviewed above show that self-efficacy beliefs are correlated with other self-beliefs, motivation constructs, and academic choices, changes, and achievement.

There have also been findings that support Bandura's (1986) contention that efficacy beliefs mediate the effect of skills or other self-beliefs on subsequent performance by influencing effort, persistence, and perseverance (Bouffard-Bouchard, Parent & Larivee, 1991; Collins, 1982; Lent, Brown & Larkin, 1984, 1986). For example, Collins (1982), in a study involving low, middle and high mathematics ability students, found that regardless of the ability level, high self-efficacy students completed more math problems correctly and when given the chance to do so, reworked more of the math problems they had missed than did the low and middle self-efficacy students. Lent et al. (1984, 1986) found that high self-efficacy college students enrolled in science and engineering courses demonstrated greater persistence in their efforts to maintain high academic achievement than did their low self-efficacy peers.

Meanwhile, Zimmerman and his associates have mainly been responsible for advancing research on the relationships among self-efficacy perceptions, self-efficacy for self-regulation, academic self-regulatory processes, and academic achievement. Zimmerman and Martinez-Pons (1990) found that gifted students displayed significantly higher verbal efficacy, mathematical efficacy, and strategy use than regular students. In another study involving high school students, Zimmerman et al. (1992) found that students' beliefs in their efficacy for SRL affected their perceived self-efficacy for academic achievement, which in turn influenced the academic goals they set for themselves and their final academic achievement. Zimmerman and

Bandura (1994) studied the role of self-efficacy beliefs concerning academic attainment and self-regulation of writing, academic goals, and self-standards on writing course achievement of college freshmen using path analysis. They found that perceptions of self-efficacy for writing influenced both perceived academic self-efficacy and self-efficacy for personal goal setting, and grade attainment. A more recent study by Chye, Walker and Smith (1997), involving Singaporean and Australian undergraduates also reported of significant relationships between self-efficacy and strategy use as well as academic achievement. These findings suggest that students who believe they are capable of performing academic tasks set higher goals, use more cognitive, metacognitive, and other self-regulatory strategies, persevere at their tasks, and attain better final grades.

### **CONCLUSION AND SUGGESTIONS FOR FURTHER RESEARCH**

The self-efficacy construct therefore deserves greater focus in research as it plays a paramount role in influencing human functioning. Virtually all experiences of learning, choice making and conscious motivation are affected by the individual's perception of his or her own ability to succeed. There is a need to consider this form of self-referent thought more extensively in a wide range of concerns, including education.

Research on the self-efficacy of students would be a worthwhile pursuit in educational research, as it would provide insights into how to promote positive learning qualities in students. The school is a social system where the shaping of students' early self-efficacy beliefs in various areas of functioning (such as social, physical, and cognitive) takes place. Teachers therefore need to be aware of how self-efficacy development takes place and how the various sources of self-efficacy information can influence students' self-efficacy beliefs. Knowledge of students' perceived self-efficacy in the various subject areas would also prove to be useful to teachers in deciding on the choice of instructional approaches to use and how to relate to students so as to enhance their self-efficacy.

The area of teacher efficacy is equally if not even more important as a focus of research because teachers are instrumental in creating the learning environment that would promote or impede development of a high sense of self-efficacy in their students. Teacher-educators, supervisors and school administrators therefore have an important role to play in promoting development of teacher efficacy.

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