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The Influence of Efficacy Beliefs on Teacher Performance and Student Success: Implications for Student Support Services

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Abstract   The influence of teachers' efficacy beliefs on student achievement is well documented in educational literature. Efficacy beliefs are derived from sources of information teachers obtain from professional experiences. This article provides student support services personnel with an overview of efficacy beliefs and their impact on teachers' thoughts, emotions, and behaviors. A cognitive behavioral framework, rational emotive behavior therapy, is used to conceptualize ways efficacy beliefs may hinder teacher performance and student success. Implications for student support services and research are provided.

Keywords   Teacher efficacy · Irrational beliefs · REBT · Student support services · Student success

Corey (2013) described four areas of development in contemporary behavior therapy: classical conditioning, operant conditioning, social learning approach, and cognitive behavior therapy. Classical conditioning was first introduced by Ivan Pavlov almost a century ago; John Watson later refined this concept and developed behaviorism (Spiegler and Guevremont 2015). In the 1920s, Hobart and Wille Mowrer and one of Watson's students, Mary Carver Jones, extended the efforts of behaviorists; the former utilized the work of Pavlov to treat a case of enuresis while the latter treated a phobia through modeling and in vivo exposure. As the work of Pavlov and Watson evolved, at Columbia University Edward Thorndike determined that systematic consequences influence behavior. This concept, known as operant conditioning, was later championed by B.F. Skinner (Spiegler and Guevremont

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2015). For several decades, Skinner and others (e.g. Edmund Jacobson, Teodoro Ayllon, and Ogden Lindsley) continued to study the concepts of operant conditioning and behavior modification as behavior therapy developed.

In South Africa, during the 1950s, Joseph Wolpe advanced systematic desensitization while coupling it with Jacobson's relaxation approaches. One of Wolpe's students, Arnold Lazarus, expanded the traditional behavioral model and eventually moved to the United States and taught with Albert Bandura at Stanford University (Corey 2013). For the next three decades Bandura, along with several colleagues, explored the impact of cognition on social modeling and observational learning while refining his social learning theory. Meanwhile, cognitive behavior therapy began to emerge from the cognitive-based theories of Albert Ellis, Aaron Beck, and Donald Meichenbaum (Spiegler and Guevremont 2015).

According to Pajares (2004), in the mid-1980s Bandura renamed his approach Social Cognitive Theory to better reflect the bi-directional interactions he believed occurred between the self and the environment. A central component of learning and behavior change in Bandura's (1986) social cognitive framework is self-efficacy. Bandura (1989) described self-efficacy as one's perception of her or his ability to complete a task. Efficacy beliefs, often termed self-efficacy or sense of efficacy, are inferential thoughts based on personal experience, observation, persuasion, and emotional arousal (Bandura 1977). Self-efficacy can fluctuate from strong to weak based on experience and is often task-specific (Bayraktar 2013). Individuals who maintain a strong sense of efficacy are often motivated to complete tasks. Alternatively, a weak sense of efficacy, which frequently stems from task failure, leads to complacency and stagnation. Self-efficacy influences cognitive, emotional, and behavioral responses which are the crux of cognitive behavioral theories (Bandura 1986).

Cognitive-behavioral theories and their application are widely studied throughout the field of education. Bernard (2001), Sapp (1996, 2006), and Vernon (2009) for example, have all made significant contributions to the efforts to promote cognitive behavioral theory and strategies that foster student success. In many instances, emphasis is placed on applications of theory that directly support child and adolescent development. For example, Banks and Zionts (2009a, 2009b) highlighted the role of cognitive behavioral strategies in helping children and adolescents manage their emotions. More recently, Banks et al. (2013) outlined the importance of supporting students with diverse learning needs through developmental and learning theories. They suggested emotional competence is attainable through the application of rational emotive behavior therapy (REBT; Ellis 1962). Alternatively, Bernard (1990), Forman and Forman (1980), Fowler et al. (2008), and Warren (2010a, 2010b, 2013a) have explored ways cognitive behavioral theory is applicable to educational practices including the delivery of instruction and fostering student–teacher relationships. For example, Bernard (1990) drawing from REBT, developed the Teacher Irrational Beliefs Scale (TIBS) in an effort to conceptualize and measure the rigidity of teachers' beliefs.

Other researchers have applied Bandura's self efficacy theory to the teaching profession. Teacher efficacy appears to have significant implications for educational practice and student success (see Ashton et al. 1983; Haverback 2010; Huang et al.

2007; Poulou 2007; Ross and Bruce 2007; Takahashi 2011; Tschannen-Moran et al. 1998; Warren 2013a). Teachers' sense of efficacy influences student engagement, classroom management, and the delivery of instruction, all which directly impact student achievement (Berman et al. 1977; Kass 2013; McCormick and Ayres 2009; Prieto-Ursúa and Bermejo-Toro 2005; Raudenbush et al. 1992; Tschannen-Moran and Woolfolk Hoy 2001). For example, teachers with a strong sense of efficacy are more motivated to encourage students to work together (Haney et al. 2002). Additionally, Kass (2013) and Soodak and Podell (1993) noted teachers with strong efficacy beliefs were more willing to work with students in need of additional support services such as special education.

Teacher efficacy beliefs are also associated with emotions. In a study conducted by Warren and Dowden (2012), the strength of teachers' efficacy beliefs was negatively associated with feelings of depression, anxiety, and stress. Negative relationships were also found between teacher efficacy beliefs and irrational beliefs (Ozer and Akgun 2015; Warren 2010a, b; Warren and Dowden 2012; Warren and Gerler 2013). It appears that teachers who display little confidence in their ability to complete classroom tasks often experience irrational beliefs and heightened or unhealthy negative emotions. Teachers model these thoughts, emotions, and behaviors on a daily basis (Harvey et al. 2012). Heightened responses to classroom situations often serve as barriers to student success (Warren and Robinson 2015; Zembylas 2011). Teachers who exhibit unhealthy negative emotions in the classroom have difficulty building strong student relationships, delivering instruction, and managing their classroom, thus often confirming their sense of efficacy (Warren 2013a).

Meirovich (2012) asserted the importance of teachers remaining aware of the emotional climate developed in their classroom. Warren (2013a, 2013b) later recommended that teachers remain cognizant of their thoughts and the impact their efficacy beliefs have on classroom performance and student outcomes. An understanding of these psychosocial processes can lead to reductions in teacher stress and burnout while enhancing educational practices and student success. It is critical school leaders acknowledge the impact beliefs have on teacher performance and student success while seeking ways to promote developmentally appropriate and optimal learning environments.

As recognized leaders in today's schools, professional school counselors provide comprehensive services that support the academic, career, and personal/social development of all students (Schmidt 2014). In their efforts to promote student success, it is critical for school counselors to collaborate and partner with other student support services personnel such as school psychologists and school social workers. School psychologists aim to promote effective school-wide practices that support optimal student development (National Association of School Psychologists 2010). Similarly, school social workers advance the mission of the schools they serve, encouraging academic and social development for all students (School Social Work Association of America, n.d.). These student support services often compliment each other as efforts are made to promote student development. However, factors such as teacher beliefs, emotions, and behaviors which impact student success are often overlooked (Warren 2016). It is vital for school

psychologists and school social workers to work collaboratively, alongside school counselors, to develop strategies that promote positive emotional climates and optimal learning environments.

While several studies have explored the relationship between teacher irrational beliefs and efficacy beliefs, a conceptual model that explains how these constructs interact does not exist. This article provides student support services personnel with an overview of teacher efficacy beliefs and the sources from which these beliefs are conceived. Case examples demonstrate the impact efficacy beliefs have on student engagement, instructional strategies, and classroom management. REBT (Ellis 1962) is utilized to conceptualize and analyze the cognitive, emotive, and behavioral processes of the teachers in these scenarios. Implications for educational practice and student support services personnel are provided.

Sources of Teacher Efficacy Beliefs

Sources of efficacy beliefs lead teachers to believe they possess or lack the ability to accomplish tasks (Tschannen-Moran et al. 1998; Warren and Robinson 2015). Bandura (1997) cited four sources of information that influence teachers' perceived ability to complete tasks—mastery experience, vicarious experience, verbal persuasion, and physiological/affective state. Described below, these sources of efficacy beliefs impact several areas of teaching practice: student engagement, the delivery of instruction, and classroom management (Tschannen-Moran et al. 1998). In order to effectively promote student success, it is imperative student support services personnel understands the processes in which teachers develop, maintain, and act on efficacy beliefs.

Mastery Experiences

The most influential source of self-efficacy is mastery experience (Tatar and Buldur 2013). Teachers' classroom experience and level of performance during tasks provide evidence of their ability (Bernadowski et al. 2013). Mastery experiences are developed when teachers actively attempt to engage students in learning activities (Skaalvik and Skaalvik 2014). Success builds a strong sense of efficacy while failure weakens perceived efficacy (Bandura 1997). If teachers experience success during a task, their perceived level of ability to complete the task strengthens. Alternatively, teachers' efficacy beliefs related to student engagement will weaken if they fail to engage students in learning activities.

Perceived ability is greatly influenced by the information teachers gather from genuine experiences. Bandura (1997) suggested teachers with few mastery experiences dwell on their past failures, view them as weaknesses, and sabotage their ability to effectively teach students. Teachers with significant amounts of mastery experience also fail at tasks, however, are likely to view failure as a constructive aspect of the learning process (Kass 2013). Student support service personnel who aim to promote student success must acknowledge the power of mastery experiences and the manner in which they shape teacher beliefs and dictate classroom outcomes.

Vicarious Experiences

Teachers also gauge their abilities by witnessing the successes and failures of experienced models (Morris 2011). These vicarious experiences influence teachers' sense of efficacy to complete classroom tasks. Teachers who witness their colleagues' success will believe they can achieve similar goals. Successes and failures of colleagues lead teachers to question their own ability to plan lessons, engages students, and carry out activities (Tatar and Buldur 2013). For example, teachers who successfully manage their classrooms can vicariously strengthen other teachers' perceived ability to effectively manage classrooms. Tang (2003) considered pre-service learning a critical time for teachers to engage in vicarious experiences and strengthen their efficacy beliefs. In this stage of their career, teachers have the opportunity to observe experienced teachers and receive monitored supervision. Teachers' efficacy beliefs are also influenced by school leaders such as grade-level chairs or administrators. Kass (2013) suggested motivated school leaders are significant sources of vicarious experiences and contribute to teachers' perceptions of their ability. Alternatively, unmotivated leaders can unknowingly lead teachers to maintain a poor sense of efficacy. Therefore, it is important for school leaders, including student support services personnel, to consider the role observation plays in the development of teacher beliefs.

Verbal Persuasion

Understanding the power of verbal persuasion and its role in establishing self-efficacy beliefs also can help student support service personnel understand the psychosocial challenges teachers face in the classroom. Evaluative feedback, also known as verbal persuasion, is particularly powerful when teachers have few classroom experiences (Morris 2011). The influence of verbal persuasion on teachers' efficacy beliefs is often mediated by the perceived knowledge and credibility of the individual providing the feedback (Morris 2011). Kass (2013) found teachers with a strong sense of efficacy described good principals as providing clear feedback, offering individual considerations, promoting autonomy, and encouraging original, creative, and innovative thought. Through verbal persuasion, administrators, colleagues, or peers can either positively or negatively influence teachers' perceived ability to complete classroom tasks. As a one teacher indicated, "I don't need a medal. A good word is a good enough reward for me" (Kass 2013, p. 217).

Physiological and Affective Sources

Physiological and affective sources of information such as responses or reactions to stress and anxiety also can influence teachers' efficacy beliefs (Bandura 1997; Tatar and Buldur 2013). Morris (2011) found teachers' physiological and affective states were better predictors of student engagement, job satisfaction, and emotional exhaustion than perceived environmental opportunities or obstacles such as teaching

in overcrowded classrooms. Teachers are more resilient when they feel optimistic about the likelihood of positive outcomes and their ability to work against obstacles (Keogh et al. 2012). However, a moderate amount of physiological arousal is necessary to motivate teachers to act (Bandura 1997). Physiological and affective sources of information appear to impact motivation, efficacy beliefs, and burnout (Skaalvik and Skaalvik 2014). When student support service personnel are knowledgeable of the relationships between these concepts and self-efficacy beliefs, they can more readily identify strategies that support effective teacher practices.

A Cognitive Behavioral Perspective on Teacher Efficacy

REBT is an evidence-based model of cognitive behavior therapy. The theory and model have evolved over the past 60 years, yet the primary philosophical tenet, "people are not disturbed by things, but the view they take of those things," continues to remain a centerpiece (Ellis 1962). Ellis (1962) posited that humans are genetically predisposed to think in irrational, self-defeating ways. Irrational beliefs are thoughts that are rigid and extreme in nature, comprise a core demand, and at least one of three extreme derivative beliefs or evaluations: awfulizing, low frustration tolerance (LFT), or deprecation (Dryden 2014). For example, the thought, "students should do what I say and it's terrible when they don't," is an irrational belief containing a demand and evaluation (e.g., awfulizing). A belief that describes a demand and evaluation for comfort and ease is an example of LFT, while beliefs that include demands and errors of overgeneralizations are either self-downing, other-downing, or life-downing (David 2014). These overgeneralizations erroneously link behaviors or events to worth and value. REBT does not promote these beliefs nor distorted beliefs that are based on fabricated explanations, otherwise known as rationalizations (Walen et al. 1992). REBT utilizes a variety of cognitive, emotive, and behavioral techniques to dispute these and other detrimental beliefs, thus enhancing emotional and behavioral health (Ellis and MacLaren 2005; Warren and Cottone 2015).

Conceptualizing Dysfunction in REBT

REBT employs the ABC model to conceptualize cognitive, emotional, and behavioral dysfunction (Neenan and Dryden 2011). The "A" or activating event of the ABC model comprises situations and event-specific thoughts or inferences. An activating event leads to "B," a belief. The "C" of the ABC model includes outcomes or consequences based on the beliefs maintained at "B." Consequences (C) can include cognitions, emotions, and behaviors. If thoughts at "B" are irrational (i.e., rigid and extreme) then cognitions at "C" are highly distorted, emotions are unhealthy, and behaviors are dysfunctional. Alternatively, if "B" comprises rational beliefs, then cognitions at "C" represent reality and accompanying emotions and behaviors are functional. The ABC model appears linear, although it is often cyclical in nature. For instance, an activating event (A) can contain thoughts, emotions, or behaviors generated from consequences (C). REBT

promotes wellness by disputing irrational thoughts and encouraging the development of rational beliefs. Below, teacher cognition is expounded using the ABC model. Key features of A and B are detailed to emphasize the nuanced cognitions that stem from efficacy beliefs held by teachers.

A Framework for Understanding Teacher Cognition

Teachers hold efficacy beliefs about a variety of educational practices. These beliefs are pre-conceived and based on prior sources of information. When a new experience opposes a teacher's efficacy belief, cognitive dissonance occurs. Regardless of whether the efficacy belief is maintained or replaced by a new one, irrational beliefs may surface. Overgeneralizations serve to validate the irrational beliefs. At times, rationalizations may emerge. Extreme beliefs lead teachers to experience cognitive consequences. The ABC model is used below to further explain these cognitive processes and the continuous impact of sources of efficacy beliefs (see Fig. 1).

A1. Efficacy Beliefs

Warren and Baker (2013) suggested efficacy beliefs are examples of thoughts called inferences which occur at "A" in the ABC model. Inferences, similar to perceptions, are thoughts individuals develop based on knowledge of an event or circumstance. These beliefs are often speculative and ill-founded. "I can develop an effective classroom management plan," is an inference and an example of an efficacy belief. It is possible this thought is valid and accurate or the teacher may erroneously hold this belief based on sources of information (i.e., vicarious
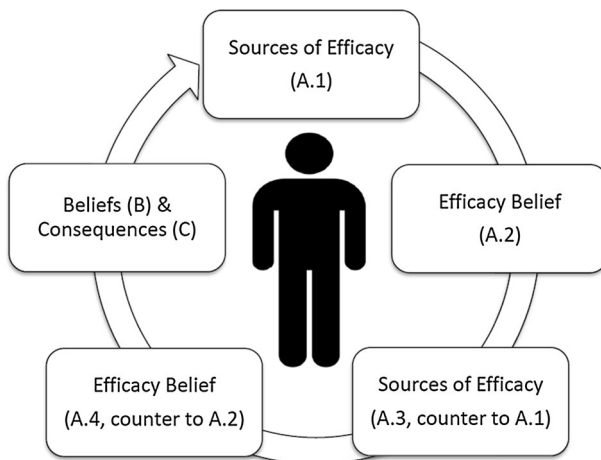

Fig. 1 Cycle of teacher cognitions. This figure illustrates the cyclical nature of cognitive processes and the influence of sources of efficacy on teachers' thoughts, emotions, and behaviors

experience). Notwithstanding, efficacy beliefs are not a reliable measure of teachers' ability to complete tasks.

REBT does not encourage teachers to change their reality or perceptions of ability. As such, teachers can maintain any perceptions about their ability to complete a task. However, the efficacy beliefs for completing a task may not always align with a teacher's actual ability or outcome.

A2–A4. Cognitive Dissonance

Cognitive dissonance is a state of disharmony evoked when an individual simultaneously maintains two opposing beliefs (Sullivan 2009). When a situation indicates an outcome contradictory to the efficacy belief maintained, teachers experience cognitive dissonance. This unpleasant experience serves as motivation to reduce or eliminate the contradiction, even at the expense of upholding or developing irrational beliefs (Festinger 1957).

Teachers experience cognitive dissonance when an efficacy belief lies in opposition to what they experienced. A teacher may believe, "I have the ability to provide effective math instruction," yet experience dissonance when they fail to achieve the instructional task. When a teacher maintains a strong sense of efficacy they will likely maintain their initial belief. Teachers with a weak sense of efficacy will often develop a new efficacy belief aligned with the new experience. Regardless of the strength of the efficacy belief, the teacher must decide to either maintain their initial efficacy belief or develop a new one based on the immediate experience. However, either choice has the potential to lead to an irrational belief.

B1. Irrational Beliefs

After cognitive dissonance is experienced teachers often develop irrational beliefs (Festinger 1957). Teachers who maintain their original efficacy belief as well as those who form a new one based on their immediate experience are subject to experience irrational beliefs. These beliefs most often demand the teacher "*should* or *must* have the ability to complete the task." At times, the irrational beliefs are directed toward others (e.g., students, parents, or administrators).

B2. Overgeneralizations

Overgeneralizations are often developed based on an experience and inappropriately applied to similar situations (Sullivan 2009). Teachers may use overgeneralizations to validate or confirm their irrational beliefs. For example, a teacher believes, "I must effectively instruct this student because I have taught students effectively in the past." The teacher attempts to validate the irrational belief by applying a past experience to the present situation. In this instance, if the teacher fails to provide effective instruction, he may rationalize the failing or simply devise an extreme belief.

B3. Rationalizations

In some instances, teachers may rationalize why they failed at completing a task. Rationalizations emerge from thoughts aimed at self-preservation (Smith et al. 2012). "If her parents just taught her to behave, I wouldn't have these problems," is an example of a rationalization. This rationalization serves to protect the teacher's value and self worth. Rationalizations typically place blame on others and can dictate who the extreme beliefs target (e.g., parents).

B4. Extreme Beliefs

Extreme beliefs are derived from the culmination of rigid beliefs, overgeneralizations, and in some cases, rationalizations. These beliefs involve awfulizing, low frustration tolerance (LFT), or deprecation. "It's terrible, I can't manage this student's behavior," is an example of a teacher awfulizing. When rationalizations precede extreme beliefs, deprecation typically targets students, parents, or administrators, rather than the teacher. For example, a teacher may rationalize the reason for their failure is because of the students lack of motivation. The extreme belief, "I can't stand it when students don't motivate themselves," may follow.

C. Cognitive Consequences

Cognitive consequences stem from the beliefs (e.g., irrational, extreme, overgeneralizations) maintained by teachers. These thoughts are definitive in nature and include words such as "always" and "never." An example of a cognitive consequence is, "I'll never be able to form a solid relationship with students." These cognitions dictate the types of emotional and behavioral consequences that follow.

This framework provides an outline of the cognitive processes teachers experience when faced with common classroom situations that challenge their sense of efficacy. All teachers, regardless of the strength of their sense of efficacy, are susceptible to developing irrational beliefs which impede their performance and hinders student success. Case examples that describe teachers' cognitive processes and the impact of efficacy beliefs are provided below.

Case Examples of Teachers' Cognitive Processes

Teachers experience common classroom situations across their career, however, no two events are the same. Students' ability level, predisposition, background, parental support, and lived experience widely varies. Additionally, curriculum requirements continue to evolve and expand. A strategy deemed effective with one child may appear ineffective with other children. Likewise, a strategy may not succeed with the same student twice. Teachers can maintain a host of detrimental thoughts as a result of these nuances and ever-changing classroom experiences.

These detrimental thoughts include expectations, efficacy beliefs, irrational beliefs, and generalizations among others.

In an effort to address beliefs that hinder performance, Warren (2010b) and Warren and Gerler (2013) employed intentional instructional strategies when providing Rational Emotive-Social Behavioral (RE-SB) group consultation to elementary teachers. Songs were utilized to help teachers conceptualize irrational thoughts and learn strategies to dispute them. The lyrics to one song (sang to the tune of The Itsy Bitsy Spider) frequently resonated with teachers:

> I am a teacher, and I like to teach. ALL of my boys and girls, I must reach.
> If I don't I'll get mad and raise my voice then yell. Then I'll start to down myself,
> I'm going straight to hell.

This song provides a glimpse into the cognitive processes and emotions teachers experience while attempting to engage students, provide effective instruction, and manage classroom behaviors. When their expectations are not met, Warren (2016) found teachers tend to think irrationally. This leads teachers to respond to students in dysfunctional ways. In some instances and as the song suggests, these behaviors lead to additional irrational beliefs and unhealthy emotions.

More examples of cognitive processes teachers experience are presented and described in detail below. Three areas of teacher practice are emphasized: instructional strategies, student engagement, and classroom management. Variations of these cognitive processes are possible based on efficacy belief, source of efficacy information, demands, and area of practice. In each instance the development of efficacy beliefs based on misleading sources of information contribute to and promote the development of irrational beliefs, critical inferences or cognitive consequences, and unhealthy negative emotions. This linear process can become cyclical as teachers are re-exposed to sources of efficacy information and perceived ability is influenced.

Mastery Experiences of Instructional Strategies Including Awfulizing

Teachers often believe they possess the ability to successfully implement an instructional strategy due to previous success using the same or similar strategy. Teachers develop these beliefs based on mastery experiences. While these efficacy beliefs are indicative of past experience, they are not strong indicators of future success. However, if teachers are successful in delivering an instructional strategy, their overgeneralizations are confirmed and their self-efficacy for completing the task is strengthened. Cognitive dissonance results when teachers expect to successfully apply an instructional strategy and failure occurs. As such, efficacy beliefs can lead to awfulizing which, in turn, produces emotional and behavioral consequences that prohibit effective delivery of instruction. Teachers do not perform to the best of their ability as a result of this cognitive barrier (i.e., awfulizing) thus impeding student success.

Case Example

Mr. Matthews, a fourth grade teacher recently completed a 1-day workshop focused on teaching strategies in mathematics. Upon his return, Mr. Matthews assists a student in learning how to complete a two-step multiplication problem using a strategy practiced in the workshop. Mr. Matthews experiences difficulty implementing the instructional strategy and fails to teach the student how to solve the multiplication problem. His perceived ability to provide the instructional strategy was originally based on his experience in the workshop. However, the experience with the student was contradictory, which discomforted Mr. Matthews and undermined his perceived ability level. As a result, he developed a new, weaker sense of efficacy and concluded "it's the end of the world" (i.e., awfulized) because he does not have the ability to help the student.

Analysis

The dissonance experienced creates a platform for irrational thought and leads Mr. Matthews toward cognitive consequences (see Table 1). Irrational beliefs (B) are supported by overgeneralizations as Mr. Matthews attempted to navigate an experience (A) contradictory of his original efficacy belief. In turn, cognitive, emotional, and behavioral consequences (C) resulted, further prohibiting Mr. Matthews from effectively implementing the mathematics strategy. In this situation, the teacher internalized the problem, became depressed, and presented as unmotivated when implementing future instructional strategies.

Vicarious Experiences of Student Engagement Including Awfulizing

Student engagement is vital and leads to positive academic outcomes (Dimmitt et al. 2007). Teachers' efficacy beliefs based on vicarious experiences stem from observations of colleagues' ability to engage students in educational pursuits. However, it is important for teachers to use caution and not assume colleagues' strategies will also work in their classroom. Since there are myriad factors to consider when implementing a strategy, it is irrational to rigidly expect results similar to those of a colleague. If teachers' expectations are met, their sense of

Table 1 Model of teacher cognitive processes based on mastery experiences

Stage	Thought	Type of thought
A	I don't have the ability to implement this strategy	Efficacy belief
B	I should be able to help this child	Rigid belief
	Because I practiced the strategy at the workshop	Overgeneralization
	It's awful I can't implement this strategy	Extreme belief
C	I'll never be able to effectively use this strategy	Cognitive consequence

efficacy is strengthened and irrational beliefs are suppressed. Teachers will experience dissonance when they fail to engage their students. When teachers discover they cannot achieve the same results as their colleague, inadequacy ensues along with irrational beliefs (e.g., awfulizing) which govern unhealthy emotions and behaviors. This cognitive process hinders the development of effective working relationships with students and colleagues.

Case Example

Ms. Vargas, a 7th grade math teacher observed the solid working relationship the 7th grade language arts teacher, Ms. Edison, formed with a student they both teach. As a result of this vicarious experience, Ms. Vargas develops a belief that she too can form a positive relationship with the student. After many attempts with no success, Ms. Vargas declared that she *must* have the ability to "reach" this student and it's *terrible* she doesn't.

Analysis

Ms. Vargas failed to connect with a student after many attempts (A). She is faced with opposing sources of efficacy belief information. Ms. Vargas experienced discomfort since her colleague was able to connect with the student, yet she was not. As a result of the cognitive dissonance experienced by Ms. Vargas, she developed irrational beliefs (B) followed by cognitive consequences (C; see Table 2). Unhealthy emotions (e.g., anger) and dysfunctional behaviors (e.g., rude voice) emerged when interacting with the student which further inhibited her ability to establish a relationship.

Verbal Persuasion of Instructional Strategies Including Self-Rating and LFT

Teachers' sense of efficacy for applying instructional strategies is often influenced by verbal persuasion (Kass 2013). This occurs when family, friends, colleagues, and administrators offer words of encouragement or doubt to teachers experiencing difficulty delivering instruction to students. Positive verbal encouragement ranges from lengthy admissions of support to short, commonly used phrases (e.g., "you can do it" or "you've got this"). These messages offer ill-conceived hope, leading

Table 2 Model of teacher cognitive processes based on vicarious experiences

Stage	Thought	Type of thought
A	I can't engage this student in class work	Efficacy belief
B	I must have the ability to reach this student	Rigid belief
	Because my peers do	Overgeneralization
	It's terrible I can't engage this student	Extreme belief
C	I'll never have the ability to reach this student	Cognitive consequence

teachers to believe they have the ability to successfully implement instructional strategies. Alternatively, verbal persuasion that suggests doubt in ability may include phrases such as, "You'll never get it." When teachers are successful in implementing a strategy, their sense of efficacy strengthens. If beliefs formed through verbal persuasion are contradicted by actual experiences, opportunities for blame and anger may result.

Case Example

Ms. Pearson and her administrator are discussing instructional strategies during a meeting. The administrator suggests Ms. Pearson "can do it" when referencing the implementation of strategies to increase reading levels of at-risk students in her class. The administrator also suggests the students should be reading on grade level by the end of the marking period and indicates Ms. Pearson has the ability to "make it happen." Ms. Pearson forms an efficacy belief based on the persuasive comments of the administrator; she expects to succeed in helping this group of students read on grade-level. However, at the end of the marking period, many of the students were still below grade-level in reading. Ms. Pearson decided she was "no good" and didn't deserve to teach.

Analysis

Ms. Pearson failed to reach her goal and developed the belief that she does not have the ability to effectively teach reading strategies (A). She experienced cognitive dissonance as a result of the conflicting sources of efficacy information. Ms. Pearson formed an irrational belief demanding she *should* have ability and is worthless because she does not (B; see Table 3). Ms. Pearson internalized these failings (C) and felt anger toward herself for the inability to help these students read on grade-level. The teacher also experienced mild depression and isolated herself in an attempt to self-preserve and re-establish her sense of efficacy and worth.

Alternative Case Example

Teachers also receive negative feedback from colleagues and administrators. An administrator could suggest Ms. Pearson does not have the ability to provide effective instruction to a group of students. She delivers the instruction to the

Table 3 Model of teacher cognitive processes based on positive verbal persuasion

Stage	Thought	Type of thought
A	I don't have the ability to teach these students	Efficacy belief
B	I should have the ability though	Rigid belief
	Because my supervisor suggested I do	Overgeneralization
	I'm worthless and don't deserve to teach	Extreme belief
C	I'll never live up to my supervisor's expectations	Cognitive consequence

students and successfully manages to help them read on grade level. Yet, Ms. Pearson still experiences cognitive dissonance. Ms. Pearson is now confronted with two opposing sources of efficacy information; verbal persuasion (i.e., administrator's negative feedback) and mastery experience (i.e., successful instruction). Additionally, Ms. Pearson "can't stand" (i.e., LFT) the way the administrator treated her. She believes his harsh comments are too much for her to bear.

Analysis

A new efficacy belief is developed based on Ms. Pearson's successful attempt at instruction (A). The administrator's persuasive comments are negated (see Table 4). Irrational beliefs (B) emerge which lead to a cognitive consequence (C) and unhealthy negative emotions. Ms. Pearson becomes angry and learns to distrust the administrator. As a result, the teacher confronts the administrator which leads to repercussions that cause further stress and the inability to effectively teach her students.

Physiological/Affective States During Classroom Management Including LFT

Teachers develop beliefs about their ability to manage their classroom based on physiological and emotional responses. Affective, or emotional responses, include feelings such as anxiety or confidence. Physiological responses include a rapid heartbeat, sweaty palms, hot flashes, or "butterflies in the stomach." These sources of information are often described as visceral or involuntary responses and are responsible for the construction of teachers' perceived ability to manage classroom behavior. However, the relationship between these responses and one's actual ability is unfounded. In other words, there appears no direct connection between affective/physiological responses and ability. Teachers who experience "butterflies" during a task may or may not possess the ability to successfully complete that task. Alternatively, teachers who are confident or relaxed may lack ability to complete the task. Notwithstanding, teachers overgeneralize their ability to manage classroom behaviors based on physiological and affective states. It is critical teachers use caution when determining their ability to complete a task based solely on these visceral responses.

Table 4 Model of teacher cognitive processes based on negative verbal persuasion

Stage	Thought	Type of thought
A	I have ability despite my principal's admission	Efficacy belief
B	He shouldn't have told me that	Rigid belief
	He's an idiot; I can't stand him	Extreme belief
C	He's always wrong. I'll never trust him again	Cognitive consequence

Case Example

During an attempt to implement a classroom management plan, Mr. Adams, a 4th grade teacher remains calm, relaxed, and confident. As a result, he develops a belief he can successfully present and implement the management plan. However, Mr. Adams was not successful in implementing the plan (see Table 5). Several students remained unruly while many of students behaved in disrespectful or irresponsible ways throughout the course of the day. Due to the disconnection between Mr. Adams's emotional/physical responses and his experience (failure to complete the task), a degree of cognitive dissonance was experienced. He blamed the parents and believed their parenting skills were intolerable (i.e., LFT).

Analysis

Physiological and affective states and the ensuing overgeneralizations created Mr. Adams's false sense of ability (A) that led him to develop an irrational belief (B). In an attempt to self-preserve and avoid responsibility, Mr. Adams rationalized by placing blame for the students' behavior on their parents' lack of support. As a result, Mr. Adams believed the students will never behave and he continued to harbor unhealthy negative emotions toward the parents (C). This blame and the associated emotions negatively impacted the parent-teacher relationship and hindered the students' support systems inside and outside of the classroom.

Discussion

Research findings suggest teachers' efficacy beliefs are correlated with student achievement (Tschannen-Moran et al. 1998). As a result, school administrators often seek ways to increase efficacy beliefs among teachers (Kass 2013). In-service trainings and workshops focusing on curriculum and instruction are typically provided in an effort to increase mastery and vicarious experiences. These sources of information are considered to greatly dictate teachers' perceived ability to complete tasks related to instructional strategies, classroom management, and

Table 5 Model of teacher cognitive processes based on physiological/affective states

Stage	Thought	Type of thought
A	I can't manage these children's behaviors	Efficacy belief
B	These children should know how to behave	Rigid belief
	Because I felt relaxed rather than tense	Overgeneralization
	It must be their parents' fault, not mine	Rationalization
	I can't stand it when they don't teach them	Extreme belief
C	These students will never behave	Cognitive consequence

student engagement. However, teachers naturally develop beliefs based on mastery and vicarious experiences as well as persuasion and physiological/affective states without these specific interventions (i.e., professional development).

According to Ellis (1962), the development of these beliefs is rooted in human nature and the innate predisposition to generalize and employ logic when problem-solving. Tschannen-Moran et al. (1998) indicated efficacy beliefs are fluid and may fluctuate numerous times throughout a school day. This inconsistency demonstrates the vulnerability of teachers' perceived ability and the significant influence external factors have on teachers' classroom performance. Therefore, traditional school interventions seem useless in effecting stable, long-term efficacy beliefs among teachers. Given this instability, efficacy beliefs are capable of sabotaging teachers' classroom performance and hindering student success.

Warren (2010b) and Warren and Dowden (2012) found negative relationships between perceived efficacy and irrational beliefs—teachers with strong senses of efficacy tended to have few irrational beliefs. These beliefs were assessed in isolation and at one specific moment in time; they were independent of any specific event which could have led participants' to question their ability. Since cognitive dissonance was not experienced, these findings represent a general negative relationship between these constructs. However, thoughts occurring when a situation threatens a teacher's sense of efficacy might lead to dissonance and irrational beliefs, as described in the case examples above. Novice teachers who lack classroom familiarity may experience this dissonance more readily. As such, efficacy beliefs appear bi-directionally related to irrational beliefs; the direction of the relationship is dependent upon the degree of dissonance experienced.

Teachers often experience emotions and behave based on unfounded efficacy beliefs that lack generalizability. Self-preservation is central to teachers' motivation to either attempt or refrain from completing a given task. Teachers seek to confirm their perceived ability and tend to retreat when their perceived ability is threatened. This cycle continues as teachers attempt to process classroom experiences and gauge their ability. Teachers are more likely to attempt a task if they have a strong sense of efficacy, although a strong sense of efficacy does not always equate to successful completion. Despite the source informing teachers of their ability, they may fail. This creates a conundrum (i.e., cognitive dissonance) for teachers who attempt to understand these discrepancies. An outcome and new efficacy belief counter to the original belief may emerge and lead to a host of cognitive processes including overgeneralizations, rationalizations, and irrational beliefs.

Rationalizations often lead teachers to develop resentment or anger as they seek to place blame for their failings on others (e.g., students, parents, teachers, and administrators). Alternatively, teachers may internalize the blame and determine their failings are a result of personal inadequacies. Regardless of where teachers direct fault, they are susceptible to emotions as a result of the efficacy beliefs that stem from various sources of information. These emotions and resultant behaviors impact teachers' ability to build relationships with students and provide classroom interventions with fidelity.

REBT uncovers the crux of efficacy beliefs and their sources by deeming them ill-conceived and not an accurate indicator of actual ability. The degree of

irrationality appears a more stable predictor of teacher performance since evaluative beliefs emerge after overgeneralizations and inferences develop. In other words, irrational beliefs mediate efficacy beliefs and student achievement. Irrational thoughts stem from the core beliefs teachers hold. As a result, irrational beliefs are less influenced by daily experiences as compared to efficacy beliefs. Alternatively, perceived ability stems from overgeneralizations of sources of efficacy beliefs and may fluctuate based on daily experiences and emerging information. While conflicting sources of information and efficacy beliefs often reveal teacher irrationality, irrational beliefs appear a consistent predictor of student achievement.

It is critical teachers are cautious when using sources of efficacy information to guide their beliefs of ability. Similar to the case of Ms. Vargas, generalizing ability based on experiences has the potential to negatively impact student–teacher relationships. Teachers who implement psychological tools and strategies that address cognitive barriers can promote optimal classroom environments. For example, when teachers utilize the ABC model to develop rational thought patterns, functional emotions and behaviors emerge despite experiences contradictory to perceived efficacy. Therefore, a teacher failing to engage a student would believe, "I thought I had the ability to engage this student because my colleague did. I couldn't do it, but it's not the end of world; I'll keep at it!"

As the case examples suggest, teachers often have the knowledge and skills to provide effective instruction, however, cognitive processes often lead to poor classroom performance. These barriers lead teachers to model behaviors inconsistent with non-cognitive factors such as realistic self-appraisal and positive self-concept; research findings suggested these factors are predictive of student success (see Warren and Hale 2016). As implied by Bandura (1977), teachers who demonstrate poor work habits, a lack of self-responsibility, and give up easily will likely have students who mirror these mindsets and behaviors. It is critical school counselors, school psychologists, and school social workers consider how teachers' efficacy beliefs impact classroom climate and work collaboratively to develop programs and interventions that promote student success.

Implications for Student Support Services and Research

It is vital that all students have access to student support services. Counselors, psychologists, and social workers who work in schools aim to develop and implement innovative programs that are effective, efficient, and have school-wide implications. The delivery of programs that address beliefs and practices that impede the delivery of quality instruction is key to promoting student success.

It is critical for student support services personnel to have a solid understanding of the impact teacher beliefs have on student achievement. As such, school counselors can collaborate with other student support service personnel and administrators to provide teachers with professional development opportunities or in-service trainings that promote wellness. Encouraging wellness may promote non-cognitive skills such as fortitude, persistence, self-direction, and goal setting among teachers (Kass 2013). For example, teachers can learn to engage in metacognitive

activities to remain aware of information processing, subsequent beliefs of efficacy, and the impact of these beliefs on classroom performance. Pintrich (2002) suggested metacognition involves an active awareness of thoughts and specifically an awareness of one's own thoughts. Teachers who access metacognition and possess these skills are best positioned to form strong relationships with all students and will become more resilient when facing classroom obstacles (Pintrich 2002). As a result, teachers will advocate for students more effectively and model how to successfully navigate life's challenges. The development of these skills in conjunction with an understanding of instructional practices will place teachers in a position to promote achievement and lifelong learning for all students.

Student support services personnel can also advocate for all students and effect systemic change by implementing rational emotive-social behavioral (RE-SB) consultation (Warren 2010b, 2013a). RE-SB consultation acknowledges and addresses the nuances of cognitive processes experienced by teachers (see Warren and Baker 2013). This model of consultation educates teachers about the impact their thoughts and associated emotions and behaviors have on classroom performance and educational outcomes. The goal of RE-SB consultation is to increase metacognitive awareness and educate teachers about the role cognitive processes have on the classroom environment (Warren and Baker 2013) and the non-cognitive development of students (Warren and Hale 2016).

Based on the current conceptualization of teacher beliefs, it is vital that RE-SB consultation promotes realistic evaluations of the sources of teacher beliefs. Teachers can learn how to identify and refrain from using unwarranted sources of information that often govern their efficacy beliefs. Specifically, RE-SB consultation can address the negative impacts of overgeneralizations and rationalizations and help teachers develop skills and strategies that challenge unproductive and irrational thoughts. Assisting teachers in learning the nuances of their thoughts during instruction, classroom management, and attempts to engage students is key. As a result, when teachers experience classroom adversity they may recover from cognitive dissonance and associated thoughts more efficiently. RE-SB consultation will lead teachers to develop strategies that promote student success by avoiding self-defeating thoughts that impede classroom practices. Through this evidence-based model of consultation, teachers become resilient, display perseverance, and maintain functional work habits which lead students by example.

It is important for student support services personnel to remain steadfast in data collection regardless of the intervention used to address psychosocial barriers that hinder teacher practices. Teacher cognitions can influence student achievement-related data elements such as disciplinary issues, homework completion, and special education referrals (Hatch 2014). Student support services personnel can determine whether initiatives that promote cognitive awareness and psychosocial development among teachers are effective by connecting these variables to the achievement of students at their school (i.e., retention, dropout, and standardized test results).

Similar to teachers, the efficacy beliefs of school counselors, school psychologists, and school social workers also are derived from prior experiences. Student support services personnel should consider the impact of perceived efficacy on their own performance as they strive to develop and implement effective student

supports. Employing strategies to promote critical analysis of cognitions, self-awareness, and stress reduction will serve student support services personnel well as they strive to fulfill the obligations of their roles. Additionally, utilizing a proven system for program evaluation, rather than self-evaluation, will help provide clarity for future program development and the identification of realistic goals.

University faculty members in counselor education, school psychology and school social work programs should pursue research studies that further explore the validity of the conceptualization presented in this article. Qualitative research that employs focus groups or interviews may offer specific insights into the nuances of teachers' cognitive and emotive tendencies. Quasi-experimental designs will also yield valuable data as researchers seek to explore the impact efficacy beliefs and irrational beliefs have on teacher performance and academic achievement. For example, a replication of the Warren and Gerler (2013) study could offer additional evidence of the impact targeted psychosocial interventions, such as RE-SB consultation, have on teacher wellness and student success. Research that attempts to explore causal relationships between psychosocial factors of teachers and student success will be invaluable. It is also important for university faculty to consider ways to partner with student support services personnel at local schools in an effort to identify solid evidence-based interventions that prepare and support teachers in delivering sound developmentally appropriate instruction to all students.

Conclusion

Efficacy beliefs play an integral role in teachers' cognitive, emotional, and behavioral responses to classroom situations. While research largely indicates teacher efficacy beliefs are positively correlated with student achievement (Anderson et al. 1988; Ross and Bruce 2007; Watson 1992), theoretical considerations suggest efficacy beliefs can hinder teacher performance. Researchers can test these hypotheses while student support services personnel develop school-wide initiatives that promote teacher wellness and positive mental health. Given the degree of stress experienced in the teaching profession, an alternative model of conceptualizing perceived ability and its impact on student success warrants investigation.

Compliance with Ethical Standards

Conflict on interest   The authors declare that they have no conflict of interest.

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