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**Teacher Stress and Curriculum Reform: An Illustrative Example with
the “Growth Mindset” Movement**

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Teacher Stress and Curriculum Reform: An Illustrative Example with the “Growth Mindset” Movement

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Teacher Stress and Curriculum Reform: An Illustrative Example with the “Growth Mindset” Movement

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Teacher stress can be an important predictor of teachers’ well-being, job satisfaction, and job burnout. There are many factors that contribute to teacher stress and demoralization, including social factors such as parents, students, and administrators. In this report, I explore such social factors as make up a teacher’s ecosystem and then study how curriculum reform interacts with this environment. Previous literature shows that the way school administrators implement curriculum changes is one of the most important predictors of teacher outcomes. I then study an example of curriculum changes that is occurring recently: the “Growth Mindset” movement. After a brief discussion of this attribution theory of learning and motivation, I describe what I learned from an interview with a high school chemistry teacher whose school administrators were attempting to implement growth mindset curriculum changes. In this interview, the teacher discussed how the school administration forced curriculum changes on the teachers without consultation, sufficient time to prepare, or taking into account important factors such as the teachers’ current lesson plans, the subject they were teaching, and individual students’

issues. Future research and interventions to improve teacher-administrator relationships and communication are suggested.

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Introduction

Job stress and job satisfaction of teachers have been the subject of several research endeavors (Borg, Riding, & Falzon, 1991; Boyle, Borg, Falzon, & Baglioni, 1995). *Job satisfaction* is usually conceptualized as involving positive emotions, attitudes, behaviors, and beliefs about one's job (Weiss, Nicholas, & Daus, 1999), whereas *teacher stress* is defined as the "experience by a teacher of unpleasant, negative emotions, such as anger, anxiety, tension, frustration or depression, resulting from some aspect of their work as a teacher" (Kyriacou, 2001, p. 28). Teachers often report high job stress, an experience that has been associated with lower job satisfaction (Chaplain, 2008; Schwarzer, 2008). This lower job satisfaction has been shown to influence job performance and eventually burnout and demoralization (von der Embse 2016; Tsang, Liu, 2016). Kyriacou (2001) defined *teacher burnout* as "a state of emotional, physical and attitudinal exhaustion which may develop in teachers who have been unsuccessful in coping effectively with stress over a long period" (p. 28). Furthermore, teacher stress has been shown to have negative effects on physiological health, as indicated by dysregulated hypothalamic-pituitary-adrenocortico (HPA) axis (Bellingrath, Weigl, & Kudielka, 2008). Dysregulation in the HPA axis can lead to increases in exhaustion and irritability and may predict the onset of depression (Guerry & Hastings, 2011)

Social factors, such as interactions with students, parents, colleagues, and administrators, can have a drastic effect on burnout and teacher demoralization (Santoro, 2011), in addition to affecting physiological signs of stress directly (Hasegawa-Ohira,

Matsuzaki, Fujimoto, & Nomura, 2016). Clarke and Kissane (2002) described *demoralization* as the inability “to cope, together with associated feelings of helplessness, hopelessness, meaninglessness, subject incompetence, and diminished self-esteem.” This description can be used to infer how social supports in general can be a predictor of demoralization. Past research on the role of school administration in curriculum change has shown that these factors can be instrumental in a teacher’s level of stress, burnout, and demoralization (Herath, 2008; McCormick, Ayres, & Beechey, 2006; Song, 2008).

Understanding the types of stress that teachers can encounter is one of the most complicated endeavors of educational researchers (Gardner, 2010; Watts & Robertson, 2011). The factors that can affect stress can include other teachers, school administrators, parents, students, time, curricula, standardized testing, accountability policies, resources, and other bureaucratic obstacles that teachers encounter (Bird, Wang, Watson, & Murray, 2012; Kokkinos, 2007; Punch & Tuetteman, 1990; Santoro, 2011; Tsang & Liu, 2016). Although all of these factors are considered a standard part of the teaching ecosystem, educators still face new challenges. Educational research shifts and evolves with the newest educational or psychological zeitgeist, and curriculum reform continues to trickle down to school teachers, who may already be overwhelmed with the stressors in their current environment. Although we may study how teachers are affected by stress in their environment, we must also consider their environment as a dynamic system that occasionally may include evolving curriculum shifts. How do current factors interact with and moderate teachers’ execution of curriculum shifts in their classrooms? In this report, I will explore various elements, both institutional and psychological, of the educational

ecosystem that affect teacher well-being and performance. I will review how curriculum reform fits into the typical ecosystem, and explore one particular curriculum shift, the growth mindset movement. In addition to a review of the literature, I will present a teacher's firsthand account of the growth mindset curriculum shift and how it is affecting the teacher's classroom and school. In the conclusion, I hope to provide a better understanding of how curriculum reform in schools affect teachers directly. I will also consider new areas of research that would improve curricular transitions and, ultimately, teacher well-being.

Elements of the Teacher Ecosystem

In this section I explore literature that has addressed some of the main stressors that teachers have reported associated with their social environment: parents, students, and administrators. In particular, I address how these factors can influence teachers' time, testing and evaluations, and how curriculum reform is embraced and implemented.

How Parents Influence Teachers

The relationship between teachers and parents has evolved as time has passed and the teaching profession has evolved. Although at one time teachers were given the utmost deference and authority in the education of children, parents have slowly become more active, and sometimes more critical, participants in the process (Troman, 2000). Carol Vincent's work, begun in the 1960s, showed the evolving role of parents and the influence of culture and politics. Her 1997 article discussed how parental voice can be influential in educational decision-making, less through individual discussion than through parent-centered organizations (PCOs). Tet (2001) went further to assert that parents will be able to participate more in their children's education when the balance of power is able to shift away from professionals and teachers. This shift in power may negatively affect parent-teacher communication and may increase teacher stress (Litt & Turk, 1985). Although the standards for what is "right in education" is still determined by educator professionals, many parents feel that their only power play is to complain, further reducing positive regard in the parent-teacher relationship (Troman, 2000).

Ultimately, a theme of trust versus distrust between parents and schools has appeared in the literature (Bird, Wang, Watson, & Murray, 2012; Chang, 2013; Santiago,

Garbacz, Beattie, & Moore, 2016; Torres, 2016; Troman, 2000). For parents, trust in the school is often related to increased parental involvement, better parent-teacher relationships, and positive feelings towards the school (AdSams & Christenson, 1998; Santiago et al., 2016; Troman, 2000). Perhaps with a more trusting relationship, parents no longer believe that complaints are their only tool for involvement. Unfortunately, there is support, inconsistent though it may be, for the theory that certain types of parents tend to be more trusting than others. English proficiency, parental income, parental education, and single versus multiple caregiver households have all been tested as factors related to trust in teachers and schools, with inconsistent results (Fantuzzo, Tighe, & Childs, 2000; Kikas et al., 2011; Westergard & Galloway, 2004). Santiago et al. (2016) argued that schools may be structured to support certain types of households over others, such as multiple caregiver households and proficient English-speaking households, to be more involved in education, although this was not directly tested.

How Students Contribute to Teacher Stress

Although many teachers report student interactions as being one of the most significant positive aspects of their job, students are also often cited as a source of stress for teachers. Challenging and disruptive students have been reported to be a direct cause of stress, and even teacher burnout (Kokkinos, 2007; Pang, 2012). Managing classroom discipline is not only stressful on an emotional level, but also takes up precious instructional time (Kokkinos, 2007), and, along with the increase in focus on efficient

lesson plans and standardized testing, this in itself can cause further teacher stress (von der Embse, Pendergast, Saeki, & Ryan, 2016).

Students who come to class unprepared for the day's activities, or without having completed their work, are another issue for teachers (Geving, 2007; Punch & Tuetteman, 1990). This is a specific behavior that is often interpreted to be related to a lack of respect for the teacher and school. Although a student's lack of preparation can hinder classroom flow and his/her own learning, the perceived disrespect for the teacher may be the factor that leads to stress on a more personal level, and can influence the teacher's psychological well-being (Punch & Tuetteman, 1990).

How School Administrators Contribute to Teacher Stress

Another source of tension in the teacher's social environment can come from school administrators, most commonly principals. Having a positive, trusting relationship with school administrators is crucial in teachers' well-being and seems related to perceptions that their environment is supportive. Often a factor in a teacher's trust in administrators is whether or not the teacher believes the administrators understand how difficult teaching is. When teachers do not sense this type of empathy in their superiors, they feel increasingly frustrated and disappointed in their job (Santoro, 2011; Tsang & Liu, 2016). When principals provide emotional support and appraisal support for their teachers, their teachers report less stress, better job satisfaction, and better health outcomes (Littrell, Billingsley, & Cross, 1994). Littrell, Billingsley, and Cross defined *emotional support* as showing teachers respect and trust and recognizing that they need

open communication, appreciation, and consideration. For these authors, *appraisal support* is described as the provision of appropriate feedback, information about effective teaching, and job responsibility guidelines. The most crucial element of appraisal support was the administration's trust in the teachers to make the right choices for their classroom. Getting proper feedback for their work was another element that teachers found important in the appraisal support from their principals. Further, when teachers and principals discuss their expectations for each other, teachers are more likely to discuss value and support-based practices like communication and respect (Aslanargun, 2015).

Furthermore, in a study conducted in India, Dutta and Sahney (2015) showed an indirect relationship between school leadership and teacher job satisfaction through effects on school climate. As conceptualized by Wang et al. (1997), *school climate*, described as the ideology of a school, can be influenced heavily by a school's administrators through policies about class size, physical environment, and time allocations (Rowan et al, 2002).

Sashkin (1984; Sashkin & Burke, 1990) developed a framework for looking at leadership through the leaders' philosophical positions, including consistent leadership, caring leadership, and communicative leadership. *Consistent leadership* emphasizes the trust and consistency that teachers can have in their school leaders by being persistent in what they implement so that their beliefs and leadership are considered consistent (Kouzes & Posner, 2012). *Caring leadership* emphasizes trust of a different kind, exemplified by caring and respect for the teachers and students in one's school. Although leaders have expressed the difficulty in balancing consistent leadership and caring

leadership, both types of trust and respect can lead to positive school climates for teachers (Dimmock, 1999b). Finally, *communicative leadership* emphasizes managing communication. Naturally, this involves listening and feedback with their teachers and can lead to more openness and trust in the school system (Dimmock, 1999a).

These different types of school leadership have been demonstrated to have an effect on teachers' perceptions of their school's climate, both as perceived by teachers intrinsically and through actual policy shifts (Bogler, 2001; Rowan et al, 2002). In support of this theory, Dutta and Sahney's (2015) study further demonstrated that a teacher's perception of her/his school's climate had positive effects on job satisfaction. When school administrators took action to control student to teacher ratios and provided resources, support, and professional development for the teachers, teachers reported improvement in school climate. On a related note, in a 2009 study by McCarthy, Lambert, O'Donnell, and Melendres, teachers' perceptions of their resources versus demands seemed to be connected to their emotional experiences of burnout, like frustration. This supports the idea that when school administrators provide resources and support to teachers, not only do teachers perceive an improved external school climate, but they also report internal negative emotional symptoms to a lesser degree.

Time has been explored as another source of stress in teaching, not simply in regard to instructional hours, but also in terms of time allotted for communication of relevant issues by and to administrators (DeLorenzo 1992; Halim, Samsudin, Meerah, & Osman, 2006; Ingersoll & Smith, 2003; von der Embse et al., 2016). Teachers often report feeling overworked and as having insufficient time to communicate their concerns

or opinions to administrators effectively. This can have an effect on their sense of autonomy and self-efficacy in the classroom and in the school system (Ingersoll & Smith, 2003).

Because “teaching to the test” (Menken, 2006) has unfortunately become a common instructional philosophy, spending classroom time preparing students for standardized testing is another source of stress for teachers, especially when the results of such testing are used to a greater extent in teachers’ evaluations (von der Embse, Pendergast, Segool, Saeki, & Ryan, 2016). School leadership that is perceived as more concerned with test scores and its own agenda erodes teacher trust and teachers’ relationship with the administration, to the point of effecting teacher turnover (Torres, 2016).

How Professional Development Is Related to Teacher Stress

Professional development can be generally described as continuing education intended to bridge the “gap between teacher’s previous studies and the developments taking place in the educational realm” (Nir & Bogler, 2008; p. XX). In theory professional development should be a great resource for teachers and school districts. In fact, there is mixed research regarding both the actual effectiveness in changing teacher and student performance, as well as what components of professional development are effective (Garet, et al., 2008; Glazerman, et al., 2008; Guskey, 2003). Stricter accountability standards, such as those implemented by No Child Left Behind, can shift the focus of professional development from active learning and integration with teacher activities to rote memorization and narrowing of the curriculum to adhere to standardized

testing goals (Garet, et al., 2001, No Child Left Behind [NCLB], 2002; Hochberg & Desimone, 2010). Understandably, previous studies have found that professional development is viewed by teachers as a source of great hope and joy, as well as frustration, and even boredom (Nir & Bogler, 2008; Osman et al., 2016).

An example of the complicated relationship teachers have with professional development is Meuwissen's (2017) case study of two teachers who worked in underperforming schools with recent high-accountability contextual changes (teacher performance reviews largely based on student standardized test scores). Although the teachers were excited about the professional development program that encouraged interpretive history teaching with open-ended questions and lessons that were largely student-led, the state and district policies in place that encouraged teaching to the test were not only contradictory, but often overtly obstructed the use of these new techniques. One of the main mitigating factors for helping teachers feel supported was how the school personnel interacted with them and helped them with the professional development. One teacher specifically mentioned that the school administrator's honesty about using a multiple-choice test instead of her own newly-developed assessment, though likely disheartening, did help to make clear the political landscape that she had to navigate at school in a realistic way, which ultimately helped with her teaching goals.

Curriculum Reform and Teacher Stress

In addition to a complex school climate with many factors that can cause teachers both satisfaction and stress, on occasion a new philosophy or psychology of teaching and

learning will become popular with educational researchers and administrators, and curriculum reform will enter the teacher's ecosystem, bringing its own innovations, opportunities, challenges, and stressors. Margolis and Nagel (2006) studied curriculum reform within this context, noting that teachers are historically resistant to change but that teachers were not the only variable in the equation (Chronaki & Matos, 2014; Duffy & Roebler, 1986; Jones & Thessin, 2015; Tagg, 2012; Zimmerman, 2006). They found that existing cumulative stress in the environment had a negative effect on teachers, in addition to how quickly the curriculum change was being implemented and how it interacted with their relationships and trust in the school administration. Margolis and Nagel found that the principal played a crucial role in how teachers' environment is impacted by curriculum change. When principals acknowledged their teachers' experiences and opinions in the face of change, teachers' experience of the change improved.

In addition to support from the school administration, Fullan (2001) discussed the need for teachers to be supported by each other. Because curriculum change often involves not only changes in actions, but also in school culture and beliefs, it is important that teachers interact with each other frequently to share ideas, study learning paradigms, and discuss challenges that they face. Thus, curriculum changes are about more than the curriculum; they involve personal development, which is best supported by the social environment (Fullan, 2001).

Fullan and Hargreaves (1992) further discussed how the social environment can facilitate more purposeful interaction with "collaborative work cultures." Principals are

crucial in creating these types of cultures by using goal-setting activities to encourage collaboration and discussion of how to use efforts and resources more efficiently to achieve shared goals (Fullan, 2001; Rosenholtz, 1989). When a curriculum change is considered to be a collective effort that must be undertaken by everyone in the school's social environment, rather than something that is thrust upon teachers for them deal with, teachers' perceptions of the change improve. In such an environment, resources, both material and social, are open and shared among colleagues, and encouraged to be shared, as opposed to teachers having to create their own materials and not consulting with colleagues. In essence, any kind of improvement in teaching depends greatly on the school's social environment, as to whether or not curriculum reform will take hold (Fullan, 2001).

Along with collaborative work cultures, strong leadership from the principal is associated with successful curriculum reform and teaching improvements (Fullan, 2001; Bryk, Sebring, Kerbow, Rollow, & Easton, 1998). It is part of the principal's role to take charge of instigating community and parental collaboration in the student's environment, as well as teacher collaboration. When teachers have a clear focus on improving student learning, in addition to efficient management and appraisal support, schools were able to improve during curriculum changes, rather than stagnate or flounder (Bryk et al., 1998).

At the administration level, similar values have been found to facilitate successful curriculum reform. Clear communication and monitoring of learning goals were discussed by Fullan (2001) and Rosenholtz (1989). When administrators and principals had collaborative conversations about school changes, rather than assignments, and

where the administrators actually trusted the principals to make the choice of which changes would be implemented in the schools, student achievement improved (Fullan, 2001).

In sum, common themes continue to appear in the literature: Clear communication and frequent communication are needed for effective curriculum change. Although the influencing factors of students and parents are substantial, trust and respect throughout all levels of the school hierarchy (teachers, principals, and administrators) are most relevant to my research and will be emphasized throughout the rest of the report. A combination of communication, trust, and respect lead to effective collaboration in designing, implementing, and monitoring curriculum change. In the next section, I examine the growth mindset movement, its origins and use in schools, and how the previously discussed elements of the teacher ecosystem should be taken into consideration when implementing a growth mindset curriculum.

An Example in Progress: The Growth Mindset Movement

Attribution theories of motivation have been popular in the academic literature for some time, and with good reason (Malti & Krettenauer, 2013; Shores & Smith, 2010; Weiner, 1974, 1986; West, 2013). Attribution theory, simply defined, refers to how one interprets the causal factors of outcomes. In motivation, successes and failures are considered to be important outcomes, and causes can vary from factors concerning innate ability, exerted effort, environmental factors, or simply luck (Weiner, 1974; Graham, 1991). From attribution theory came the construct of achievement goal orientation, with its separation of achievement goals into mastery goals (e.g., desiring to master a skill or idea) or performance goals (e.g., attempting to look good by performing well in comparison to others) (Pintrich, 2000). In educational settings, motivation in terms of goal orientations and mastery or performance approach tendencies are both intuitive and empirically supported as being significant predictors for factors such as better performance, increased effort (Changeiywo, Wambugu, Wachanga, 2009), retention (Bradley, 2016), learning rate (Fitzpatrick, 1985; Guskey & Gates, 1986), helplessness (Smiley & Dweck, 1994), and student affect (Pekrun, Elliot, & Maier, 2009).

However, when Carol Dweck coined the phrase “growth mindset” to communicate these ideas more effectively to non-academic educational practitioners (Dweck, 1999; Dweck & Leggett, 1998; Dweck, 2006), attribution theory exploded onto the public stage and was (and continues to be) embraced by school administrators, teachers, coaches, and parents across the country (Meierdirk, 2016; Menanix, 2015;

Sparkman & Briceño, 2014). Growth mindset programs have even found their way to other countries like Chile, Australia, China, among several (Chan, 2012; Claro, Paunesku, & Dweck, 2016; Laine, Kuusisto, & Tirri, 2016; Martin, 2015; Yeager et al., 2016). With the growth mindset movement, teachers and students are able to conceptualize attribution and goal orientation theories by describing students as having either a “growth mindset” or a “fixed mindset.” Individuals with a growth mindset understand that intelligence is something that can be grown, meaning that with practice, seeking help, facing challenges, and making it through frustrations, they are growing their intelligence. Individual improvement is valued over social comparisons. By contrast, those with a fixed mindset consider intelligence to be a fixed commodity – something that cannot be changed very much. A person with a fixed mindset avoids challenge and frustration, as these are signs that the person has reached beyond their ability. Such individuals strive for performance goals, wanting to prove their intelligence to others, or at least avoid looking unintelligent (Dweck, 2006; Dweck & Leggett, 1998).

Why are growth mindset programs so popular? The answer is complex, but one possibility is that they have been shown to be an effective intervention in improving student outcomes. Academically, growth mindset messages to students have resulted in students adopting more learning goals (Blackwell, Trzesniewski, Dweck, 2007), having higher achievement (Aronson, Fried, & Good, 2002; Good, Aronson, & Inzlicht, 2003), increasing effort attributions (Blackwell, Trzesniewski, & Dweck, 2007; Dweck & Leggett, 1998), increasing motivation in class (Dweck & Leggett, 1998), increasing course completion rates (Yeager & Dweck, 2012), and using fewer maladaptive

comforting strategies (Rattan, Good, & Dweck, 2012). However, simply because a new educational ideology is effective does not mean that it will be implemented in the curriculum without some complications.

In an action research study by Ian Guidera (2014), a framework for growth and fixed mindset school norms was created and taught to school leaders, who were then tasked to implement these norms in their schools as they saw fit. Basing his mindset norms in the field's established literature (Aronson et al., 2002; Blackwell et al., 2007; Dweck & Leggett, 1988), Guidera highlighted values, beliefs, and techniques that represent either a growth or a fixed mindset. For example, attributing successes or failures to effort (e.g., working hard or not putting in enough practice) is considered a growth mindset norm. A fixed mindset norm would entail attributing successes or failures to innate ability, like being naturally smart, or "not a math-person." Praising students for individual improvement in achievement would be considered a growth mindset action because their individual mastery is valued, whereas praising only the highest achieving students would be considered a fixed mindset norm as performance is evaluated and valued in comparison to others.

Considering these mindset norms, there is concern that fixed mindset ideas could already be prevalent in contemporary school structures, with emphases on grade point averages and peer-comparison metrics (e.g., rankings, competitions). Delasandro (2016) found that whereas teachers felt comfortable implementing a growth mindset curriculum, they were worried that other stakeholders in the educational system, like parents and

administrators, are still too focused on a highly regarded performance goal – grade point average. As Carol Dweck (2015) noted recently, it has become quite common to say that one has a growth mindset, but for one’s words and actions to appear to support a fixed mindset. For example, teachers may praise effort, but not when actual learning is happening, or they may not value mastering a subject as much as they value not making mistakes (Dweck, 2015).

Dweck (2015) suggested that classroom leaders, teachers, and administrators, not attempt to ban fixed mindsets outright, but rather recognize that these beliefs will take time to adjust. One of Guidera’s (2014) main suggestions was for school leaders to collect data, visit classrooms, and allow implementation of growth mindset norms to be evolving continuously. These suggestions are consistent with previous curriculum change literature that has stressed the importance of communication, understanding, and cooperation between teachers and school administrators (Ingersoll & Smith, 2003; Littrell, Billingsley, & Cross, 1994; Margolis & Nagel, 2006).

One Teacher's Experience

I set out to interview teachers about the growth mindset movement, focusing in particular on those who were resistant to the ideas encompassed in this movement. Because of the philosophy's overwhelming popularity, I sought individuals with real world experience and a dissenting opinion to explore what they may be encountering in their environment or in their past and present experiences that could shed light on where the growth mindset movement could be improved or further researched. I approached these interviews with a grounded theory methodology (Strauss & Corbin, 1998). I used semi-structured interviews with open questions to explore the teachers' past experiences, their educational histories, their perceptions of classroom climate and school environment, and their understanding of growth mindset and other philosophies about education and failure. Because of the open nature of qualitative research, I was able to explore an unexpected facet of the growth mindset curriculum in the classroom: how the implementation was handled by the school administration.

As it is not the purpose of this report to provide a full description of the study as I conducted it, I instead want to use the story of one teacher from my full data set as an illustrative case with which to consider the issues I have described so far, how curricular change can often lead to teacher stress and dissatisfaction with teaching and how a school's administration may contribute to these negative effects of curricular change. I am especially interested in the possibility of negative effects of change when the innovation in its own right seems so positive and well-supported by the literature.

One teacher I interviewed was teaching in a school that had recently “discovered” the growth mindset movement and had attempted to make changes to the current curriculum with these ideas in mind. {Because it is important to me to protect all my participants’ privacy and confidentiality, I refer to this teacher using the pronoun *they* or *their* so as not to reveal the gender of the person.) This high school chemistry teacher had been teaching for six years and also had participated in extracurricular academic competitions with their students. They primarily taught chemistry and advanced chemistry to tenth-grade students, but occasionally would have eleventh-grade and twelfth-grade students. The custom was to work with other chemistry teachers to create lesson plans that were to be used for the current semester of school. However, the administrators at their school decided to implement policies and adjust lesson plans to be more in line with the growth mindset movement.

Before our discussion about school reform began, I established that the teacher fully understood the underlying concepts of attribution theory and growth mindset, and the teacher even admitted that they agreed with most tenets of this teaching philosophy. However, it was in the implementation of these ideas that problems occurred. The teacher said that all of the classrooms were required to use an academic strategy called *Cornell Notes*. This was described by the teacher as a system of taking notes that would allow the students to interact more with the materials, theories, and curricula, learning on a deeper, mastery level, as is encouraged with the growth mindset movement. For this note-taking method, students separate their notepaper into three sections: the main notes, questions,

and a summary. The upper 80% of the page is used for first taking standard notes on the right side, and then writing extra ideas and questions on the smaller left side. The bottom 20% of the page is used to create a summary of the notes on the page. The students are encouraged, at a later time when studying, to cover up their notes on the right side with a piece of paper, and then attempt to answer their own questions from memory. Reflection on the significance of the materials is a step suggested in the studying process, in addition to frequent review of the notes (Pauk, 2001; The Learning Strategies Center, n.d.). The non-linear nature of Cornell notes can be helpful for students to organize and remember the most relevant information, to understand better the semantic meaning of a lecture rather than simply the verbatim words (Makany, Kemp, & Dror, 2009; Donahoo, 2010). As part of this new campus initiative, “every class must use Cornell notes - even orchestra classes.” This teacher relayed a common feeling from fellow teachers: “What am I supposed to do? Have them write on their sheet music? We don't talk about music theory, we're just practicing music.”

At this point in the interview, I asked for a bit more detail on how the administrators approached the teachers to discuss this curriculum change. They said that there was no “discussion” – that they were going to do the Cornell notes “or else,” and what came after that part was never made clear. This teacher did concede that the administration could have possibly discussed these curriculum changes with teachers in other departments, but they had not heard of this being the case, and they knew for certain that it was never discussed with the chemistry teachers. Further, the teacher went on to say that these curriculum changes were explained to them only one week before

classes were scheduled to begin. The teachers had already planned most of their semester by then. “I had to overhaul everything I spent all summer doing. That was very frustrating not only for myself but for a lot of teachers that I work with.” Even after having spent much of the department’s budget on booklets with their lesson plans, the school administration still insisted on using Cornell notes, without so much as a meeting to discuss these changes or glancing at what the teachers had already prepared during their summer. The teacher went on to say that these notes were:

“already designed to be well scaffolded and presented in chunks and we already feel like our notes are the most effective that they can be for our students. Because we have spent a lot of our blood, sweat, and tears just trying to make them, so being told that those were not good enough and you need to do this other thing without anyone asking what we were doing in the classroom...”

They described frustration with these changes, and also anxiety when considering communicating their feelings with the administration.

“My current school says they are open for feedback for the teachers, but they don't go looking for it, and a lot of teachers are nervous to give feedback because they don't know what will happen if they give feedback that is viewed unfavorably.”

In addition, many teachers who chose to disregard the Cornell notes did so without discussion with administrators, reasoning that they would later “ask for forgiveness, rather than permission.”

I interpreted these comments as suggesting a breakdown of communication and teacher-administrator relationships on multiple levels. The school administrators, in the view of the teacher I interviewed, seemed to have had no discussion with the teachers regarding the curriculum changes. They chose to “force” these changes on the teachers with very little time to prepare. This school administration also appeared to have created a school environment that did not encourage open discussion of ideas between teachers and administrators, as perceived by the teachers. The emotional and appraisal supports that have been shown to be important in improving a teacher’s well-being seemed lacking in this school climate. Additionally, when teachers were unsure of how to implement the new curriculum changes, considering the music teacher’s incredulous comments, there was no support from the administration to help the teachers integrate the new curriculum with their current one. Further, at least for this teacher, there seemed to be an issue of trust of the school’s administrators. The teacher discussed briefly how they doubted the ability and knowledge of their administrators to give an educated critique of their classroom:

“It is rare to have someone who ever taught math or science in administration. A very large percentage of the time, they were either teachers at a middle school level or they were English teachers or history teachers, and I think it's very frustrating having someone dictate to you what you're supposed to do in your classroom when they have no idea what it's like to teach a STEM field”

The teacher even discussed a time when they had to leave another school because they “buted heads” with the principal so often over what they were teaching in their

classroom. The administrators were “dictating a lot of stuff to me there about how I should run my science classroom, and I was saying this is not best practice for a science classroom, and I was having a lot of trouble getting through to the administration.” They even described how the principal seemed to doubt their opinion because “he thought I was young and relatively inexperienced.” Here, we can see that the relationship between the teacher and administrator did not appear to be emotionally supportive, nor to be providing the appraisal support that can help with curriculum reform and teacher stress.

The teacher also recognized that the growth mindset curriculum reform, at least as operationalized in the use of these *Cornell notes*, was not something that would work for every student. They described to me cases of several students who needed more individual time because of issues that were specific to these students – and that the “blanket” curriculum changes were taking away from how they would normally choose to run their classroom. Thus, not only did this teacher feel that the changes were not going to help the individual students who could really benefit from it, but they also felt that their own instructional power of choice was being taken away from them. This loss of autonomy can have a profound effect on teacher stress, especially in regards to how they feel about their role in teaching (Mausethagen & Elde Mølstad, 2015).

In sum, this teacher described almost every instance in which a curriculum reform and school administration could potentially lead to a gratuitous amount of teacher stress. Communication was the overarching theme of the issues, including not having an open dialogue about the teacher’s frustrations and other emotions, not helping the teachers integrate theoretical growth mindset strategies in more practical classrooms (e.g., the

music teacher), not allowing teachers slowly to adjust or opt out of the reform, and the overall lack of communication about implementing the curriculum reform until very close to the beginning of the school year. The second overarching theme was mutual trust between the teachers and the school administrators, a theme that could be considered a contribution to the communication issues. The teacher felt that the principal did not value their opinions or trust their knowledge and experience. The teacher felt that the principal did not have relevant knowledge and experience. The teachers did not trust in their school administrators enough to discuss their feelings about and objections to the curriculum reform. Ultimately, these broken relationships between the teachers and administrators resulted in teachers feeling a loss of autonomy and lack of emotional and appraisal support, which likely led to unnecessary teacher stress during this curriculum reform.

Conclusion

In the case of the growth mindset movement as interpreted by the teacher whom I interviewed, I saw almost all of the elements of a teaching ecosystem breakdown, resulting in a frustrating, stressful environment. I would even say that the growth mindset curriculum changes themselves had little or nothing to do with the issues the teacher expressed. Instead, what was causing the stress came more from the implicit and explicit messages conveyed by the administration to the teacher.

The relationship between the teachers and the school administrators, and the principal in one particular case, were anxiety-producing for the teacher at best and led to distrust and contentions at worst. The teacher felt no emotional support in the situation and was not able to voice opinion or concern when sweeping changes were happening to the lesson plans that had already been prepared. In addition to not being given the opportunity to communicate concerns prior to a week before the start of school, the teachers were in an environment in which they did not feel safe to voice their honest opinions. These teachers feared repercussions for their communications and even chose to disobey the administration without discussion, for fear of what could come of revealing their opinions. This type of environment creates cumulative stressors for the teachers with which to cope, simultaneous with curriculum reform, while lacking emotion and appraisal supports from the school administration (Margolis & Nagel, 2006; Littrell, Billingsley, & Cross, 1994).

While I believe that the growth mindset concepts themselves are not the cause of

the stressful environment that the teachers are experiencing, it is no small irony that this particular movement is the one that is involved in this teacher's situation. The growth mindset concepts stress being open about the possibilities of individuals, recognizing that there is no one way to accomplish a goal and that the more that individuals work together, try new strategies, and understand the underlying processes, the more they are going to grow. As the teacher that I interviewed reported:

“You know, it just seems like for an administration that is pushing us to have a growth mindset about our students and teach a growth mindset to our students it seems like the administration has a fixed mindset about our teachers.”

Rather than using different strategies that play to different teachers' and students' strengths, this teacher's school administration was attempting a blanket policy of growth mindset or bust, which led to strains in their relationships and teacher stress. Rather than working with the teachers, communicating with them and taking into account the lesson plans that they had already arranged, the administrators approached the situation without understanding what was already happening in the classrooms and automatically assumed that their growth mindset curriculum changes would benefit all classrooms and students. The school leadership did not appear to exhibit a trust or respect for the teachers' current lesson plans, which has been shown to lead to increased stress and frustration (Aslanargun, 2015).

“The way things are getting implemented surrounding the growth mindset is like a blanket that's just gonna cover every wound without actually addressing some of

the root problems of the students that we're trying to help. ... Cornell notes are not gonna work for every subject or every student.”

Without taking into account the different structures of the classrooms, or the individual differences of the students, the school administration did seem to display a fixed mindset about their school environment.

With regard to the different types of transactional leadership styles as discussed earlier, it appears that the administration was attempting to be consistent in implementation of the new curriculum, but at the expense of establishing a caring and communicative leadership. There was no open communication between the teachers and the school administrators. Although there was no explicit disrespect or uncaring displayed for the teachers, the lack of teacher autonomy in implementing the curriculum change, and the way in which teachers' current work was disregarded, made clear the source of why the teachers felt disrespected.

Even though there is literature with these types of situations, stresses, and opinions being discussed by teachers (Aslanargun, 2015; Littrell, Billingsley, & Cross, 1994; Torres, 2016; Tsang & Liu, 2016), I think that this report and interview continue to put into focus how much we need to relay messages to school administrators about the need to support their teachers. Interventions that focus on improving these relationships are a practical and likely effective next step. Qualitative action research could be done with consultants conducting professional development programs with teachers, principals, and administrators that focus on the stress points discussed in this report. Participants could collaborate to develop programs that support the facets of teachers'

social ecosystem that appear to have the most influence on successful curriculum reform: effective communication, monitoring progress, providing information related to instruction and education, having feedback about performance and job guidelines and responsibility, and encouraging trust, respect, and appreciation to be shown at all levels. As hackneyed as it may sound, communication is key. There can be little trust and respect without an open honest dialogue between teachers and administrators. Thoughtful, empirically supported interventions are needed to move forward to create this atmosphere for educators.

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