

Teachers' Well-Being: Sources, Implications, and Directions for Future Research

The teaching profession has long been recognized as highly demanding of its practitioners (Johnson et al., 2005; Travers, 2001), with most teachers navigating multiple career challenges including heavy workloads, difficulties supporting students' varying needs, struggles with classroom management, isolation from colleagues, limited job resources, low wages, and low professional prestige (Curbow, et al., 2003; Day & Qing, 2009; Montgomery & Rupp, 2005, Raskin et al., 2015; Veenman, 1984). These negative job-related experiences have serious implications for the field: attrition rates in the profession are high, with recent reports estimating that 30% to 50% of teachers leave the profession, and about two thirds of this overall attrition due to reasons other than retirement (Carver-Thomas & Darling-Hammond, 2017). Given the steep importance of teachers for students' positive lifelong development (Aaronson, Barrow, & Sander, 2007; Chetty, Friedman, & Rockoff, 2014a, 2014b; Nye, Konstantopoulos, & Hedges, 2004; Rivkin, Hanushek, & Kain, 2005) fully understanding the lives of teachers and using this information to best support them should be a high priority to educational researchers, policymakers, and stakeholders.

We focus here on teachers' well-being, a topic that has gained increasing attention over the past 15 years. Merriam Webster's Dictionary defines well-being generally as "the state of being happy, healthy, or prosperous" (Merriam-Webster, 2019). In the field of education, investigations of teachers' well-being have focused primarily on stress, burnout, and mental health symptomatology (clinical depression and anxiety), as indicators of teachers' well-being. Stress, specifically work-related stress, is the most immediate outcome of teachers' challenging professional circumstances, and is defined by Merriam Webster's Dictionary as

“a state of mental or emotional strain or tension resulting from adverse or very demanding circumstances” (Merriam-Webster, 2019). Burnout, a more distal indicator of overall well-being, is considered the endpoint of an individual’s unsuccessful coping with long-term stress (Jennett et al., 2003). Among teacher populations, burnout has traditionally been considered a combination of emotional exhaustion, depersonalization (a teacher’s cynical attitudes towards students or colleagues), and reduced personal accomplishment (Maslach & Jackson, 1981; Maslach, Jackson, & Leiter, 1996). Clinical depression and anxiety are additional, more distal, indicators of overall well-being and are closely related to individuals’ long-term experiences with stress and burnout in the workplace (Rada & Johnson-Leong, 2004; Whitebird, Asche, Thompson, Rossom & Heinrich, 2013). Depression is considered a dampening of positive affect with symptoms including fatigue and feelings of worthlessness whereas anxiety is characterized by excessive worry or fear (American Psychiatric Association, 2013). In the next section, we provide a review of relevant research regarding the current state of knowledge of teachers’ well-being as indicated by their stress, burnout, and mental health symptomatology including the sources of influence on these factors, the implications these factors hold for both teachers and students, and notable directions for future research, policy, and practice.

The Current State of Knowledge of Teachers’ Well-Being

Multiple studies carried out in the past decade have illustrated that teachers experience work-related stress, burnout, and negative mental health symptomatology at higher rates than do individuals in the general population and among other professions. For example, Whitaker and colleagues (2013) found that teachers report higher rates of negative mental health symptomatology than the general population, and Johnson and colleagues (2005) identified the teaching profession as one of the most stressful in terms of psychological and physical well-

being and job satisfaction, with teachers experiencing levels of stress comparable to emergency medical responders, police officers, and prison guards. Further, results from the 2017 Education Quality of Life Survey indicated that 61% of U.S. teachers find their job 'highly stressful' and a similar percentage characterize their present mental health as 'not good' (Education Quality of Work Life Survey; American Federation of Teachers, 2017). Lastly, a Gallup poll in 2014 indicated that 46% of kindergarten through 12th grade teachers experienced high levels of stress, which was among the highest percentage of all occupational groups surveyed, matched only by the percentage of nurses experiencing high stress (also 46%) and falling slightly above physicians (45%; Gallup, 2014; Greenberg, Brown, & Abenavoli, 2016). These patterns are not unique to U.S. teachers: international studies on teacher burnout have observed burnout rates of 50% and higher among teachers across multiple nations (Alkhateeb, Kraishan & Shala, 2015; Shukla & Trivedi, 2008). These studies illustrate that teaching is a career that likely places its practitioners at higher risk for marked struggles with well-being, with critical implications for the field: these trends directly mirror trends observed in teacher attrition and turnover, where teachers leave the profession at rates higher than is observed in other occupations. Even assuming teacher attrition rates at the low end of the estimated range (30%), this figure is still higher than most other careers including engineers (16%), nurses (19%), lawyers (19%), and law enforcement (28%; Ingersoll & Perda, 2014; Riggs, 2013).

Importantly, the field has begun to identify early-career teachers as a population that may be particularly vulnerable to struggles with well-being: McLean, Abry, Taylor, Jimenez and Granger (2017) reported that symptoms of depression and anxiety increased significantly from pre-service training into the first year of teaching. This aligns with longstanding findings that attrition rates are highest among early-career teachers, with an estimated 50% of beginning

teachers leaving the profession (Gallant & Riley, 2014). Of these early-career attritors, nearly 70% cite job dissatisfaction and/or the pursuit of a different job as reasons for leaving (Ingersoll & Smith, 2003).

Sources of Influence on Teachers' Well-Being

The majority of research to date identifying factors that influence teachers' well-being has focused on external (i.e., aspects of a teacher's professional working environment) contributors to teachers' stress, burnout, and mental health. We have identified three broad areas of external influence that research suggests contribute significantly to teachers' well-being, and these are 1) the people whom teachers interact with regularly, 2) teachers' working conditions, and 3) larger systems and policies that impact teachers' professional experiences.

Members of the school community who influence the daily experiences of the practicing teacher primarily include school leaders and administrators, colleagues, and students, and each of these groups has been found to impact teachers' well-being (Boyd et al., 2011; Collie, Shapka, & Perry 2012; Grayson & Alvarez, 2008; Greenberg et al., 2016; Johnson, Kraft, & Papay, 2012; Smith, Hoy, & Sweetland, 2001). School leaders have a strong influence on the community and culture of the school and so, not surprisingly, school leadership is a powerful predictor of teacher burnout and retention (Boyd et al., 2011; Johnson et al., 2012; Ladd, 2009). Teachers report greater professional satisfaction when their school leaders involve them in decision-making, establish consistent school-wide behavioral expectations for students, and provide constructive feedback to teachers on instructional practice (Kraft, Marinell, & Wee, 2016; Kraft et al., 2015; Leithwood, Harris, & Hopkins, 2008; Supovitz, Sirinides, & May, 2010). Using survey data from 600 teachers, Pas and colleagues (2012) found that teachers' ratings of their relationships with leadership were positively related to ratings of self-efficacy and negatively related to feelings of

burnout (Pas et al., 2012). Additionally, Burkhauser (2016) found that a 1 standard deviation increase in principal quality had the equivalent effect on teachers' perceptions of their working conditions as a decrease in class size by 7 students.

Teachers' relationships with their colleagues not only relate to their well-being but also to their instructional quality, professionalism, and ability to enhance student achievement (Goddard, Goddard, Kim, & Miller, 2015; Grayson & Alvarez, 2008; Greenberg, et al., 2016; Johnson et al., 2012; Ronfeldt, Farmer, McQueen, & Grissom, 2015; Smith et al., 2001; Tschannen-Moran, 2009; 2014). In fact, studies have shown that teachers' professional relationships are perhaps more salient to their well-being and related outcomes than are physical or geographical aspects of a school: Allensworth, Ponisciak, and Mazzeo (2009) found that teachers' perceptions of their relationships with colleagues, the commitments of faculty to student learning, and systems of leadership, innovation, and collaboration in schools accounted for the vast majority (76%) of variance in teacher mobility across a school year in a large sample of educators. More recently, McLean and colleagues (2020) reported that school climate, more specifically the relational/collegial aspects of the school environment, had the farthest-reaching impacts on early-career teachers, affecting a wider range of teacher well-being outcomes than student-related stressors or the availability of material resources. Relationships with colleagues may be especially important for the well-being of early career teachers: one study found that first-year teachers who had opportunities for positive collaboration are were less likely to leave the profession than those who felt more isolated (Kardos & Johnson, 2007). These and other findings illustrate the importance of collegial relationships characterized by trust, collaboration, and positive communication for teachers, as they allow teachers to attain important interpersonal resources (advice, support, etc.) from those they work with that can boost both teacher- and

school-level productivity (Rosenholtz, 1989). Given these findings, we note that it is concerning that most teachers, and especially new teachers, operate largely in isolation from their colleagues (Ingersoll, 2003; Johnson & Birkeland, 2003).

Students are also a considerable source of stress for teachers, with multiple studies illustrating that challenging interactions with students and difficulties supporting at-risk students lead to increased struggles with well-being for teachers. For example, students' problematic behaviors have been linked to teacher stress and burnout (Kokkinos, 2007; Nichols & Sosnowsky, 2002), and are contributing factors in teachers' decisions to leave their positions (Darling-Hammond, 1997). As well, studies tracking patterns of teacher attrition have found that teachers transfer out of schools with high proportions of low-performing students in favor of schools with higher-achieving students (Carroll et al., 2000; Hanushek, Kain, & Rivkin, 2004) and cite lack of student motivation as a factor contributing to these exit decisions (Darling-Hammond, 1997). We assert that the findings linking teachers' stress to their classroom students underscore the need for pre-service teacher training programs and school-based professional development to place a stronger emphasis on classroom management and instructional supports for students with more intensive academic and behavioral needs.

Another prominent source of influence on teachers' well-being (and teacher functioning at all levels) is their working conditions (Loeb et al., 2013). Of these working conditions, especially notable is the school climate teachers experience on a daily basis, defined more precisely as "the quality and character of school life" (Cohen et al., 2009, p. 182). School climate includes the physical and social-emotional safety in a school, the quality of teaching and learning among teachers and students, relationships and collaboration among and between students, teachers, and administrators, and aspects of the structural environment including school

cleanliness and availability of materials (Cohen, 2006; Cohen et al., 2009; Rosenholtz, 1989). Teachers' perceptions of their school's climate have been found to relate to their work-related stress (Skaalvik & Skaalvik, 2009), job satisfaction (Taylor & Tashakkori, 1995), and burnout (Collie, Shapka, & Perry, 2012; Grayson & Alvarez, 2008; Pas, Bradshaw, & Hershfeldt, 2012), and positive school climate has also been found to have a protective effect against worsening mental health symptoms among early-career teachers (McLean et al., 2017; 2020).

Additional relevant working conditions include time to plan lessons (with a lack of planning time termed "time pressure") and feelings of safety in the school setting, with teachers' negative experiences in these areas leading to higher rates of turnover (Loeb, Darling-Hammond, & Luczak, 2005). With regard to time pressure, not having sufficient preparation time during the school day is predictive of teachers' intent to leave their positions across elementary and secondary levels (Ladd, 2011). As well, teachers' perceptions of safety are linked to their feelings of burnout (Cornell & Mayer, 2010; Kraft, Marinell, & Yee, 2016). In a particularly relevant study, Berg and Cornell (2016) found that perceptions of safety within the school setting helped to explain the relationship between school climate and teacher distress, after controlling for school-level socioeconomic status and a range of other demographic variables.

Larger systems and policies that impact the lives of teachers also have implications for their well-being, the most widely studied of which is teacher pay. Recent large-scale economic evaluations have identified problematic patterns in U.S. teacher pay: more conservative analyses have estimated that teachers earn an average of 18.7% less than workers with similar education levels and job demands (Allegretto & Mishel, 2018), while other reports have estimated that teachers' salaries are between 55% and 59% of the average salaries of comparably educated U.S. workers (Organization for Economic Cooperation and Development, 2017). Similarly

disheartening, trends over time have shown that compensation rates for teachers have steadily decreased since the 1990's while wages in most other professions have risen (Allegretto & Mishel, 2018). While few studies have made explicit links between teachers' pay and their stress, burnout, and mental health (and we identify this as an area of need for future work), some have established relations between pay and career longevity, and have revealed that teachers who receive higher levels of compensation stay in the field longer (Clotfelter, Glennie, Ladd & Vigdor, 2008; Guarino, Santibanes & Daley, 2006).

An issue of particular note in the area of teacher pay is that, in addition to teachers' level of compensation being generally lower than it ought to be, many recent initiatives have pushed to tie teachers' compensation levels to their students' academic performance in ways that do not accurately reflect teacher quality or performance, also termed pay-for-performance or incentive pay programs (Podgursky & Springer, 2006). These programs aim to increase teachers' motivation to perform at high levels in their job, however multiple studies have found no such effects (Teaching Commission, 2004; Yaun et al., 2013), and recent reports have detailed the problematic nature of this approach (Lavigne & Good, 2020) as it fails to account for the many complexities of the teaching profession.

We also note that the extremely high societal expectations placed upon teachers to positively impact all students may also contribute to declines in their well-being, especially when considered along with the low/inequitable compensation rates and the challenging nature of the career in general. A wealth of research has illustrated that teachers have stronger impacts on students than any other school-based factor, affecting immediate student outcomes including academic achievement, attendance, and behavior; and long-term outcomes such as high school completion, college enrollment (Aaronson, Barrow, & Sander, 2007; Chetty, Friedman, &

Rockoff, 2014a, 2014b; Nye, Konstantopoulos, & Hedges, 2004; Rivkin, Hanushek, & Kain, 2005). While this knowledge of the impacts teachers have on students is useful, it may also have contributed to a culture of exaggerated expectations for how much teachers can/should influence their students' development (Lavigne & Good, 2019) that are unrealistic, do not consider factors outside of teachers' control such as students' socioeconomic background, and do not match the level at which they are compensated.

Additional policy-related areas of likely import to teachers' well-being are systems of teacher preparation and induction into the career. In general, teacher research to date has produced considerable knowledge about the experiences, outcomes, and impacts of practicing teachers. However, research on what teachers experience before they enter the classroom, the supports they receive (or don't receive) upon career entry, and how these experiences translate to their outcomes have seen far less attention. In line with this, the field has seen a recent shift in focus toward the impacts of pre-service teacher preparation and induction, with preliminary efforts in this area illustrating that factors such as coursework and student teaching placements during the pre-service stage can affect later student learning and teacher retention (e.g., Boyd et al., 2009; Goldhaber, Liddle, & Theobald, 2013; Henry et al., 2014; Ronfeldt, 2012). However, no efforts to date have included an explicit focus on teacher well-being, and as such we identify this as a current gap in the field that require more targeted investigation.

While most research on the various sources of influence on teachers' well-being focuses on external factors such as those mentioned above, some lines of research have also identified internal teacher characteristics/feelings/beliefs that appear to be relevant to their well-being. Perhaps the most notable of these internal influences is teachers' self-efficacy, or their perceptions of their own abilities to address the needs of their students (Jennings & Greenberg,

2009). Teachers' feelings of efficacy have long been shown to significantly predict stress and burnout (Collie et al., 2012; Friedman-Krauss, Raver, Neuspiel, & Kinsel, 2014; Grayson & Alvarez, 2008), and teachers who feel unprepared to teach students with diverse needs tend to experience greater emotional exhaustion, a core component of burnout (Brouwers & Tomic, 2000; Pas et al., 2012). As well, although general education teachers commonly teach students with a range of disabilities (Gilmour & Henry, 2018), they report not feeling fully equipped to meet the needs of these students (Gable et al., 2012; Jenkins & Ornelles, 2009; Westling, 2010). Teachers also tend to feel less competent instructing students whose first language is not English (Durgunoğlu & Hughes, 2010), a population which continues to rapidly grow in the U.S (National Center for Education Statistics, 2017). These trends, and the well-established connections between self-efficacy and well-being, suggest that teachers who interact more frequently with at-risk students and/or students who have diverse needs, may be especially vulnerable to declines in well-being, although this remains to be proven empirically.

Implications of Teachers' Well-Being for Teachers and their Students

The past decade of research focusing on teachers' well-being has identified some direct implications of negative well-being for teachers' professional performance and career progressions. More burnout among teachers is related to dampened motivation and professional performance (Hakanen, Bakker, & Schaufeli, 2006; Llorens, Schaufeli, Bakker & Salanova, 2007), as well as to lower job satisfaction (Brackett et al., 2010; Klassen & Chiu, 2010; Skaalvik & Skaalvik, 2009; 2010). Further, burnout has been identified as a primary contributor to teachers' intentions to leave the field (Martin, Sass, & Schmitt, 2012). Teachers' stress and negative mental health symptoms have been found to adversely impact their job satisfaction and

performance, for example through increased absenteeism (Ferguson, Frost, & Hall, 2012; Fernet, Guay, Senecal, & Austin, 2012; Kyriacou, 2001).

In addition to impacting their own professional outcomes, teachers' well-being also has implications for the classroom environment and the students therein. Further, the field is starting to make important, explicit connections between teachers' well-being and students' academic and social/emotional outcomes: elementary teachers' depressive symptoms have been found to negatively relate to the academic achievement of already underperforming students (McLean & Connor, 2015), and Roberts et al. (2016) reported that preschool students of more depressed teachers make fewer gains in social/emotional development. The influence of teachers' well-being on students can even be measured physiologically: Oberle and Schonert-Reichl (2016) found that higher teacher-reported burnout was associated with higher levels of cortisol in their classroom students.

Perhaps the most widely studied set of outcomes investigated in relation to teachers' well-being are the ways in which teachers interact with, manage, and provide instruction to their students (Chang, 2009; Darr & Johns, 2008; Sandilos et al., 2015). In a foundational study on this topic, Hamre and Pianta (2004) found that preschool teachers and daycare workers experiencing more depressive symptoms were more withdrawn in their interactions with young children. Relating more directly to instructional quality, teachers who report more depressive symptoms have been found to provide less frequent positive feedback to their students (McLean & Connor, 2018), and to underutilize types of instruction that require more effort (McLean, Abry, Taylor & Connor, 2018). In addition, depressive symptoms have been found impede teachers' management of student behavior (Aloe, Amo, & Shanahan, 2014; Li-Grining et al., 2010).

Regarding how teachers' well-being influences the ways in which teachers interact with students, teacher's burnout has been found to relate to their abilities to support student feelings and behaviors that are important to learning, including student motivation (Shen, McCaughtry, Martin, & Garn, 2015) and engagement (Covell, McNeil, & Howe, 2009). Additionally, research has identified significant links between teachers' burnout and their appraisals of/reactions to student behavior (Egyed & Short, 2006; Kokkinos & Panayioutou, 2005). Looking at the classroom as a whole, studies have established important connections between teachers' mental health and classroom quality. For example, Sandilos and colleagues (2015) reported that teachers' depressive symptoms were negatively associated with the observed quality of classroom-level instructional support and organization (elements of more general classroom quality), and McLean & Connor (2015) found that teachers with more depressive symptoms were less able to create high-quality classrooms, with classroom quality defined here as a combination of teachers' warmth and responsiveness to students, classroom control, organization, and use of high-quality instructional practices. Studies of teachers' anxiety in relation to the above classroom processes and student outcomes are severely lacking and are thus a notable direction for future research.

While the current bodies of literature describing the prevalence and impacts of teachers' negative well-being may paint a bleak picture, it is important to also note that recent research has identified clear and effective supports that can have positive impacts on both teachers and their students. Research in early childhood educational settings has identified professional development (PD) supports as a potential buffer against the negative influence that teacher stress has on the quality of teachers' interactions with students (Sandilos, Goble, Rimm-Kaufman, & Pianta, 2018). Research has also shown a direct relation between PD and teacher well-being. For

example, when administered effectively, PD experiences can increase teachers' feelings of self-efficacy in the targeted area of PD instruction (Garet, Porter, Desimone, Birman, & Yoon, 2001; Goddard, Hoy, & Hoy, 2004; Rimm-Kaufman & Sawyer, 2004; Tschannen-Moran & McMaster, 2009), which, in turn, may lessen negative feelings of stress associated with that aspect of their job (Schwarzer & Hallum, 2008). Importantly, professional development opportunities explicitly seeking to improve teachers' social/emotional functioning in the school context have seen promising results: Jennings et al., (2017) recently reported that a teacher mindfulness and resilience intervention (The CARE intervention; Cultivating Awareness and Resilience in Education) based on the Prosocial Classroom Theoretical Model described above had direct positive effects on teachers' emotion regulation, mindfulness, and psychological distress.

Directions for Future Research and Practice

In addition to the current gaps in the field we have noted throughout, we have identified some additional directions that those conducting research in this area might consider. Firstly, we note that the bulk of the research to date on teacher well-being has a primarily negative valence, focusing mostly on indicators, causes, and outcomes of diminished well-being. We posit that this approach reflects larger traditions in the psychological sciences of focusing on individuals' challenges and setbacks, with approaches focusing on individuals' strengths (i.e. Positive Psychology, Seligman, 2002) coming into view much more recently. In the field of education specifically, this could also be a byproduct of the previously mentioned culture of exaggerated expectations and excessive evaluation that U.S. teachers experience – simply put, our default when it comes to teachers may be to look for the bad rather than the good. A potentially fruitful avenue moving forward, then, would be to reframe our approach to give equal consideration to indicators of, and factors influencing, positive well-being and performance among teachers.

As mentioned previously, the majority of research in this area has focused on external influences on teachers' well-being. In contrast, we know far less about the personal characteristics that contribute to teachers' positive well-being and sustained longevity in the field, and we highlight this as a potential avenue for continued investigation. However, we also caution that these explorations must be done with purpose and care. Rather than using information about teachers' personal characteristics to exclude individuals from the teaching profession (for example, screening for depressive symptoms as part of a job application process or including well-being characteristics in teachers' performance evaluations), this information should instead be used to identify areas where current and future teachers might especially benefit from added supports and intervention efforts (for example, ensuring that all teachers have mental health support coverage as a health insurance benefit). We stress again that taking a strengths-based approach to investigating teachers' personal characteristics – or investigating the characteristics that help teachers thrive – may be a way to answer these important questions without exacerbating teachers' negative experiences. Approaches to studying teachers' personal characteristics that align with movements in positive psychology (Reivich et al., 2011; Yates, Tyrell & Masten, 2015) seeking to inform what individuals need to thrive, as opposed to just survive, in their work, could then be particularly useful. Research on teacher resilience (e.g. Johnson & Down, 2013; Mansfield et al., 2012; 2016; Morgan, 2011) has laid a foundation upon which others can build in identifying personal and job resources that can serve as bolsters to teachers' well-being and related professional outcomes, with the goal of creating a more holistic view of teacher well-being (Roberts & Kim, 2019).

Another notable characterization of the research on teacher well-being is the fact that the bulk of the investigations into teachers' stress, burnout, and most especially mental health have

relied on teachers' self-reports of their experiences, and have not quantified these experiences clinically. Future investigations could incorporate actual diagnoses of mental health conditions, and could take more nuanced, multifaceted, and holistic approaches when assessing the extent to which teachers are experiencing indicators of well-being. Relatedly, investigations into teachers' mental health have almost exclusively examined depressive and anxious symptomatology on a continuous scale ignoring clinical cutoffs, yet have still identified relations between non-clinical or sub-clinical occurrences of symptoms and teacher/student outcomes. Future research could benefit from investigations into the thresholds at which teachers' negative mental health symptoms begin to impact teachers and their students, and could take this line of research further by clarifying how more severe (diagnosable) mental health conditions operate compared to sub- or non-clinical levels of these symptomatology. In addition, and as mentioned above, despite recent progress in the field linking teachers' pre-service and early-career induction experiences to some teacher and student outcomes, we still largely lack knowledge of how teachers' experiences *before* they enter the classroom impact them throughout their careers. One study has explored this: Taylor et al. (2019) found that stress experienced one year prior to entering the teaching profession predicted first-year teachers' burnout and career optimism even after controlling for common career-related stressors experienced in the first teaching year. A related area of exploration includes the examination of stressors and/or supports experienced during pre-service teaching placements that might shape teachers' perceptions of the career before they officially enter the field. More information on how teachers' pre-career life experiences impact their outcomes once practicing could go far in helping to identify groups of teachers who may especially benefit from targeted support once in the career. For example, teachers who have generally experienced more life stressors prior to career entry could be provided more purposeful

support in the form of teacher induction during the early career stage to ensure they successfully adjust.

Lastly, while the field has made considerable progress in the past 15 years towards understanding how teachers experience their professions, the bulk of this exploratory research has been performed on small samples of teachers (typically fewer than 100). Replicating and expanding upon what we currently know about teachers' well-being using large teacher samples and robust, longitudinal, mixed methods study designs would go far, but these types of efforts typically require substantial support from external funders. While funders of educational research generally recognize the importance of teachers, funding priorities have traditionally placed more value on more procedural aspects of the teaching profession such as teachers' pedagogical and content knowledge (Loewenberg-Ball, Thames & Phelps, 2008; Mishra & Koehler, 2006; Van Driel & Berry, 2012). However, recent evaluations have revealed that improvements to these more procedural teacher factors including teachers' knowledge generally do not translate to improved student outcomes (National Center for Educational Evaluation, 2016; Jayanthi, et al., 2017). This suggests that we as a field may be missing consideration of the more affective elements of the teaching experience such as teachers' well-being that undoubtedly play important roles in their abilities to foster effective learning environments. As such, we call on external funders to consider the topic of teacher well-being as a high-priority area of research that merits large-scale support. Indeed, given the connections that have already been established among teachers' well-being and numerous other factors that are traditionally prioritized highly among funders (e.g., pedagogical and content knowledge, instructional practices, interactions with students), efforts investigating how well-being operates in conjunction with more traditionally-studied aspects of teacher knowledge and practice could yield valuable new information.

We also identify some promising areas that we feel systems of teacher preparation and induction could benefit from considering. Firstly, we note that most models of teacher preparation today do not include targeted training in areas related to well-being, even despite evidence that skills such as emotion regulation are important for teachers' success (Day, 2008; Newberry, Gallant & Riley, 2013). We assert that teachers could benefit from training in areas that research has suggested are likely to improve and sustain well-being including emotion regulation, resilience, fostering positive professional relationships, and supporting challenging students. We highlight two interventions created for practicing teachers that we feel could be adapted for application in the pre-service stage: the previously mentioned Cultivating Awareness and Resilience in Education program (CARE; Jennings et al., 2017), and the Leading Together program (Rimm-Kafuman, Leis, & Paxton, 2014), an intervention focusing on building positive relationships among school colleagues.

We also note that, given indications that the early-career stage is a vulnerable time for teachers' well-being, beginning teachers would likely benefit from targeted, continuous support that begins immediately after completion of teacher preparation and continues throughout the early career stage (the first five years). Unlike most white-collar workers who experience organized inductions into their careers (Lortie, 1975; Tyack, 1974), teachers do not typically experience structured support upon entry into the profession and those systems of teacher induction that do exist are not mandated or regulated by any larger educational policies. Rather, new entrants are often left in isolation upon entering the classroom as practicing teachers (Ingersoll, 2003; Johnson & Birkeland, 2003). This mirrors the larger problem of isolation from colleagues and mentors characteristic of the teaching career (Ingersoll & Kralik, 2004), an issue that is gaining increasing recognition from leaders in the field as highly problematic (Johnson,

2019). As such, programs that promote teacher-teacher interaction including high-quality mentored teaching, co-teaching models or simply providing teachers with frequent opportunities to observe and discuss their colleague's teaching practices – and incorporating these elements into structured induction systems for new teachers – may see positive returns in terms of teachers' well-being and career longevity.

In closing, the current body of literature suggests that individuals in the teaching profession experience feelings of stress, burnout, and mental health symptomatology at strikingly high rates (e.g., Greenberg et al., 2016; American Federation of Teachers, 2017) which, in turn, has likely contributed to high rates of turnover and attrition from the field (Ingersoll & Perda, 2014). Research has identified key factors that influence teacher well-being as well as potential consequences for educators and their students if well-being is not adequately addressed. This existing work provides a roadmap for a multitude of future directions in research, practice, and policy that may be pursued with the goal of enhancing the well-being of our nation's teachers.

References

- Aaronson, D., Barrow, L., & Sander, W. (2007). Teachers and student achievement in the Chicago public high schools. *Journal of Labor Economics*, 25(1), 95-135.
- Allegretto, S., & Mishel, L. (2018). The Teacher Pay Penalty Has Hit a New High: Trends in the Teacher Wage and Compensation Gaps through 2017. *Economic Policy Institute*.
- Allensworth, E., Ponisciak, S., & Mazzeo, C. (2009). The schools teachers leave: Teacher mobility in Chicago public schools. Consortium on Chicago School Research (ccsr.uchicago.edu).
- Aloe, A. M., Amo, L. C., & Shanahan, M. E. (2014). Classroom management self-efficacy and burnout: A multivariate meta-analysis. *Educational Psychology Review*, 26(1), 101-126.
- American Federation of Teachers (2017). 2017 Educator Quality of Work Life Survey. Retrieved from https://www.aft.org/sites/default/files/2017_eqwl_survey_web.pdf
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders*, fifth edition. American Psychiatric Association, Arlington, VA. www.psych.org.
- Berg, J. K., & Cornell, D. (2016). Authoritative school climate, aggression toward teachers, and teacher distress in middle school. *School Psychology Quarterly*, 31, 122-139.
- Boyd, D.J., Grossman, P.L., Lankford, H., Loeb, S., & Wyckoff, J. (2009). Teacher preparation and student achievement. *Educational Evaluation and Policy Analysis*, 31(4), 416-440.
- Boyd, D., Grossman, P., Ing, M., Lankford, H., Loeb, S., & Wyckoff, J. (2011). The influence of school administrators on teacher retention decisions. *American Educational Research Journal*, 48(2), 303-333.
- Carver-Thomas, D., & Darling-Hammond, L. (2017). *Teacher turnover: Why it matters and what we can do about it*. Palo Alto, CA: Learning Policy Institute.

- Brackett, M. A., Palomera, R., Mojsa-Kaja, J., Reyes, M. R., & Salovey, P. (2010). Emotion-regulation ability, burnout, and job satisfaction among British secondary-school teachers. *Psychol*
- Brouwers, A., & Tomic, W. (2000). A longitudinal study of teacher burnout and perceived self-efficacy in classroom management. *Teaching and Teacher Education*, 16, 239–253.
- Burkhauser, S. (2017). How much do school principals matter when it comes to teacher working conditions? *Educational Evaluation and Policy Analysis*, 39(1), 126-145.
<https://doi.org/0162373716668028>
- Carroll, S., Reichardt, R. & Guarino, C. (2000). The distribution of teachers among California's school districts and schools. Santa Monica, CA: RAND Corporation.
- Chang, M. L. (2009). An appraisal perspective of teacher burnout: Examining the emotional work of teachers. *Educational psychology review*, 21(3), 193-218.
- Chetty, R., Friedman, J. N., & Rockoff, J. E. (2014a). Measuring the impacts of teachers I: Evaluating bias in teacher value-added estimates. *American Economic Review*, 104(9), 2593-2632.
- Chetty, R., Friedman, J. N., & Rockoff, J. E. (2014b). Measuring the impacts of teachers II: Teacher value-added and student outcomes in adulthood. *American economic review*, 104(9), 2633-79.
- Clotfelter, C., Glennie, E., Ladd, H., & Vigdor, J. (2008). Would higher salaries keep teachers in high-poverty schools? Evidence from a policy intervention in North Carolina. *Journal of Public Economics*, 92(5-6), 1352-1370.
- Cohen, J., McCabe, L., Michelli, N. M., & Pickeral, T. (2009). School climate: Research, policy, practice, and teacher education. *Teachers college record*, 111(1), 180-213.

- Collie, R. J., Shapka, J. D., & Perry, N. E. (2012). School climate and social–emotional learning: Predicting teacher stress, job satisfaction, and teaching efficacy. *Journal of educational psychology, 104*(4), 1189.
- Cornell, D. G., & Mayer, M. J. (2010). Why do school order and safety matter? *Educational Researcher, 39*, 7-15.
- Covell, K., McNeil, J. K., & Howe, R. B. (2009). Reducing teacher burnout by increasing student engagement: A children's rights approach. *School Psychology International, 30*(3), 282-290.
- Curbow, B., McDonnell, K., Spratt, K., Griffin, J., & Agnew, J. (2003). Development of the work–family interface scale. *Early Childhood Research Quarterly, 18*(3), 310-330.
- Darling-Hammond, L. (1997). *Doing what matters most: Investing in quality teaching*. New York: National Commission on Teaching and America's Future.
- Darling-Hammond, L. (2003). Keeping Good Teachers: Why it Matters and What Leaders Can Do. *Educational Leadership, 60*(8), 6-13.
- Darr, W., & Johns, G. (2008). Work strain, health, and absenteeism: a meta-analysis. *Journal of occupational health psychology, 13*(4), 293.
- Day, C. (2008). Committed for life? variations in teachers' work, lives and effectiveness. *Journal of Educational Change, 9*(3), 243-260.
- Day, C., & Qing, G. (2009). Teacher emotions: Well being and effectiveness. In *Advances in teacher emotion research* (pp. 15-31). Springer, Boston, MA.
- Durgunolu, A. Y., & Hughes, T. (2010). How prepared are the US preservice teachers to teach English language learners? *International Journal of Teaching and Learning in Higher Education, 22*, 32-41.

- Egyed, C. J., & Short, R. J. (2006). Teacher self-efficacy, burnout, experience and decision to refer a disruptive student. *School Psychology International*, 27(4), 462-474.
- Farshi, S. S., & Omranzadeh, F. (2014). The effect of gender, education level, and marital status on Iranian EFL teachers' burnout level. *International Journal of Applied Linguistics and English Literature*, 3(5), 128-133.
- Ferguson, K., Frost, L., & Hall, D. (2012). Predicting teacher anxiety, depression, and job satisfaction. *Journal of teaching and learning*, 8(1).
- Fernet, C., Guay, F., Senécal, C., & Austin, S. (2012). Predicting intraindividual changes in teacher burnout: The role of perceived school environment and motivational factors. *Teaching and teacher education*, 28(4), 514-525.
- Friedman-Krauss, A. H., Raver, C. C., Neuspiel, J. M., & Kinsel, J. (2014). Child behavior problems, teacher executive functions, and teacher stress in Head Start classrooms. *Early Education and Development*, 25, 681-702.
- Gable, R. A., Tonelson, S. W., Sheth, M., Wilson, C., & Park, K. L. (2012). Importance, usage, and preparedness to implement evidence-based practices for students with emotional disabilities: A comparison of knowledge and skills of special education and general education teachers. *Education and Treatment of Children*, 35, 499-520.
- Gallant, A., & Riley, P. (2014). Early career teacher attrition: New thoughts on an intractable problem. *Teacher Development*, 18(4), 562-580.
<https://doi.org/10.1080/13664530.2014.945129>
- Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). What makes professional development effective? Results from a national sample of teachers. *American educational research journal*, 38(4), 915-945.

- Gilmour, A. F., & Henry, G. T. (2018). A comparison of teacher quality in math for late elementary and middle school students with and without disabilities. *The Elementary School Journal*, 118, 426-451.
- Goddard, R., Goddard, Y., Sook Kim, E., & Miller, R. (2015). A theoretical and empirical analysis of the roles of instructional leadership, teacher collaboration, and collective efficacy beliefs in support of student learning. *American Journal of Education*, 121(4), 501-530.
- Goddard, R. D., Hoy, W. K., & Hoy, A. W. (2004). Collective efficacy beliefs: Theoretical developments, empirical evidence, and future directions. *Educational researcher*, 33(3), 3-13.
- Goldhaber, D., Liddle, S., & Theobald, R. (2013). The gateway to the profession: Assessing teacher preparation programs based on student achievement. *Economics of Education Review*, 34, 29-44.
- Grayson, J. L., & Alvarez, H. K. (2008). School climate factors relating to teacher burnout: A mediator model. *Teaching and teacher education*, 24(5), 1349-1363.
- Greenberg, M. T., Brown, J. L., & Abenavoli, R. M. (2016). Teacher stress and health effects on teachers, students, and schools. Edna Bennett Pierce Prevention Research Center, Pennsylvania State University.
- Guarino, C. M., Santibanez, L., & Daley, G. A. (2006). Teacher recruitment and retention: A review of the recent empirical literature. *Review of educational research*, 76(2), 173-208.
- Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of school psychology*, 43(6), 495-513.

- Hamre, B. K., & Pianta, R. C. (2004). Self-reported depression in nonfamilial caregivers: Prevalence and associations with caregiver behavior in child-care settings. *Early Childhood Research Quarterly*, 19(2), 297-318.
- Hanushek, E., Kain, J., & Rivkin, S. (2004). Why public schools lose teachers. *Journal of Human Resources*, 39(2), 326–354.
- Henry, G.T., Purtell, K.M., Bastian, K.C., Fortner, C.K., Thompson, C.L., Campbell, S.L., & Patterson, K. M. (2014). The effects of teacher entry portals on student achievement. *Journal of Teacher Education*, 65(1), 7-23.
- Ingersoll, R. (2003). The Teacher Shortage: Myth or Reality? *Educational Horizons*, 81(3), 146-152. Retrieved from <http://www.jstor.org/stable/42926477>
- Ingersoll, R., & Kralik, J. M. (2004). The impact of mentoring on teacher retention: What the research says. GSE Publications, 127.
- Ingersoll, R., Perda, D., & May, H. (2014). An analysis of the effects of teacher qualifications on student achievement in the core subjects in Grade 8 using the 2003 NAEP. Manuscript in preparation.
- Ingersoll, R. M., & Smith, T. M. (2003). The wrong solution to the teacher shortage. *Educational leadership*, 60(8), 30-33.
- Ingersoll, R. M., & Perda, D. (2008). The status of teaching as a profession. *Schools and society: A sociological approach to education*, 106-118.
- Jayanthi, M., Gersten, R., Taylor, M. J., Smolkowski, K., & Dimino, J. (2017). Impact of the Developing Mathematical Ideas Professional Development Program on Grade 4 Students' and Teachers' Understanding of Fractions. REL 2017-256. Regional Educational Laboratory Southeast.

- Jenkins, A., & Ornelles, C. (2009). Determining professional development needs of general educators in teaching students with disabilities in Hawai 'i. *Professional Development in Education*, 35, 635-654.
- Jennett, H. K., Harris, S. L., & Mesibov, G. B. (2003). Commitment to philosophy, teacher efficacy, and burnout among teachers of children with autism. *Journal of Autism and Developmental Disorders*, 33, 583-593.
<https://doi.org/10.1023/B:JADD.0000005996.19417.57>
- Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of educational research*, 79(1), 491-525.
- Jennings, P. A., Snowberg, K. E., Coccia, M. A., & Greenberg, M. T. (2011). Improving classroom learning environments by cultivating awareness and resilience in education (CARE): Results of two pilot studies. *The Journal of classroom interaction*, 37-48.
- Jennings, P. A., Brown, J. L., Frank, J. L., Doyle, S., Oh, Y., Davis, R., ... & Greenberg, M. T. (2017). Impacts of the CARE for Teachers program on teachers' social and emotional competence and classroom interactions. *Journal of Educational Psychology*, 109(7), 1010.
- Johnson, S. M. (2019). *Where Teachers Thrive: Organizing Schools for Success*. Harvard Education Press. 8 Story Street First Floor, Cambridge, MA 02138.
- Johnson, S. M., & Birkeland, S. E. (2003). Pursuing a "sense of success": New teachers explain their career decisions. *American Educational Research Journal*, 40(3), 581-617.

- Johnson, S., Cooper, C., Cartwright, S., Donald, I., Taylor, P., & Millet, C. (2005). The experience of work-related stress across occupations. *Journal of Managerial Psychology*, 20(2), 178-187. <https://doi.org/10.1108/02683940510579803>
- Johnson, B., & Down, B. (2013). Critically re-conceptualising early career teacher resilience. *Discourse: Studies in the cultural politics of education*, 34(5), 703-715.
- Johnson, S. M., Kraft, M. A., & Papay, J. P. (2012). How context matters in high-need schools: The effects of teachers' working conditions on their professional satisfaction and their students' achievement. *Teachers College Record*, 114(10), 1-39.
- Kardos, S. M., & Johnson, S. M. (2007). On their own and presumed expert: New teachers' experience with their colleagues. *Teachers College Record*, 109(9), 2083-2106.
- Klassen, R. M., & Chiu, M. M. (2010). Effects on teachers' self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress. *Journal of Educational Psychology*, 102(3), 741.
- Kokkinos, C. M. (2007). Job stressors, personality and burnout in primary school teachers. *British Journal of Educational Psychology*, 77, 229-243.
- Kokkinos, C. M., Panayiotou, G., & Davazoglou, A. M. (2005). Correlates of teacher appraisals of student behaviors. *Psychology in the Schools*, 42(1), 79-89.
- Kraft, M. A., Marinell, W. H., & Yee, D. S. (2016). School organizational contexts, teacher turnover, and student achievement: Evidence from panel data. *American Educational Research Journal*, 53, 1411-1449.
- Kraft, M. A., Papay, J. P., Johnson, S. M., Charner-Laird, M., Ng, M., & Reinhorn, S. (2015). Educating amid uncertainty: The organizational supports teachers need to serve students in high-poverty, urban schools. *Educational Administration Quarterly*, 51(5), 753-790.

- Kyriacou, C. (2001). Teacher stress: Directions for future research. *Educational review*, 53(1), 27-35.
- Ladd, H. F. (2011). Teachers' perceptions of their working conditions: How predictive of planned and actual teacher movement?. *Educational Evaluation and Policy Analysis*, 33(2), 235-261.
- Lavigne, A. L., & Good, T. L. (2019). *Enhancing Teacher Education, Development, and Evaluation: Lessons Learned from Educational Reform*. Routledge.
- Leithwood, K., Harris, A., & Hopkins, D. (2008). Seven strong claims about successful school leadership. *School leadership and management*, 28(1), 27-42.
- Li Grining, C., Raver, C. C., Champion, K., Sardin, L., Metzger, M., & Jones, S. M. (2010). Understanding and improving classroom emotional climate and behavior management in the "real world": The role of Head Start teachers' psychosocial stressors. *Early Education and Development*, 21(1), 65-94.
- Llorens, S., Schaufeli, W., Bakker, A., & Salanova, M. (2007). Does a positive gain spiral of resources, efficacy beliefs and engagement exist?. *Computers in human behavior*, 23(1), 825-841.
- Loeb, S., Darling-Hammond, L., & Luczak, J. (2005). Teacher turnover: The role of working conditions and salaries in recruiting and retaining teachers. *Peabody Journal of Education*, 80, 44-70.
- Loewenberg Ball, D., Thames, M. H., & Phelps, G. (2008). Content knowledge for teaching: What makes it special?. *Journal of teacher education*, 59(5), 389-407.
- Lortie, D. (1975). *Schoolteacher: A Sociological Study*. Chicago, IL: University of Chicago Press.

National Center for Education Statistics (NCES). (2017). *Fast Facts: Back to School Statistics*.

Washington, DC: Institute of Education Sciences, U.S. Department of Education.

Nichols, A. S., & Sosnowsky, F. L. (2002). Burnout among special education teachers in self-contained cross-categorical classrooms. *Teacher Education and Special Education*, 25(1), 71-86.

Mansfield, C. F., Beltman, S., Broadley, T., & Weatherby-Fell, N. (2016). Building resilience in teacher education: An evidenced informed framework. *Teaching and Teacher Education*, 54, 77-87.

Mansfield, C. F., Beltman, S., Price, A., & McConney, A. (2012). "Don't sweat the small stuff:" Understanding teacher resilience at the chalkface. *Teaching and Teacher Education*, 28(3), 357-367.

Martin, N. K., Sass, D. A., & Schmitt, T. A. (2012). Teacher efficacy in student engagement, instructional management, student stressors, and burnout: A theoretical model using in-class variables to predict teachers' intent-to-leave. *Teaching and Teacher Education*, 28(4), 546-559.

Maslach, C., & Jackson, S. E. (1981). *Maslach Burnout Inventory Manual*. Mountain View, California: CPP, Inc.

Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). *Maslach burnout inventory manual* (3rd ed.). Mountain View, California: CPP, Inc.

McLean, L., & Connor, C. M. (2015). Depressive symptoms in third-grade teachers: Relations to classroom quality and student achievement. *Child development*, 86(3), 945-954.

- McLean, L., & Connor, C. M. (2018). Relations between third grade teachers' depressive symptoms and their feedback to students, with implications for student mathematics achievement. *School Psychology Quarterly*, 33(2), 272.
- McLean, L., Abry, T., Taylor, M., & Connor, C. M. (2018). Associations among teachers' depressive symptoms and students' classroom instructional experiences in third grade. *Journal of school psychology*, 69, 154-168.
- McLean, L., Abry, T.A., Taylor, M., Jimenez, M. & Granger, K. (2017). Teachers' Mental Health and Perceptions of School Climate across the Transition from Training to Teaching. *Teaching and Teacher Education*, 65, 230-240.
- McLean, L., Abry, T., Taylor, M., & Gaias, L. (2020). The influence of adverse classroom and school experiences on first year teachers' mental health and career optimism. *Teaching and Teacher Education*, 87, 102956.
- Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers college record*, 108(6), 1017-1054.
- Montgomery, C., & Rupp, A. A. (2005). A meta-analysis for exploring the diverse causes and effects of stress in teachers. *Canadian Journal of Education/Revue canadienne de l'éducation*, 458-486.
- Morgan, B. J., & Bibb, S. C. G. (2011). Assessment of military population-based psychological resilience programs. *Military Medicine*, 176(9), 976-985.
- Newberry, M., Gallant, A., & Riley, P. (Eds.). (2013). *Emotion and school: Understanding how the hidden curriculum influences relationships, leadership, teaching, and learning*. Emerald Group Publishing Limited.
- Nye, B., Konstantopoulos, S., & Hedges, L. V. (2004). How large are teacher effects?. *Educational evaluation and policy analysis*, 26(3), 237-257.

- Oberle, E., & Schonert-Reichl, K. A. (2016). Stress contagion in the classroom? The link between classroom teacher burnout and morning cortisol in elementary school students. *Social Science & Medicine*, 159, 30-37.
- OECD (2017), "How have teachers' salaries evolved and how do they compare to those of tertiary-educated workers?", *Education Indicators in Focus*, No. 53, OECD Publishing, Paris, <https://doi.org/10.1787/b5f69f4c-en>.
- Pas, E. T., Bradshaw, C. P., & Hershfeldt, P. A. (2012). Teacher-and school-level predictors of teacher efficacy and burnout: Identifying potential areas for support. *Journal of School Psychology*, 50(1), 129-145.
- Podgursky, M. J., & Springer, M. G. (2006). K-12 public school finance in Missouri: An overview. Economics publications (MU).
- Rada, R. E., & Johnson-Leong, C. (2004). Stress, burnout, anxiety and depression among dentists. *The Journal of the American Dental Association*, 135(6), 788-794.
- Raskin, M., Kotake, C., Easterbrooks, M. A., Ebert, M., & Miller, L. C. (2015). Job-related stress and depression in orphanage and preschool caregivers in Ukraine. *Journal of Research in Childhood Education*, 29(1), 130-145. <https://doi.org/10.1080/02568543.2014.978516>
- Reivich, K. J., Seligman, M. E., & McBride, S. (2011). Master resilience training in the US Army. *American Psychologist*, 66(1), 25.
- Riggs, L. (2013). Why do teachers quit. *The Atlantic*, 10, 3-5.
- Rimm-Kaufman, S. E., & Sawyer, B. E. (2004). Primary-grade teachers' self-efficacy beliefs, attitudes toward teaching, and discipline and teaching practice priorities in relation to the "responsive classroom" approach. *The Elementary School Journal*, 104(4), 321-341.

- Rimm-Kaufman, S. E., Leis, M., & Paxton, C. (2014). Innovating together to improve the adult community in schools: Results from a two-year study of the initial implementation of Leading Together. *Seattle, WA: The Center for Courage & Renewal*.
- Rivkin, S. G., Hanushek, E. A., & Kain, J. F. (2005). Teachers, schools, and academic achievement. *Econometrica*, 73(2), 417-458.
- Roberts, A., LoCasale-Crouch, J., Hamre, B., & DeCoster, J. (2016). Exploring teachers' depressive symptoms, interaction quality, and children's social-emotional development in Head Start. *Early Education and Development*, 27(5), 642-654.
- Ronfeldt, M. (2012). Where should student teachers learn to teach? Effects of field placement school characteristics on teacher retention and effectiveness. *Educational Evaluation and Policy Analysis*, 34(1), 3-26.
- Ronfeldt, M., Farmer, S. O., McQueen, K., & Grissom, J. A. (2015). Teacher collaboration in instructional teams and student achievement. *American Educational Research Journal*, 52(3), 475-514.
- Rosenholtz, S. J. (1989). Workplace conditions that affect teacher quality and commitment: Implications for teacher induction programs. *The Elementary School Journal*, 89(4), 421-439.
- Sandilos, L. E., Cycyk, L. M., Scheffner Hammer, C., Sawyer, B. E., López, L., & Blair, C. (2015). Depression, control, and climate: An examination of factors impacting teaching quality in preschool classrooms. *Early Education and Development*, 26, 1111-1127.
- Sandilos, L. E., Goble, P., Rimm-Kaufman, S. E., & Pianta, R. C. (2018). Does professional development reduce the influence of teacher stress on teacher-child interactions in pre-kindergarten classrooms? *Early Childhood Research Quarterly*, 42, 280-290.

- Schwarzer, R., & Hallum, S. (2008). Perceived teacher self-efficacy as a predictor of job stress and burnout: Mediation analyses. *Applied psychology, 57*, 152-171.
- Seligman, M. E. (2002). Positive psychology, positive prevention, and positive therapy. *Handbook of positive psychology, 2*(2002), 3-12.
- Shen, B., McCaughtry, N., Martin, J., Garn, A., Kulik, N., & Fahlman, M. (2015). The relationship between teacher burnout and student motivation. *British Journal of Educational Psychology, 85*(4), 519-532.
- Shukla, A., & Trivedi, T. (2008). Burnout in Indian teachers. *Asia Pacific Education Review, 9*(3), 320-334.
- Skaalvik, E. M., & Skaalvik, S. (2009). Does school context matter? Relations with teacher burnout and job satisfaction. *Teaching and Teacher Education, 25*(3), 518-524.
<http://dx.doi.org/10.1016/j.tate.2008.12.006>
- Skaalvik, E. M., & Skaalvik, S. (2010). Teacher self-efficacy and teacher burnout: A study of relations. *Teaching and teacher education, 26*(4), 1059-1069.
- Smith, R. C. (2001). Teacher education for teacher-learner autonomy. *Language in language teacher education.*
- Smith, P. A., Hoy, W. K., & Sweetland, S. R. (2001). Organizational health of high schools and dimensions of faculty trust. *Journal of School leadership, 11*(2), 135-151.
- Stipek, D. (2012). Context matters: Effects of student characteristics and perceived administrative and parental support on teacher self-efficacy. *The Elementary School Journal, 112*(4), 590-606.
- Stress (2019). In Merriam-Webster Dictionary. Retrieved from <https://www.merriam-webster.com/dictionary/stress>
- Supovitz, J., Sirinides, P., & May, H. (2010). How principals and peers influence teaching and

- learning. *Educational Administration Quarterly*, 46(1), 31-56.
- Taylor, D. L., & Tashakkori, A. (1995). Decision participation and school climate as predictors of job satisfaction and teachers' sense of efficacy. *The Journal of experimental education*, 63(3), 217-230.
- Taylor, M., McLean, L., Bryce, C. I., Abry, T., & Granger, K. L. (2019). The influence of multiple life stressors during Teacher Training on Burnout and Career Optimism in the first year of teaching. *Teaching and Teacher Education*, 86, 102910.
- Teaching Commission. (2004). *Teaching at risk: A call to action*.
- Tschannen-Moran, M. (2009). Fostering teacher professionalism in schools: The role of leadership orientation and trust. *Educational Administration Quarterly*, 45, 217-247.
- Tschannen-Moran, M. (2014). *Trust matters: Leadership for successful schools*. John Wiley & Sons.
- Tschannen-Moran, M. (2014). The interconnectivity of trust in schools. In *Trust and school life* (pp. 57-81). Springer, Dordrecht.
- Travers, C. J. (2001). Stress in teaching: Past, present, and future. In J. Dunham (Ed.), *Stress in the workplace: Past, present, and future* (pp. 130-163). Philadelphia: Wiley, Inc.
- Tschannen-Moran, M., & McMaster, P. (2009). Sources of self-efficacy: Four professional development formats and their relationship to self-efficacy and implementation of a new teaching strategy. *The elementary school journal*, 110(2), 228-245.
- Tyack, D. (1974). *The One Best System*. Cambridge, MA: Harvard University Press.
- Van Driel, J. H., & Berry, A. (2012). Teacher professional development focusing on pedagogical content knowledge. *Educational researcher*, 41(1), 26-28.
- Veenman, S. (1984). Perceived problems of beginning teachers. *Review of educational research*, 54(2), 143-178.

- Vlăduț, C. I., & Kállay, É. (2011). Psycho-emotional and organizational aspects of burnout in a sample of Romanian teachers. *Cognition, Brain, Behavior. An Interdisciplinary Journal*, 15(3), 331-358.
- Well-being (2019). In Merriam-Webster Dictionary. Retrieved from <https://www.merriam-webster.com/dictionary/well-being>
- Westling, D. L. (2010). Teachers and challenging behavior: Knowledge, views, and practices. *Remedial and Special Education*, 31, 48–63.
- Whitaker, R.C., Becker, B.D., Herman, A.N., & Gooze, R.A. (2013). The physical and mental health of Head Start staff: The Pennsylvania Head Start staff wellness survey. *Preventing Chronic Disease*, 10, 130-171. <https://doi.org/10.5888/pcd10.130171>
- Whitebird, R. R., Asche, S. E., Thompson, G. L., Rossom, R., & Heinrich, R. (2013). Stress, burnout, compassion fatigue, and mental health in hospice workers in Minnesota. *Journal of palliative medicine*, 16(12), 1534-1539.
- Yates, T. M., Tyrell, F. A., & Masten, A. S. (2015). Resilience theory and the practice of positive psychology from individuals to societies. *Positive psychology in practice: Promoting human flourishing in work, health, education, and everyday life*, 773-788.
- Yuan, K., Le, V. N., McCaffrey, D. F., Marsh, J. A., Hamilton, L. S., Stecher, B. M., & Springer, M. G. (2013). Incentive pay programs do not affect teacher motivation or reported practices: Results from three randomized studies. *Educational Evaluation and Policy Analysis*, 35(1), 3-22.