

Affective States: A Neglected Construct in the Study of Efficacy

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ABSTRACT

The social cognitive theory concept of efficacy has a rich evidence base to support its importance to educators. Although there is much research in support of the theory, there is also evidence which contradicts some of its major and long-held beliefs. One of these beliefs is that out of the four sources of efficacy, affective states are the weakest in terms of impact. This paper synthesizes evidence to challenge the accepted notion and presents an argument for affective states being the most powerful source of efficacy. This idea has important implications for school leaders because of efficacy's relationship to resilience and job commitment.

Keywords: Self-efficacy, Sources of Efficacy, Resilience, Affective States

INTRODUCTION

More than 40 years since its inception, the social cognitive theory concept of self-efficacy originating in Bandura (1977) has become a mainstay in educational theory and research. The popularity of self-efficacy, and the related notion borne from it, collective efficacy, can likely be linked to the positive outcomes with which they are associated. According to Bandura (1977, 1997), both types of efficacies are believed to support teacher's, commitment and resilience, among other impacts, and these beliefs have persisted, and been supported and cited elsewhere throughout the efficacy literature base (Tschannen-Moran et al., 1998; Tschannen-Moran & Woolfolk Hoy, 2007; Donohoo, 2017). The same can be said for school leaders as a recent study found that school leaders' self-efficacy was related to their resilience throughout the COVID-19 pandemic (Stomski et al., 2022).

The importance of increased commitment and resilience to school leaders cannot be overstated. This is especially true considering data from Aguilar (2018) which notes that 40% percent of first-year teachers have left the profession during the last two decades. Combine this with the claim from Pollock (2020) that even prior to the pandemic school leaders were facing work intensification partially due to accountability pressures, and the finding from Stomski et al. (2022) that four in ten administrators plan to leave education in the next three years, and there is potential for real crisis in school leadership and education. A possible avenue to address and alleviate at least some of the pressure is self-efficacy.

However, to be helpful, self-efficacy theory needs to advance. Even though the theory has strong implications for teacher development and has an established and dedicated scholarship centred on the area of professional learning/development (Salas-Rodriguez & Lara, 2022; Tschannen-Moran & Woolfolk Hoy, 2007; de Carvalho et al., 2023; Loughland & Nguyen, 2020; Loughland & Ryan, 2020), the theory has not evolved since the original publication of Bandura (1977). Take for example, the four sources of efficacy, mastery experiences, vicarious

experiences, social persuasion, and affective states, were thought to contribute to the development and efficacy, and were believed to have varying degrees of impact. Above, they are listed in order from most to least powerful, and this hierarchy of the sources of efficacy is firmly entrenched in the knowledge base and still appears often (Donohoo, 2017; Asih et al. 2022).

Although the hierarchy of sources is commonly accepted in efficacy research, there is evidence and claims which allows this truth to be disputed. In fact, Asih et al. (2022) state that since the physiological state is thought to be the least important because it is believed to be strengthened through the role of mastery experience, it leads to the lack of investigation into physiological states, which is problematic. They go on to urge for increased attention paid to the role of the affective state as an important construct in self-efficacy due to its effect on individual resilience (p. 4). In that case, the purpose of this article is to synthesize evidence and formulate an argument which not only challenges the popular sentiment that places affective states as having the least influence, but also contends that the aforementioned source of efficacy may be the most important factor in governing teacher efficacy.

In an effort to theory-build, this review will construct an argument based on a preponderance of evidence related to each source from literature based in the education sector, but corroboration will also be sourced from areas outside of the normal fields associated with teacher efficacy. The remainder of this article will consist of three parts. First, an overview of evidence related to the sources of efficacy will be provided. Next, the argument to consider affective states as the most powerful source of teacher efficacy will be developed. Finally, implications for school leaders and practice will be considered.

SOURCES OF EFFICACY

As mentioned earlier, there are four sources which shape efficacy. According to Bandura (1997), the sources that develop self-efficacy and collective efficacy are the same, serve similar functions, and operate through similar processes. Thus, the evidence presented in this review is drawn from research of both self-efficacy and collective efficacy. Beforehand, it would be useful to define what is meant by each source of efficacy. Mastery refers to past perceptions of teaching, vicarious experiences are based on the success or failures of models with similar characteristics, verbal persuasion in encouragement from colleagues such as other teachers or administrators, and affective states are the amount of emotional and physiological arousal experienced as they anticipate and practice teaching (Tschannen-Moran and McMaster, 2009).

Mentioned as well was the agreed upon order of influence of the sources, which is mastery experiences, vicarious experiences, social persuasion, and affective states (Donohoo, 2017). Not only are mastery experiences thought to be the strongest influence on efficacy, it is also the source that has had the most data collected on its impact, so much of this review will include evidence connected to mastery experiences while detailing the lack of certainty surrounding the dominant discourse of the sources of efficacy.

An early study to measure its influence, Goddard (2001) noted that mastery experiences, which was defined by previous school achievement, explained nearly two-thirds of the variance of CTE between schools (p.474). A subsequent study by Goddard and Skrla (2006) again confirmed the relationship between prior academic achievement and reports of collective

efficacy. In this case, they studied the rate of student placement into gifted programs, faculty ethnic composition, and past academic achievement and found that achievement and context variables accounted for 46% of the variation in collective efficacy beliefs between schools.

The latter study introduced context as a variable in the development of efficacy, and researchers began to ask the question of whether or not efficacy beliefs are simply a product of prior experience and context (Goddard & Salloum, 2011). A study by Ross et al. (2004) provided answers to that very question. Although they confirmed that prior student achievement was predictive of collective teacher efficacy, they tested two models which both showed that the effects of school processes were greater than prior achievement in predicting CTE. The school processes which had the strongest effects were shared school goals, school-wide collaboration, fit of plans with school needs, and empowering school leadership. The authors explained their results by referencing teachers' skepticism of the mandated assessment scores included in their models and conceding that prior school achievement is likely to be a stronger predictor of CTE where teachers believe the assessment scores have greater credibility. By interpreting their results, they may have actually minimized the impact and perpetuated the belief that prior achievement influenced mastery experiences and efficacy more than other factors. Later, Adams and Forsyth (2006) showed that contextual variables accounted for a significant proportion of the variance in school level CTE. In particular, socioeconomic status, enabling school structure, and school level influenced a school's level of collective efficacy over and above that of prior achievement.

Tschannen-Moran and Woolfolk Hoy (2007) uncovered several important contextual variables including the availability of teaching resources and teaching level which impacted efficacy beliefs. In addition, they found significant differences between novice and experienced teachers when it comes to the sources of efficacy. For both, mastery experiences were important. As for the other three sources, they were more powerful for novice teachers who have less mastery experiences to draw upon.

Not only did Tschannen-Moran and Woolfolk Hoy contribute to the understanding of variables that impact how the sources of efficacy influence beliefs, they also diverged in how they measured mastery beliefs. As mentioned, early studies considered prior achievement as the source of mastery experience, however, Tschannen-Moran and Woolfolk Hoy (2007) examined it as satisfaction with past professional performance. Thus far, the evidence presented on the impact of mastery experiences in the formation of efficacy shows varying results, but it also shows that what actually constitutes this source of efficacy hasn't been completely settled upon. Another example, Tschannen-Moran and McMaster (2009) found that an important aspect and significant predictor of developing mastery-related efficacy beliefs involved task-specific implementation experience and was measured through teacher collaboration toward instructional improvement. This alternative way of framing mastery experience was later termed enactive experiences in Goddard et al. (2015).

Studies related to teacher collaboration and professional learning, just like those mentioned above, have also yielded differing conclusions as it pertains to mastery experiences and the other sources of efficacy. Studies conducted by Aliazas et al. (2023) and Loughland and Nguyen (2020) have confirmed the conventional understanding and order of the sources' influence, while Gilbert et al. (2018) highlighted the importance of mastery experiences and vicarious

learning as efficacy-shaping opportunities. Loughland and Ryan (2020) also determined that mastery was an important source of efficacy, however, their findings also revealed that affective states were an essential motivational construct of efficacy and seemed to be at least as important as the other three sources.

Recent research has further supported the importance of affective states as a source of efficacy. In an investigation of professional learning and mathematics instruction, de Carvalho et al. (2023) observed that affective states appeared to be instrumental in the success of the program. In addition, a study by Asih et al. (2022) concluded that mastery experiences were the weakest, while affective states were the strongest source of efficacy information. A study by Lawrent (2022) yielded similar results. The order of influence of sources of efficacy produced in the aforementioned study was affective states first, then social persuasion, and mastery experiences being the least influential.

Not only have the results from these latter studies gathered evidence that suggests a re-evaluation of conventional thought surrounding affective states, deeper analysis of previously cited studies is warranted. For example, although Aliazas et al. (2023) found mastery to have the most and affective states the least influence, the results from the surveys showed that differences in means for the two was not overly large, 4.48 and 4.31 respectively. On the other hand, there was a significant difference in their standard deviations, with mastery owning the smallest at .411, and affective states being the largest at .581. What this shows is that in the survey results that there was a large disparity in the survey responses related to affective states, indicating that some rated the influence low, while others rated it very high, which can explain the differences in results for the sources.

The qualitative study by Loughland and Nguyen (2020) may provide insights into the above phenomena. Even though they concluded that there was limited evidence of affective states being a source of efficacy, what they uncovered was what they considered to be counterfactual, comments regarding negative feelings toward collaborative learning. This evidence can be reframed as illustrating the power of affective states. Emotions, positive or negative, can impact efficacy beliefs. It would be naive to assert that the preceding proves beyond any doubt that mastery isn't the most powerful source, the order of the sources' influence is incorrect, or that affective states truly are the most impactful source of efficacy. These varying results can be simply explained by the view that contextual factors determine how self-efficacy information is interpreted by individuals and is multi-dimensional in nature (Lawrent, 2022). However, there should also be uncertainty cast upon the established discourse which warrants re-opening of the dialogue that surrounds theories of efficacy. The following section will attempt to lay the foundation for this reconsideration by furthering the argument that affective states have the potential to be the strongest source of efficacy.

THE ARGUMENT FOR AFFECTIVE STATES AS A NEGLECTED CONSTRUCTED

Although often overlooked, Bandura (1995) recognized the importance of affective states as a source of efficacy and claimed that physiological and emotional states such as stress can undermine an individual's perceived self-efficacy and impact their ability to act on life's circumstances. Burić et al. (2020) add that emotions serve as a filter that determines the efficacy information that is viewed as salient and how it is interpreted. Frenzel et al. (2023) acknowledge the long history of emotions in the literature tied to education, but how and why

emotions have the effect that they do on behaviour is still often misunderstood in self-efficacy research.

The social cognitive explanation behind efficacy and behaviour motivation can be summed up through the concept of task-analysis. That is, the assessment of one's beliefs about their capability in a certain context. Doing so entails two judgements, the requirements of an anticipated task and an assessment of competence in light of the requirements. Included in task assessment are the available resources such as student factors and contextual factors like school leadership and collegial support. Judgements of competence are based upon evaluation of internal strengths and deficits. This view of how efficacy impacts behaviour relies heavily on the importance of mastery and vicarious experiences and verbal persuasion and, as Asih et al. (2022) explain, minimizes the role of affective states in efficacy appraisals.

Neuroscience, on the other hand, offers a different explanation, through a process known as emotional value tagging. When faced with a decision, emotional value tagging occurs through emotional responses to memories, what happened, the outcome, and how our reaction led to success or failure. Memories are infused with memories of how we felt at the time, which in turn, informs our logical appraisal of the present moment. We decide which pathway provides the least risk. Every decision we make, no matter how logical, is always biased by emotion (Swart, 2019).

From this perspective, what matters more than success or failure is how we feel about that success or failure. It isn't whether or not a teacher believes they can or cannot accomplish a task or have an impact. It is how they feel about whether or not they can accomplish a task and how accomplishing it or not, could make them feel. If not being successful does not present a risk emotionally but has potential to be impactful, teachers are more likely to try. Conversely, if being successful with a change provides risk of losing something that there is an emotional attachment to, change could be avoided. While it may be true that affective states are enhanced through mastery experiences (Asih et al., 2022), it may also be true that positive affective states stimulate the pursuit of mastery experiences and negative affective states discourage the same.

IMPLICATIONS FOR SCHOOL LEADERS

If emotional and physiological arousal is the precursor to action or inaction, how can this knowledge impact the work of school leaders, why is it important? Revisiting earlier points made regarding current trends in the field of education can help begin to answer that. First, teachers are leaving the profession at a high-rate in the early years of their careers (Aguilar, 2018). Second, principals have been facing a greater workload and work intensification (Pollock, 2020). Finally, Stomski et al. (2022) note that many principals intend on leaving the profession over the next few years. All of these factors point to and contribute to a need for a resilient field of educators and leaders, and as Stomski et al. (2022) found, leaders who reported higher self-efficacy were more resilient.

Leithwood et al. (2019) also linked resilience and self-efficacy and identified them as key psychological resources exhibited by successful school leaders. Furthermore, they established that social resources including acting in emotionally appropriate ways and managing emotions contribute to effective leadership practice. Crawford (2021) concurs and emphasizes the importance of leaders to be able to responsibly manage themselves, keep disruptive emotions

and impulses under control, maintain a high standard of conduct, and foster considerate and professional relationships and interactions.

Therein lies a challenge as emotional responses are automatic and school leaders often encounter stressful situations. After repeated experiences, just thoughts of impending stress-inducing circumstances, such as upcoming meetings with parents can cause the same physiological responses as if they were actually occurring. If leaders are unable to recognize and manage their own emotions, ultimately, this can manifest as reduced decision-making capabilities, learned helplessness, and low self-efficacy (Shepherd, 2021). This point underscores the importance of school leaders cultivating interoceptive skills and developing personal strategies in order to manage the emotions tied to their daily work. By managing their own emotions, leaders would be able to operationalize other sources of efficacy such as their previous mastery experiences.

Being aware and managing their own emotions is not the only consideration for school leaders, perceiving and responding to the emotions of others is also conducive to successful school leadership (Leithwood et al. 2019; Crawford, 2021) and its crucial functions such as implementation of change and professional development. A study conducted by Mather and Visone (2024) illustrates this point. In their qualitative study, teacher's feelings regarding a peer observation program were assessed. 12 of the 13 participating teachers reported negative feelings at the onset of collegial visits, whereas all teachers expressed positive emotions toward them at their conclusion.

Consideration of teacher's emotions during times of change may impact teacher retention through self-efficacy, but recent research (Uzuntiryaki-Kondakci et al., 2022; Burić et al., 2020) this principle may also be applicable throughout a teacher's career, and may be especially pertinent to early career teachers. As Wheatley (2002) contends, the attrition rate of teachers in their first five years may be due to strongly felt optimism that has not been challenged and strengthened by efficacy doubts. This is supported by Burić et al. (2020) when they found that higher negative emotions tend to predict future lower levels of efficacy. Properly supporting teachers through avenues such as coaching could provide experience dealing with such uncertainty and help inoculate teachers against burnout. Although challenging, efficacy doubts could be reframed as non-threatening thus leaving teachers not emotionally upset by them.

Additionally, being aware of teachers' circumstances will assist both leaders and teachers in managing, perceiving, and responding to emotions and, consequently, tapping into their self-efficacy and resilience. For example, women have reported less partner support and greater responsibility as it pertains to household and child care than men. This results in women disproportionately feeling the impact of workload stress (Klassen, 2010). While this is only one of many possibilities which may impact teachers' emotions, this knowledge suggests that personal lives influence the way work lives are perceived and managed. Knowing this also allows school leaders to respond sensitively to each teacher's personal circumstances and provide and guide them toward necessary resources. However, this does not absolve teachers of personal responsibility in maintaining and managing their own emotional state and pursuing appropriate resources to do so, because as Safali (2023) notes, teachers with higher life satisfaction have higher self efficacy, but for the sake of their professional efficacy and resilience, makes it essential.

CONCLUSION

Stress is inherent in the teaching profession. Occupational stress has a strong effect on performance, career decisions, physical and mental health, and overall job satisfaction (Klassen, 2010). Teaching and leading in schools have always been stressful, but recently, Pollock (2020) noted that school administrators have experienced a work intensification. These conditions have contributed to many teachers leaving (Aguilar, 2018) and school leaders planning to leave the profession which has resulted in an increased emphasis on and investigation into factors affecting individual resilience (Stomski et al., 2022). One of the factors related to resilience is self-efficacy (Tschannen-Moran et al., 1998; Tschannen-Moran & Woolfolk Hoy, 2007; Donohoo, 2017; Stomski et al., 2022).

For far too long though, self-efficacy theory and the practices which emerged from it have neglected the role of affective states and the impact emotions have on efficacy. Recent research (Loughland & Ryan, 2020; Asih et al., 2022; de Carvalho, 2023) supports this claim. It has been argued in this paper that affective states are a more powerful source of efficacy than which it has been credited for within the literature and may actually be the most powerful. Future research should investigate this further. While there are several well-known strategies and practices for managing emotions and studies (Uzuntiryaki-Kondakci et al., 2022; Burić et al., 2020) have suggested the need for intervention, subsequent studies could also provide understanding of the most impactful for practising teachers and school leaders in assisting implementation at personal and school levels, those most successful for retaining educators and, in turn, leveraging self-efficacy to improve resilience.

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