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The Impact of Universal Learning Strategies on Teacher Burnout in a Project-Based-Learning Secondary School

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The Impact of Universal Learning Strategies on Teacher Burnout in a
Project-Based-Learning Secondary School

By

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A capstone thesis submitted in partial fulfillment of the requirements for the degree of
Masters of Arts in Teaching

Hamline University

Saint Paul, Minnesota

April 2023

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CHAPTER ONE

Introduction

The following study is an analysis of the impact of the pedagogical philosophy known as *universal learning* on teacher burnout in a project-based secondary school. Universal learning is a *thing-oriented* teaching method, outlined in the work of radical pedagogue Jacques Rancière, that emphasizes a student's ability to achieve intellectual and political emancipation through the support of a committed but non-expert educator. This study will explore whether universal learning, when deployed as a strategy for teaching unfamiliar subjects, has a measurable impact on teacher burnout as measured by the Oldenburg Burnout Inventory (OLBI) and self-reporting. The study will provide a literature review of the causes and effects of teacher burnout with an emphasis on teacher autonomy and workload, followed by a summary of Rancière's theory, related pedagogical theories, and research on said theories with regard to their impact on the causes of teacher burnout. It will then describe a methodology for testing the impact of an adaptation of Rancière's pedagogy (tailored to the current needs of a project-based-learning school) on teacher burnout over a nine-week trial period. It will conclude with a report on the results of that trial, an analysis of the results, and a summary of the study's findings and implications.

Context

Critical pedagogy too often lives in the world of theory. Academic enthusiasm abounds, but working teachers rarely find opportunities to explore critical strategies in their own everyday practice. This reality runs quite contrary to the intentions of critical theorists. Paulo Freire's methodology was created out of practical necessity, and even a

theory-heavy scholar like Henry Giroux begins his *Theory and Resistance in Education* with a quotation about active praxis from Marcuse. Critical pedagogy was not created for academic publications; it was created for the classroom, wherever and whatever that classroom happens to be.

What does the application of critical pedagogy look like in an education system that is, more often than not, hostile to said theory's founding principles? It is a truism among educators that radical pedagogy (much like radical politics) is interesting in theory but of limited use in practice. The critical classroom is helpful to think about as an intellectual exercise, but - in my experience at least - it is rare to see working teachers finding the time and energy to make it happen. As a result, we rarely have an opportunity to witness the emancipatory effect of critical pedagogy on our students. It is perhaps impossible to prove, but I believe that this universal resistance to radical pedagogy comes at least in part from a sense of self-preservation and protection: critical pedagogy takes time and hard work. Teachers are already short on time, and already overworked; despite our best intentions, it is a practical reality of our work that we must preserve our energy and use our time efficiently. Critical pedagogy might be interesting, but it is not known for its ease and its efficiency.

The emancipatory potential of critical pedagogy may be a nonstarter for overworked teachers - but what if critical pedagogical strategies actually eased the labor burden of working teachers? Human instinct tends toward the familiar under stress, but what if the familiar way of teaching is exactly the source of our stress? Students are acutely aware that they are overexerted; teachers are acutely aware that they are overworked. Everyone is working too hard, and nobody seems to be learning enough.

What if critical pedagogy - in all its difficult, inefficient, unrealistic thorniness - actually made our jobs easier?

Before laying out an overview of contemporary critical pedagogy and explaining the methodology and results of the ensuing study, it is worth describing how I came to this subject and why I believe that such research is necessary. In this chapter, I will introduce the circumstances that led to this study, focusing especially on the school where I work and the specific issues that my work there has raised, contextualized in the general scope of American education in the 2022-2023 school year. My hope is that this background will provide context for the difficulty, necessity, and applicability of a study that explores the relationship between pedagogical practice and burnout.

Background

In 2022, I arrived, like so many educators in the years following the outbreak of the COVID-19 pandemic, at a point of emotional and physical exhaustion. Despite receiving a license in 5-12 language arts, I have worked for six years in special education, first as a paraprofessional educational assistant and then as a special education teacher. I have had few opportunities to teach my two subjects of expertise, writing and English-language literature. Instead, the 2021-22 school year found me, on a near-daily basis, “teaching” basketball and chemistry, two subjects for which my loathing is only bested by my ineptitude.

By all accounts, this work situation should have been untenable. Despite extraordinary turnover and job availability in my license area, I have continued to work out-of-field for a simple reason: I love my school. I work at a teacher-powered, project-based-learning school in my hometown of St. Paul, Minnesota. Instead of

traditional classrooms, students at my school work with advisors to construct a schedule based around interest-led projects. Students typically spend less than half of their days in classes; they spend a majority of their time working on standards-focused projects, completed on their own schedule and at their own speed. This freedom is reflected in our school's organization: per its charter, my school is a cooperatively-led workplace. All decisions are made via consensus voting, a process which includes all salaried staff. Our teachers set their own schedules because they have no bosses. This democratic structure, against all common expectations, *works*, and the various areas of apparent structurelessness serve to strengthen a complex web of mutual support. My job as co-administrator is less to run the school than it is to create the conditions in which my colleagues and I are supported, just as my job as a teacher is less to “teach” than it is to guide students towards the tools for learning.

On our best days, our school lives up to this vision of emancipated mutual reliance. The 2019-20, 2020-21, and 2021-22 school years, however, were not our best days. Despite our core values of flexibility, creativity, and autonomy, my colleagues and I found ourselves falling into a pandemic-inspired slog. My colleagues in special education found themselves working from 7am to 11pm on a regular basis. My general education colleagues found themselves struggling to find collaborative pedagogical solutions and turned instead to battling one-on-one with their students to complete daily tasks. And my students, despite the array of possibilities set before them, found themselves so stressed out that they were unable to work, living in a state of simultaneous non-productivity and overworked exhaustion.

How is that a school with a radically autonomous structure found itself stuck in the bindings of traditional education? There is no simple answer to this question, but a persistent reality is the basic structures of our American education system. Even when we actively buck the strictures of high-stakes testing and deficit-model productivity, we still fall into the byways of our overriding system and culture. When not under stress, we work against the grain of late-capitalist education with joyful impunity. Under stress, however, I saw myself and my colleagues plodding along the short march to premature retirement. I did not know the technical definition yet, but I heard the term plenty of times in teacher trainings and news reports: my colleagues and I were on the verge of *burnout*.

Theoretical Exploration: Critical Pedagogy and Jacques Rancière

My question, as I stumbled through remedial chemistry videos on my lunch break in a haze of anxiety and boredom, was not why I was burning out, or even what I could do to alleviate the conditions that were leading to my burnout. I knew that, even if I did come to a better understanding of how our current system of education-labor pushes teachers to exhaustion, I wouldn't be able to do much about it. Instead, the only question that kept coming to my mind was: why am I doing this? Why am I working so hard to prepare lessons for which I have no interest or natural aptitude, in order to force it down the throats of students who are similarly uninterested? Why, when I was intellectually and emotionally exhausted, was I teaching in a way that was intellectually and emotionally ineffective? Why, at this strange point in history, was I not trying something different?

Coming from a comparative literature background, I have always had an interest in critical theory, and my curiosity naturally gravitated toward pedagogical theory written

in conversation with the continental tradition. I read through classics like Freire's *Pedagogy of the Oppressed* (1968) and Ivan Illich's *Deschooling Society* (1971) and loved what I read. Despite finding these works inspiring, however, I found it difficult to imagine their work in the context of my actual workplace. Theories of teaching language, structuring curriculum, or dismantling administrations are exciting, but few of them relate to the role of the special education teacher. More than any educator, the special education teacher (and especially the paraprofessional special education assistant) are bound to the pedagogical decisions of others. For the most part, we work off of someone else's curriculum, at best creating modifications to direct a student's learning towards a general-education view of what is "important." I could dream about how things should be taught, but I was ultimately beholden to making sure my students could achieve their special education goals under the auspices of someone else's lesson plan.

The Ignorant Schoolmaster and Universal Learning

I felt trapped by these circumstances until I came across post-political theorist Jacques Rancière's 1986 text *The Ignorant Schoolmaster*. Rancière is better known for his damning critiques of modern government, but *The Ignorant Schoolmaster* applies his theory of radical democracy to the classroom. Based on the life and writings of the 18th-century French pedagogue Joseph Jacotot, *The Ignorant Schoolmaster* posits the counterintuitive notion that the ideal "teacher" is not an expert on a subject, but rather someone who knows nothing about the subject at all. The need for a "teacher," says Jacotot-via-Rancière, implies that a student is incapable of grasping the material themselves, thus resulting in a process of "stultification" or, more literally translated, "stupid-ification." Rancière argues that anyone with the capacity to read has the capacity

to comprehend a text; the role of the pedagogue, then, is to support the student in focusing, questioning, and engaging with the text. The pedagogue need not know what the text is about, or even how to read it; he only needs to know how to engage a student and, alongside that student, devote his willful attention to the text at hand.

As I sat reading Ranciere's book on lunch break between chemistry and basketball, the idea that ignorance could be a pedagogical positive came as a revelation. Instead of spending unpaid hours laboring to master these two confounding subjects, I could instead come to them with the full enthusiasm of ignorance. Instead of exhausting myself, both mentally and morally, by pretending that I understood atomic theory or knew what the phrase "and one" meant, I could serve my students better by just going in as I am: ignorant of chemistry, incapable of basketball, but nevertheless willing to watch my students learn.

I started to apply Rancière's method midyear, and I noticed the impact immediately. I stopped cram-reading chemistry textbooks, I stopped thinking about how to correct my (visibly hopeless) basketball shot, and I stopped putting any amount of time into contemplating how I could twist my brain to support my students in either area. Instead, I decided to trust the subject and to trust my students. When it was time to work with them on chemistry, we opened up their study materials and learned it together. When it was time to play basketball, I let them run the game and held them to their own standard of sportsmanship. It was no miracle cure, and there were plenty of setbacks, but for the most part - it worked. Or rather, *we* worked, my students and I together - and I, as a result, found myself working less. Instead of putting my energy into prep that I had no time to complete, I focused on the one thing I always had capacity to do: I held my

students accountable to their own ability as students. I stopped pretending to know things that I did not, and I stopped pretending to be able to do things that I knew I was not able to do. I employed Rancière's method, and I did my best to hold my students' attention long enough for them to see it work. My relationships with my students improved. They expressed more enthusiasm about what they were learning. And - maybe most interestingly of all - I started learning alongside them. I cannot say that I got remarkably better at basketball, but I started to understand - and actually enjoy! - chemistry. I was learning it alongside my students, letting the "text" of the lab experiment or the theory assignment teach all of us, together.

Formulating a Research Question

Reading and applying universal learning felt like a conversion moment. I found a method that improved my teaching ability and decreased my workload. I had a teaching philosophy that was politically resonant, but more importantly, applicable: immediately so, and requiring no additional labor hours to deploy it. I could imagine trying it as a special education teacher or as a paraprofessional when I did not have an easy opportunity to collaborate with a general education teacher. I could imagine using it as a general education teacher who did not have time to structure a complete lesson plan around a new text. I could apply a radical theory to my students' education, and the result could be less work and more learning, for all of us.

My question expanded, then, from what I could do, right now, to save me from burning out, to something broader: could universal learning be a useful tool for all of my colleagues in the fight against burnout? Was it possible that we were actually working too hard - and simultaneously asking our students to work too hard - all to our collective

detriment? On a gut level, Ranciere's theory made sense to me. But I had never heard of anyone pursuing it, at an individual or an institutional level. What might happen if an entire school started to think about education in this way?

It struck me that this could be transformed into a testable hypothesis. Rancière explicitly lays out Jacotot's methodology in *The Ignorant Schoolmaster*, and the steps are simple and easily teachable to fellow educators. The nature of my school is highly collaborative, highly adaptable, and highly experimental; I could share the method with a core group of educators, select a subject area (perhaps one where we all share a comparable "ignorance"), and test the method's efficacy with an emphasis on self-reported symptoms of burnout. My curiosity developed into a testable research question: *how do Universal Learning strategies impact teacher burnout in a project-based-learning secondary school?*

Overview

I elected to undergo this study with support from Hamline University in the second nine-week quarter of the 2022-23 school year. I selected a core group of 10 teachers to practice Rancière's Universal Learning method when working with students on unfamiliar subjects. After conducting a literature review of the definitions, testing methodologies, causes, and interventions of teacher burnout, as well as a comprehensive overview of critical interpretations of Rancière's pedagogy, I developed a mixed-methods methodology that explored correlations between Oldenburg Burnout Inventory (OLBI) scores and self-reporting from teacher surveys and interviews. The trial period commenced on 31 October 2022 and ended on 13 January 2023.

In the next chapter, I will report the results of my review of current literature on teacher burnout, focusing especially on studies that focus on the effects of pedagogical methodology. I will also lay out a review of responses to Rancière's universal learning and adjacent pedagogical theories, most notably Freirean critical pedagogy, Sugata Mitra's *minimally-invasive learning* (2001), and the contemporary school known as *post-critical pedagogy*. I will also summarize the (limited) data-driven studies with regard to the application of Rancière's and similar pedagogies. I will follow this literature review with an outline of my research methods in Chapter Three, followed by an analysis of research results in Chapter Four, and conclude with a summary of the findings and implications of this study in Chapter Five.

CHAPTER TWO

Literature Review

In this chapter I will present a review of literature, both past and current, on the intersection of teacher burnout and pedagogical strategies related and adjacent to universal learning. I will first explore literature defining (and critiquing common definitions of) teacher burnout, as well as an exploration of some of the conditions contributing to teacher burnout with a particular emphasis on teacher autonomy and teacher workload. I will then discuss Jacques Rancière's work on universal learning, contextualizing it both in the critical pedagogy tradition as well as contemporary pedagogical explorations, most notably the post-critical school of pedagogical thought. I will conclude with an overview of current discussions of universal learning. In exploring this literature, I aim to better contextualize my research question: *how do universal learning strategies impact teacher burnout in a project-based-learning secondary school?*

Burnout: Definitions, Measures, and Causes

In the year 2023, burnout needs no introduction. Coined by American psychologist Herbert Freudenburger in 1974 and advanced by the ongoing work of psychologist Christina Maslach and partners, burnout is most frequently defined as a psychological condition that combines emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach, 2017). It is frequently applied to workplace settings, and, unsurprisingly, it is frequently used to describe the psychological condition of educators. Countless studies have explored the causes, effects, and means of preventing teacher burnout; it is all but impossible to synthesize a clinical summary of the

subject, and new research continues to complicate our understanding of this pervasive but nonetheless evasive condition.

Measures of Burnout

Various studies have reimagined or otherwise questioned the accuracy of her conclusions (Demerouti et al, 2001; Kristensen et al., 2005) but Maslach's classification of burnout remains the standard definition in social and occupational psychology. Maslach and her research partner Jackson created the Maslach Burnout Inventory (MBI) in 1981 (updated in 2017) as a multivariable scale to assess worker burnout. Maslach and others have created several specialized alternatives to the standard MBI: most notably, for our purposes, the Educators Survey (MBI-ES) (2018). Though the MBI is the standard tool for burnout research, several alternatives are currently in use, including the Oldenburg Burnout Inventory (OLBI) (Demerouti et al., 2003), and the Copenhagen Burnout Inventory (CBI) (Kirstensen et al., 2005).¹ While the MBI focuses on the three-dimensional definition of burnout, the OLBI and CBI focus on what their authors consider the essential causes of burnout, exhaustion/fatigue and exhaustion/disengagement, respectively.

Though burnout is sometimes conflated with quitting, early retirement, or otherwise exiting an employment field, burnout does not necessarily reflect a change in employment status. Someone who is "burned out" can continue to work in the same position or workplace long after they begin to experience the symptoms of their condition. Teacher burnout is separate, therefore, from the question of teacher retention

¹ The Burnout Measure (BM), developed by Pine and Aronson in 1988, was used with some frequency in past studies but is rarely used in contemporary burnout literature.

(Santoro, 2019). This makes burnout all the more difficult to classify: a committed worker may continue in their position despite experiencing burnout, while an uncommitted worker may quit their job long before any symptoms of burnout appear. As no change, material or otherwise, needs to occur in the quantity or quality of workers' output, burnout is best measured via self-reporting among workers who continue in their work roles despite decreased satisfaction, mental health, and emotional engagement (Maslach, 2017). The immateriality of this rationale is perhaps why burnout is so frequently studied, but still so poorly understood.

Critiques of Burnout. Though burnout is a widely accepted workplace phenomenon within the field of social psychology, it is not without its challengers. These critiques typically come from a materialist perspective that considers burnout literatures' psychological approach to labor as a diversion from the primary causes of labor fatigue, namely overwork, alienation, and exploitation. This labor-oriented critique is echoed by the recent work of Santoro (2019), who takes a more holistic approach to her critique of burnout. Critiques of burnout literature rarely dispute the existence of burnout per se; rather, they posit an overemphasis on burnout as a distraction from what they consider to be more significant workplace phenomena (psychological, material, or otherwise).

As this study is focused on the potential impact of specific labor practices on burnout, these labor-oriented critiques provide useful guidelines for navigating the immense field of teacher burnout literature. Though labor-oriented studies of burnout are significantly less common than psychology-oriented studies, one can maintain a labor-focused perspective as one processes the existing literature in order to better identify studies that will help understand the impact of labor practices on an individual

teacher-laborer's experience of their labor, be it alienation, exploitation, demoralization, or burnout.

Materialist Critique. The origins of the materialist critique of burnout date back to Karger's (1981) criticism of the early work of Freudenberger and Maslach. Karger writes:

The recommendations resulting from the burnout literature suggest an ameliorative approach based on the "privatized" nature of the problem. On the one hand they propose cosmetic organizational changes, and on the other, an increase in the stress-management abilities of the worker. Both Freudenberger and Maslach and Pines suggest change in everything but the control of workers over the quality, quantity, and activity of their production. (pp. 272-273)

Karger's critique is echoed in the imaginative work of Carton (2016), who labels burnout "a later version of [Marxian] alienation but a more acceptable term for overwork" (p. 1). Discussing overwork in a clinical setting, he writes: "The problem is that much of the overstepping of boundaries is a result of ever decreasing funding of the health services, not an individual pathology of the clinician, an inference facilitated by the burnout discourse" (p. 2). Similar discourse, currently prominent in online leftist discussion, challenges the individualized focus of burnout literature and suggests a refocus on labor exploitation (a discourse that dates back, at least, to Schlomann, 1993).

Santoro: Burnout vs. "Demoralization." Perhaps the most significant contemporary challenge to burnout literature, at least within the context of schools, is the work of Santoro (2019). Santoro does not reject Maslach's classification of burnout (2017), but she questions Maslach's focus on burnout as a leading contributor to teacher

dissatisfaction. Instead, Santoro proposes *demoralization* as a more appropriate descriptor for the experience of most dissatisfied teachers:

Burnout signals that something is amiss with a teacher who could otherwise be doing good work in her position. Demoralization points to a normative problem the teacher sees with the context of the work. The teacher considers it very difficult, if not impossible, to engage in good work in her position. The source of burnout is an individual teacher's current psychological profile. Demoralization signals a problem with conditions of the work that impede the realization of the teacher's significant commitments and beliefs about the purpose and conduct of good work. (p. 44)

Like Karger and other materialists, Santoro (2019) critiques burnout literature as overly focused on individualized psychology, the cause and cure of which are similarly individualized. Demoralization, to the contrary, is a result of institutional decisions that undermine teachers' ability to do their jobs in a personally and professionally fulfilling way. Though no researcher beyond Santoro has, to my knowledge, explored the demoralization vs. burnout question, we can consider her findings as a useful framework for understanding and sorting burnout studies.

Causes of Burnout

A comprehensive review of the hypothesized causes of burnout is beyond the purview of this study. Though there is some degree of clinical agreement on the definition of burnout, there is no similar consensus with regard to its causes. One meta-analysis of perceived causes of burnout, for example, lists eight categories ranging from demographics to individual expectations (El Helou et al., 2016). Their study

determined that all eight categories had a significant impact on burnout, noting such diverse factors as marriage (married teachers are more impacted than single teachers²), grade level (fourth-sixth grade teachers are most impacted), and working under an incompetent principal (the impact of which is, presumably, obvious). A brief perusal of burnout literature will produce a similarly diverse collection of conclusions. Burnout's causes are rife with subjectivity, incomplete understanding, and indefinite terms. One could conclude, upon reviewing the literature, that burnout happens in many ways to many people for many reasons.

As this study is focused on the impact of a particular teaching practice in an individualized teaching environment, I will focus on what I have identified as two highly relevant categories of burnout causes: workload and teacher autonomy. I have identified these two categories due to the elements of universal learning that I find most salient to the role of the project-based-learning educator: first, universal learning celebrates both student and teacher autonomy, and second, universal learning is a pedagogical strategy born out of limited resources, most notably time. As discussed below, universal learning (and related pedagogies) could have significant impact on both teacher workload and teacher autonomy, and it is therefore beneficial to review current literature on these variables as they relate to teacher burnout.

Workload. As discussed above, various researchers maintain that burnout studies could benefit from a materialist refocusing; however, to date there have been very few studies that focus on the material factors contributing to burnout. I define materialism as an economic epistemology that, following Marx, centers itself in the material conditions

² Two other studies, Çağlar (2011) and Luk et al. (2010) found the opposite to be true.

that impact labor. These include compensation, labor hours, resource availability, and production capacity. In the case of teaching, this can comfortably translate to wages, work hours, and workload/responsibilities. Though one might expect an array of literature that explores the material factors contributing to a psychological condition tied to labor, there are, as discussed previously, relatively few studies that explicitly analyze burnout, much less teacher burnout, from a materialist perspective. We can draw several conclusions, however, from what studies exist.

Many materialist analyses of burnout focus on compensation and wages; a majority of these studies conclude that there is no correlation between burnout and labor compensation. Schaak et al. (2020), for example, found that, though teacher compensation has a major impact on teacher retention, it has almost no impact on teacher burnout. There is some evidence, however, for the impact of labor demands on teacher burnout. Though they found no clear correlations between labor demands and MBI scores, Schaak et al. state: “It may be that different combinations of job demands and resources conspire to increase or decrease teachers’ burnout or to fortify their fulfillment with the work” (p. 1022). Other studies by Lee (2019) and Skaalvik and Skaalvik (2018) present evidence that increased labor hours and labor demands correlate to rates of burnout. Skaalvik and Skaalvik also found that access to resources decreased burnout, but speculated that “the devastating effect of job demands on well-being is stronger than the buffering effect of job resources” (p. 1267).

One possible reason for the limited impact of labor demands on burnout, suggested by the work of Kirstensen (2005) and others, is the particular data collected by the MBI. A labor-oriented scale, such as the OLBI or the CBI, could produce stronger

evidence for or against the role of labor demands on teacher burnout. This issue will be further explored in Chapter Three.

Autonomy. Various studies demonstrate the impact of teacher and student autonomy on teacher well-being. Cheon et al. (2014) hypothesized that autonomy training would produce teacher benefits in the areas of “motivation, skill, and well-being” (p. 332) in a study of physical education teachers. Though Cheon et al. did not test specifically for burnout, they found that a variety of burnout-adjacent factors were significantly decreased by increased autonomy, including “emotional-physical exhaustion” (p. 341).

Fernet et al. (2014) explicitly examined the impact of autonomy on teacher burnout and found that “support for autonomy” had a clear impact: “Our results show that opportunities to make choices, participate in decision making and have some control over how tasks are accomplished [...] can help prevent burnout (p. 285). Esfandiari and Kamali (2016) found similar results, echoed by Ljubin-Golub et al.’s (2018) study of student burnout: (“[...] autonomy support from teachers promotes more autonomous motivation, [...] which, in turn, leads to lower academic burnout” (p. 153). These results were supported by the recent thesis of Benson (2022): “The results of the multiple regression analyses revealed that perceived teaching autonomy [. . .] [was a] strong significant negative predictors of emotional exhaustion, depersonalization, and personal accomplishment burnout” (pp. 132-33). Though the impact of autonomy is a relatively underexplored factor of teacher burnout, all studies to date suggest that increased teacher autonomy has a moderate-to-significant impact on decreased teacher burnout.

Teaching Practices and Burnout

Though they are by no means the only or even most significant causes of burnout, current literature suggest that both workload and teacher/student autonomy have a clear impact on teacher burnout. It is worthwhile, then, to explore labor practices that can impact these factors (negatively in the first case, positively in the second) in the school workplace. Though it would be irresponsible to deny the impact of school administration and other systemic influences, I have elected to focus on individual teaching practices that decrease workload and increase teacher/student autonomy. I do this not to deny the necessity of institutional change (for which the evidence is ample), but to better understand strategies that individual teachers can deploy to improve their working conditions at a critical moment in the history of teacher labor. Having defined burnout and its measures, and having defined two of its causes that pertain specifically to teacher labor practices, I now ask: which teaching practices decrease teacher workload while simultaneously increasing teacher and student autonomy? Though there are a wide array of responses to this question, I propose that one underexplored option is the strategy of universal learning as defined in the work of radical pedagogue Jacques Rancière. In order to better understand Rancière's model, it is necessary to explore the context of his work within related experiments in emancipatory learning. Before that, however, it is helpful to contextualize the role of teaching practices within the current literature on burnout interventions and preventions.

Teacher Labor Practices in the Context of Burnout Literature

A vast majority of studies that explore practice-based burnout interventions focus on what Santoro defines as “resilience-building” practices. These include mental-health

self-care practices such as cognitive behavior therapy (CBT), mindfulness exercises, and boundary setting. Despite evidence that these practices can decrease burnout, not all researchers are convinced of their efficacy. Santoro, unsurprisingly, is a leading critic of resilience-building practices:

Researchers and professional developers [...] have honed in on resilience as a silver bullet to address the teacher retention problem [...] when teachers' attempts to resolve moral concerns about their work are ignored, rebuffed, or ridiculed, it's possible to imagine that their personal resources have been depleted [...] In this case, resilience is unlikely to help (2018, pp. 44-45).

A recent mixed-method study by Kim et al. (2021) found limited results on the efficacy of trauma-informed mindfulness practices with regard to MBI-measured burnout. These studies reflect the results of meta-analyses of burnout intervention techniques. Despite the enormous amount of research on these psychology-based interventions, evidence of their efficacy is inconsistent.

The findings of Iancu et al.'s (2018) meta-analysis of burnout interventions is one such reflection of this inconsistency. Their study identified six categories of burnout intervention: CBT, mindfulness/relaxation, social-emotional skills (i.e., building positive relationships with students), psychoeducational approach (i.e., educating teachers about the prevalence and impact of burnout), social support, and professional development. Iancu et al. found, for the most part, that no burnout intervention has any comprehensive effect. Mindfulness and CBT had some impact on exhaustion and personal accomplishment; psychoeducational and social-emotional interventions, on the other hand, had no impact on any dimension of burnout, and no practice had any effect on

cynicism/depersonalization. Interestingly, the analysis did find that professional development approaches could have a significant impact on exhaustion:

The professional development approach aims to enhance students' communication and interpersonal skills [...] which, in turn, can reduce teachers' burnout. Teacher burnout is a secondary outcome of this type of intervention: following the intervention, students change their behavior (i.e., primary outcome), which leads to improvements in teacher burnout levels (i.e. secondary outcome). Therefore, we encourage future research to investigate whether teacher burnout will evolve in time, although post-intervention changes are not statistically significant. (p. 392)

Iancu et al.'s meta-analysis also encouraged further exploration of classroom management strategies, noting "substantial" evidence for the impact of management self-efficacy on burnout. Despite this evidence for the benefits of workload or teaching-based practices (as opposed to resilience-building practices), Iancu et al. make no reference to studies that test the relationship between such practices and teacher burnout.

Pedagogical Practices and Burnout

Though few studies explore the impact of specific pedagogical strategies on burnout, there are exceptions. One is Covell et al. (2009), which studied the impact of a United Nations "children's rights" curriculum on teacher burnout in English elementary schools. They found that MBI scores were impacted significantly in schools that implemented the curriculum: "When children were behaving in a socially responsible, rights-respecting way in the classroom, and particularly when they are actively involved

in their classroom and school activities, teachers have improved relationships with the students and a greater sense that their teaching is effective” (p. 288). An increase in student-centered teaching resulted in decreased scores in all three of Maslach’s dimensions of burnout.

An interesting counterpoint, especially in the context of critical pedagogy, is Gorski and Chen’s (2015) investigation of burnout among activist educators. Gorski and Chen found high rates of burnout among activist educators, suggesting that engagement in social- justice- focused education, in spite of and often as a result of activist passion, could increase the rate of burnout. Though Gorski and Chen’s work focuses on educators as a general category rather than working teachers in American schools, his findings reflect those documented in Santoro’s work: teacher interest, even in an area as passionate as social justice, does not decrease rates of burnout. Gorski and Chen’s work suggests holistic self-care initiatives as a potential intervention against activist burnout, but does not explore any pedagogical strategies that have a positive impact on the activist’s cause and a negative impact on activist burnout.

Critical and Post-Critical Pedagogy: Freire, Rancière, and Mitra

Despite limited literature on the impact of pedagogical practice on burnout, we can explore pedagogies that directly relate to our identified burnout factors of workload and teacher/student autonomy. A pedagogical strategy born out of resource limitations and focused on the emancipation of both students and teachers, then, seems an ideal candidate for exploration. Various pedagogical schools could lay fair claim to this designation, but perhaps none fill the role quite so neatly as the body of teaching literature known as critical pedagogy. Though critical pedagogy is most associated today

with social-justice pedagogical practices, its Freirean origins are more methodological than ideological. Freire and his cohort focuses on, in the Marxian parlance of 1980s critical pedagogy, praxis, or theoretically-informed practice. In this way, Freirean critical pedagogy shares similarities with the European school of Universal Learning, most prevalent in the work of French political philosopher and pedagogue Jacques Rancière. Following the work of Vleighe (2018) and others, I contend that these pedagogies meet in what Hodgson et al. (2017) define as post-critical pedagogy, a recent and, to date, un-researched theory of education. Following Stamp (2013), I further contend that the conclusions of the post-critical pedagogy school, particularly with regard to Rancière's universal learning, bear striking similarities to the findings of Sugata Mitra (2001, 2010) in the field of minimally-invasive/ self-organized learning. These three schools - critical pedagogy, universal learning, and minimally-invasive learning - each impact the field of post-critical pedagogy and could provide a potent new tool in the fight against teacher burnout.

Critical Pedagogy: Freirean Origins. Critical pedagogy originates in the work of radical educator Paulo Freire. Tasked with teaching Portuguese literacy to Brazilian workers with little formal education, Freire devised a system of language education based around dialogue between educators and “educands.” Freire introduced a high-interest word (such as *favela*, the Brazilian-Portuguese word for “slum”) to his students and encouraged free-association discussion. He would then break the word down into sound-syllables and letters and encourage his students to form connections between the sounds, concepts, and political circumstances that encompassed them both. Freire found that his students developed literacy extraordinarily quickly under these circumstances,

inspiring him to devise a general education philosophy centered around political dialogue, student-teacher democratization, and what he termed *conscientização*, typically translated as “conscientization” or “critical consciousness.” Freire compiled his theories in his seminal text *Pedagogy of the Oppressed* (1973).

Freire’s work drew international attention and inspired various collaborations, most notably with Canadian post-structuralist educator Henry Giroux. Giroux introduced post-structuralist theory into Freire’s pedagogical framework, which helped translate Freire’s work into fields of academic study. Critical pedagogy began to expand to other pedagogical arenas focused on liberation/emancipation, particularly diverse post-colonial attitudes. American educators such as Sandy Grande (*Red Pedagogy*, 2004) and bell hooks (*Teaching to Transgress*, 1994) utilized critical pedagogy strategies to create an emancipatory, race-conscious approach to education. The legacy of this justice-oriented critical pedagogy evident in the contemporary abolitionist works of Harney and Moten’s (*The Undercommons*, 2013) and Love (*We Want to Do More Than Survive*, 2019).

Freirean Emphasis on “Content.” Though Freire is popularly associated with progressive theories of education, his theory differs from many student-centered pedagogies in its emphasis on content. Freire repeatedly emphasizes *content* as an essential component of pedagogical dialogue. We can define “content” as the subject of dialogue, the “untested feasible” (1973, p. 13) that exists outside our limited reality and toward which we must orient our thoughts when we engage in criticism. Freire insists that educational practice cannot exist without content (1995), and that it is the role of teachers to introduce this content to their students. Freire’s emphasis on content must not be interpreted as a certain essentialism: he insists that we

[...] never [allow] ourselves to succumb to the naive temptation to look on content as something magical [...] [as having] such power, such importance, that one need only to 'deposit' it in educands in order for its power to effect the desired change (1995, p. 110).

Rather than grounding the students in an essentialist understanding of the “truth” of a subject, the externality of content pulls the student outside his own truth, while at the same time undermining any exclusive claim the educator has to that truth. The content can only be approached through dialogue, held in communion with peers and oriented toward an external entity: “[...] to say the true word [...] is to transform the world [...] no one can say a true word alone” (1985, p. 76). Only through this experience of mutual transcendence can students experience dialogical communion - and through this communion, political transformation and liberation. Without this transcendent orientation at its heart, dialogue becomes a simple exercise in self-expression that forces the subject to “fit our prejudices and frameworks,” making it “captive to our prejudices” and thereby failing to “liberate us from the bonds of our perspective” (Schipani, 1988, p. 173).

“The Ignorant Schoolmaster”: Rancière and Universal Learning. Freire’s emphasis on content is reflected in the work of his cross-Atlantic contemporary Jacques Rancière. Rancière is best known for his confrontational support of radical democracy, but his most significant contribution to the field of education is his 1986 text *The Ignorant Schoolmaster*. His text tells the story of Jacques Jacotot, an 18th-century French educator who successfully taught Flemish-speaking chemical students to read French despite having no knowledge of written or spoken Flemish. Jacotot’s method, described in his own writings, is almost comically simple: he gave his students a side-by-side

French/Flemish copy of a popular novel and asked his students to memorize the French version, word by word. Jacotot contributed nothing to his students other than three basic questions: *What do you see? What do you think about it? What do you make of it?* As Rancière puts it:

There was only one rule: he must be able to show, in the book, the materiality of everything he says. He will be asked to write compositions and perform improvisations under the same conditions: he must use the words and turns of phrase in the book to construct his sentences; he must show, in the book, the facts on which his reasoning is based. In short, the master must be able to verify in the book the materiality of everything the student says. (p. 20)

The teacher (“master”), in other words, asks the student to find the answer on their own, without turning to the teacher for explanation.

Remarkably (at least according to Rancière), Jacotot’s method worked: he reported that his students were able to write complex essays in French within six months.³ Jacotot concluded that his ignorance of Flemish actually supported his capacity to teach his students: instead of explaining to them, he empowered his students with the ability to master the translation on their own. Jacotot formalized his findings into a theory of education, explicated in a series of writings, that he labeled *universal learning*.

Rancière, following Jacotot, concludes that teacher explanations have a “stultifying” (in French, literally “stupid-ifying”) impact on students; instead of

³ English-language historical sources on Jacotot are limited, and the accuracy of his claims are difficult to confirm. Whether or not Jacotot truly taught advanced foreign-language writing skills in six months is, for the purposes of this study, moot; the pedagogical theory that results from his legacy is relevant regardless of its origins, mythical or otherwise.

informing students, explication teaches students that they are incapable of learning without a teacher:

[...] the child who is explained to will devote his intelligence to the work of grieving: to understanding, that is to say, to understanding that he doesn't understand unless he is explained to. He is no longer submitting to the rod, but rather to a hierarchical world of intelligence. For the rest [...] he doesn't have to worry: if the solution to the problem is too difficult to pursue, he will have enough intelligence to open his eyes wide. The master is vigilant and patient. He will see that the child isn't following him; he will put him back on track by explaining things again. And thus the child acquires a new intelligence, that of the master's explications (p. 8)

The act of explaining, in other words, teaches a student to be dependent on a teacher's explanation instead of their own natural intelligence. Universal learning, to the contrary, encourages students to find their own answers in the world around them. The teacher's only role is to be an "ignorant" observer alongside the student, serving only to encourage the student's exploration and to maintain his attention on the subject at hand.

Minimally-Invasive Learning: Sugata Mitra and the "Hole-in-the-Wall"

Experiment. To date, no study has explicitly explored the efficacy of universal learning. The closest parallel, however, is Sugata Mitra's "Hole-In-The-Wall" study (Mitra & Rana, 2001), an experiment in what he labels "minimally-invasive learning" that inspired a series of popular TED talks (and, perhaps more familiarly, the novel behind the Oscar-winning 2009 film *Slumdog Millionaire*). Mitra's team placed an English-language computer in a New Delhi slum and observed a group of uninstructed,

non-English-speaking children as they interacted with the device. Despite having never used a computer and having no formal knowledge of English, the children acquired complex, English-language computer skills and, perhaps most remarkably, shared their knowledge with other members of their community.

Mitra tested the limits of this theory in the “Kalikupam” experiment,” conducted in 2007 (Mitra & Dangwal, 2010). Mitra created what he describes elsewhere as an “impossible” scenario: he asked rural Tamil-speaking children to learn molecular biology from an English-language resource with no adult or native-language support.

The children were told, “There is some interesting new material on the computer, it is in English and it may be a bit hard to understand, but will you take a look at it?” The choice of words used was seen as important. “Will you take a look at it?” is less formal than saying “We want you to study the material.” The children were never directly asked to learn anything. (p. 678)

After 75 days, a mediator with no subject knowledge was introduced to support the children by making “positive, encouraging remarks on what the children had learned and encourag[ing] them to further explore the information and ideas” (p. 678). Despite having no prior training in biology, little-to-no knowledge of the English language, and no support from an adult “expert,” the children averaged around 30% on a comprehension test conducted after 75 days without a mediator, and over 50% after 75 additional days with a mentor, scores that matched those of same-age students at an elite urban private school in Delhi and far exceeding those of 16-year-old students at a government school. Mitra found similar results in follow-up studies in the United Kingdom and Italy, all of which are chronicled in his popular 2010 TED Talk.

Though frequently cited as evidence of the efficacy of self-learning (and, perhaps more cynically, as evidence of the diminishing role of the professional teacher and the increasing necessity of education technology), Mitra's Kalikuppam experiment quite clearly demonstrates the benefits of a supportive, if "ignorant," mediator. The Kalikuppam children were highly capable of learning molecular biology on their own, but this self-learning was significantly enhanced by a trusted, non-judgmental, non-expert adult mediator. Stamp (2013) notes the striking similarity between Mitra's mediator and Ranciere's ignorant schoolmaster: "she teaches what she does not know; but also, and perhaps more importantly, she dissociates two functions (and faculties) that are bound up in all forms of pedagogy: her knowledge (or intelligence) and her mastery (or will)" (p. 658). In other words, she does not limit the students' (and her own) capacity to learn to her own knowledge. The content is outside both her and her students, and her role is only to focus her will on supporting the students' exploration of the content.

Expansion of Rancière: Post-Critical, or "Thing-Oriented." Pedagogy.

Interest in Rancière, especially after Mitra's successes, have prompted an expansion of his pedagogical method in European educational philosophy. Pedagogues Naomi Hodgson, Joris Vlieghe, and Piotr Zamojski collaborated in 2017 to publish *Manifesto for a Post-Critical Pedagogy*. They propose a shift away from the subjective, "relativist" aspects of critical pedagogy and toward a defense of "education for education's sake: education as the study of, or initiation into, a subject matter for its intrinsic, educational, rather than instrumental, value, so that this can be taken up anew by a new generation" (p. 17-18). Hodgson et al. strive to de-emphasize the role of the pedagogues as "one who

is required to lift the veil” (p. 18) and instead promote a Rancièrian focus on the subject of education.

Vlieghe expands on this subject-focused pedagogy in what he calls “a plea for thing-centered pedagogy” (2018). Instead of focusing on the subjective relationship between the educator and the student that he perceives in Freire’s method, he proposes a focus on a transcendent “thing,” echoing the role of the text in Rancièr’s/Jacotot’s text. Indeed, he advocates for a traditional-seeming, content-focused pedagogy that places the subject at the center of pedagogy instead of the student but nevertheless displaces the centering of the teacher:

[Rancièr] allow[s] for transcending the whole opposition between teacher- and student-centeredness. A Rancièrian concept of education is thing-centered. This is to say that, when a teacher draws attention to something, it is the thing (the subject matter, the object of study) which gets authority over both student and teacher. (p. 923)

Through this thing-oriented pedagogy, Vlieghe hopes to discover “an education that is not so much driven by the needs and interest of learners as it is by the attention and care about the world” (p. 925). The “thing” pulls both students and teachers outside of themselves and orients them in critical dialogue with the world around them, not only informing them of the necessity of critique and transformation, but also of their own ability to participate in their own world. Vlieghe proposes that this “thing orientation” is the central difference between Freire’s and Rancièr’s pedagogies (though, as we have seen, Vlieghe’s “thing” is remarkably similar to Freire’s “untested feasible” content).

Several other scholars have noted the similarities and points of contention between Rancière and Freire's projects. Galloway (2012) finds that Rancière addresses several key issues in Freire's theory, most notably the impossibility of a truly equal relationship between student and teacher. Biesta (2010) notes the differences between Rancière's and Freire's political understanding of emancipation, and suggests that Rancière's method places the student in a greater position of control over his emancipation than Freire's. Lewis (2010) explores the decentering event of the subject/thing in both pedagogies and grounds both thinkers' philosophy of education in the tradition of continental philosophy. Though none of these scholars explore the practicality of either method or its relationship to labor issues such as burnout, they all enforce the connections between critical pedagogy and universal learning, thus grounding Freire's and Rancière's theories in the realm of applicable praxis.

Conclusions

Despite ample evidence for the existence of teacher burnout, there is remarkably little research on the impact of labor practices on teacher exhaustion, depersonalization, or efficacy. The most frequently studied and prescribed interventions to teacher burnout are resilience-building practices that emphasize individual psychology over material/external factors such as labor hours, workload, working conditions, and resource access. What research exists on material and external factors typically focuses on institutional practices that exist above and beyond the individual capacity of teachers to transform their experience of their labor; in other words, there is a dearth of research on burnout interventions that exist within a teacher's actual work (that is, teaching). Multiple

studies suggest that further research is required to better understand the impact of teacher labor practices on burnout, but to date very few such studies have been conducted.

Overwhelming consensus concludes that teacher and student autonomy are critical factors in alleviating teacher burnout. Mixed-methods qualitative analysis by researchers such as Santoro similarly conclude that the way teachers teach has a major impact on teacher retention, satisfaction, and capacity. Teaching practices that encourage autonomy for both teachers and students, while simultaneously reducing material conditions for exhaustion, cynicism, and inefficacy, are likely to reduce rates of burnout.

Teaching practices based in critical or post-critical pedagogy are one possible solution. Critical pedagogy aims to increase student and teacher autonomy with the ultimate goal of political transformation and student empowerment. The methods of so-called post-critical pedagogy, particularly thing-oriented practices defined as universal learning by Jacques Rancière and reflected in field work led by Sugata Mitra, provide promising opportunities for educators with limited resources, time, and general capacity. Is it possible that an 18th-century European strategy, born out of limited resources and self-reported “ignorance,” could be an effective intervention against 21st-century burnout in an American high school? My personal anecdotal evidence suggests *yes*. In order to test this hypothesis, then, it is necessary to construct a study that imitates the conditions described in Rancière’s text and that can be accurately measured by mixed-methods quantitative and qualitative measurements.

In the next chapter, I will outline the methodology for a field experiment that explores the efficacy of Rancière’s universal learning strategy as an intervention against teacher burnout at a project-based-learning secondary school. This research attempts to

answer the question, *What is the impact of universal learning strategies on teacher burnout in a project-based secondary school?* I will describe the specific strategy as adapted for the setting school, define the setting and participants, and describe the research methods and data-collection tools. Furthermore, I will explain my decision to use the Oldenburg Burnout Inventory (OLBI) instead of the more commonly used Maslach Burnout Inventory (MBI) as my primary method for quantitative data collection. I will also discuss my data analysis strategies and address potential ethical issues that arise in a school-based study.

CHAPTER THREE

Research Methods

Introduction

As explored in the preceding literature review, burnout is a pervasive and heavily researched condition among working teachers. Though a wide array of interventions have been studied and proposed, existing literature emphasizes resilience-building strategies that focus more on teacher psychology and less on the actual work of teaching. Though these interventions have demonstrated some success in temporarily alleviating the experience of burnout, they do not address the overlapping conditions variously labeled “demoralization” (Santoro, 2017), “alienation” (Karger, 1988), and “overwork” (Carton, 2016). I can add here my own experience as a working teacher: though various resilience-building trainings have been helpful for in-the-moment stress-relief, no amount of mindfulness practice can change the fact that often, as a teacher, I am asked to do things that are outside my physical, emotional, and (perhaps most critically) temporal capacity. In other words, despite enjoying my work and engaging in a variety of resilience-building practices, I am concerned that I might eventually burn out.

This concern has encouraged me to explore labor practices that minimize factors that positively predict burnout (i.e. irrational thinking, obsessive passion), maximize factors that negatively predict burnout (i.e. student/teacher autonomy, student engagement), and reduce workload. This personal interest reflects the stated necessity in burnout literature (Iancu et al., 2018) for more research on practice-based burnout interventions. Due partially to personal interests and politics, and partially to correspondence between researched burnout factors and the stated intentions of

educational theorists, I have turned to post-critical pedagogy theory as a source of praxes that could potentially prove to be effective interventions against teacher burnout. New thinking from post-critical pedagogues (particularly Vlieghe, 2018) and interpretations of the continuing research of Sugata Mitra (Stamp, 2013) emphasize “thing-centered” pedagogy as a resource-limited, autonomy-/engagement-focused teaching practice. “Thing-centered” pedagogy is perhaps best encompassed by Jacques Rancière’s interpretation (1991) of Joseph Jacotot’s Universal Teaching. Though Rancière and others have proposed universal learning as an effective teaching strategy that increases autonomy, increases engagement, and decreases workload, the impact of its practical application has yet to be formally researched.

The research question guiding this study is, then: *what is the impact of universal learning practices on teacher burnout in a project-based-learning secondary school?*

Burnout is a pervasive issue for teachers at all levels, and proposed interventions have demonstrated limited efficacy. It is necessary, therefore, to explore unstudied burnout intervention practices to determine their potential impact. We are nearing the point when questions about best practices are no longer enough. We must ask instead: what must we do to continue? If a teaching practice demonstrates the potential to reduce teacher burnout, then it is necessary to explore how and why it does so.

I hypothesize that universal learning demonstrates the potential to be an effective teaching method that minimizes the conditions that cause burnout. I propose, therefore, that it is beneficial to create and execute a formal study that explores its efficacy and impact. This chapter will explicate the methods for performing this study. I will explain the research paradigm and the rationale behind my choice of methods. I will then

describe the setting and participants of my study, with an emphasis on the particularities and limitations of my school setting. This will be followed by a description of the research process, including methodology, research tools, and data-analysis methods. This description will clarify the intent and boundaries of my study, which will allow for a better understanding of the results, their limitations, and their relevance for further research.

Research Paradigm and Rationale

Psychological studies most frequently measure teacher burnout using the Maslach Burnout Inventory - Educators Survey (MBI-ES), a quantitative survey that produces a score in the three traditional dimensions of burnout (emotional exhaustion, cynicism, inefficacy). As my study intends to explore burnout factors from a materialist-informed labor perspective, I have opted for a mixed-method study that uses the Oldenburg Burnout Inventory (OLBI) instead of the MBI-ES. A mixed-methods study allows me to measure the quantitative impact of Universal Learning via analytical methods in addition to qualitative reporting ascertained through teacher surveys and interviews.

Following criticism from Kirstensen (2005) and others, I am wary of overemphasizing the results of burnout inventories; therefore, it is necessary to conduct teacher interviews and surveys, which, as Creswell and Creswell have indicated (2018), can better incorporate individual perspectives. This is especially necessary due to the particularities of this study's setting (described below); quantitative data cannot clearly convey the unique circumstances of teacher labor in a non-traditional school such as the school setting in question. Nevertheless, the OLBI is a useful tool for data-driven analysis in that it allows for a regression model in conjunction with the impact of Universal

Learning on various material aspects of teacher labor. This practical data, in addition to teacher interviews, will provide a complex portrait of Universal Learning's impact on burnout in a complex school: data that, though hardly universally applicable, can provide insight into the particular complexities of any school setting.

Setting and Participants

This study was executed at a charter school in St. Paul, Minnesota. The school is a teacher-powered, project-based-learning (PBL), grades 6-12 charter school with approximately 250 students. Each of these descriptors make the school a particularly interesting setting for research on pedagogy-based burnout intervention. As a teacher-powered school, the school has no centralized administration; as there is no administration beyond collective governance, teachers have considerably more autonomy than at a typical school. As a PBL school, teachers spend less time teaching subjects in their area of expertise and more time supporting student projects in areas with which they are relatively unfamiliar. This is especially true of special education staff, who make up approximately half of the faculty (over 50% of the school's students receive special education services). Special education teachers work with a broad array of students on a broad array of subjects, often with little subject-area training, preparation, or context. As a 6-12 school, the setting school has a relatively broad array of student needs, and therefore a broad array of teachers, many of whom support students of all ages (the school is structured on an advisory model that includes students of all grade levels; the middle- and high-school advisories are separate, but special education staff and many subject-area teachers serve students in both age ranges). As a relatively small school, staff are expected to be familiar with nearly every student in the school, and frequently find

themselves developing teaching relationships with students through responsibilities that extend beyond their licensure-area focus.

All of these factors produce unique conditions both for burnout and for the prevention of burnout. The school offers considerable freedom for teachers to avoid labor conditions that tend to cause burnout, and to seek out practices that alleviate it. It is easier, for example, for a teacher to take a brief break (mental-health-oriented or otherwise) than it is for a teacher at a traditional school who is expected to monitor and teach six 50-minute classes a day. Conversely, the expanded responsibilities, reduced boundaries, and intensely relationship-driven pedagogy of the setting school produce abundant opportunities for overwork and emotional exhaustion. Teachers are responsible for creating and maintaining their own schedule, curriculum, and administration. Without implementing practices that reduce conditions for burnout, teachers are at a potentially heightened risk for burnout. Nevertheless, teachers at the school have more flexibility to alter their practice in ways that both reduce burnout factors and incorporate interventions against burnout.

In order to create a varied sample that incorporates all aspects of this unique setting, I selected 10 staff members from a variety of teaching positions. For reasons that will become evident below, I opened participation to all staff except licensed science teachers. My intent was to include at least 50% special education staff, with an even distribution of licensed special education teachers and paraprofessional education assistants (EAs). The remaining participants were intended to be general education teachers (*advisors*, in the school's parlance) whose work, in addition to teaching license-area content, focuses on supporting projects and coursework in all subject areas. I

invited applicable staff to express interest in a study, to be conducted the following school year (2022-23), at a June 2022 all-staff meeting; I invited additional participation via follow-up emails sent throughout the first half of the summer. By August 2022, 10 staff members had agreed to participate: five special education teachers, three general education advisors, and two special education EAs. 60% of participants identified as female; 30% identified as male, and 10% identified as using they/them pronouns. All participating teachers identified as white. Their teaching experience ranged from one to 27 years; their employment at the setting school ranged from zero (hired for the start of the 2022-23 school year) to 21 (the year of the school's founding).

Procedures

This study was approved by the Hamline University Institutional Review Board in July 2022. Teachers who expressed interest were sent confirmation emails; all 10 teachers formally agreed to participate. In August 2022, participating teachers were sent a pre-survey which included an OLBI questionnaire, a study-specific survey, and a document for longer-form responses (accompanied by the option for a phone interview, if preferred). Teachers were asked to answer with regard to their work attitudes and labor practices as of the end of the 2022 school year. The survey included the following questions:

- What does burnout feel like for you?
- What, if anything, about your work energizes you?
- What, if anything, about your work at [school] causes you to feel burned out?
- What practices, if any, do you engage in to combat burnout?

- How many hours a week do you spend on the following: lesson planning, actual teaching in your subject area, actual teaching outside your subject area, school governance/co-op duties, behavioral interventions, parent interactions, other?
- What resources do you use to support your teaching practice: internet videos/explainers, teaching/curriculum databases, pre-written curriculum, coworkers, community experts, student expertise, making things up on the fly, other?
- What subjects, in your license-area or otherwise, do you find yourself teaching that you feel particularly knowledgeable about?
- What subjects, in your license-area or otherwise, do you find yourself teaching that you feel particularly uninformed about?
- Do you feel responsible for teaching subjects about which you are not especially passionate or informed? If so, how do you feel about it? Does it cause stress?

The survey also included demographic and job-role questions.

In August 2022, I led participating teachers in a brief training on universal learning. This training included a brief summary of Jacotot’s original method, Mitra’s “Hole-in-the-Wall” experiment, Rancière’s interpretation of Jacotot, and the notion of a “thing-centered” pedagogy as proposed by post-critical pedagogues. The training then explained the core principles of Universal Learning: universal intelligence, explication/stultification, the necessity of teacher “ignorance,” and the goal of student/teacher emancipation. Universal Learning was presented to participants as the following steps:

1. Present the student with a “text” (e.g. a literal text, a video, an object).

2. Give the student time to “read” the “text” (e.g. literally read it, watch it, observe it).
3. Ask the student the following three questions: a. What do you see? b. What does it mean? c. What do you make of it?
4. If a student responds that they do not know, ask the student to “read” the “text” again (assisting them only by asking them to focus in on a smaller portion of the “text,” if necessary).
5. Do not explain the “text;” if a student does not understand, ask them to “re-read” the “text” or utilize connections/tools to which they have access.

Participating teachers were then given the opportunity to practice Universal Learning with each other to read and understand a complex physics text.

Participating teachers were asked to utilize Universal Learning when working with students on science classwork and projects over a nine-week period (11/7/22 - 1/19/23, not including winter break). Participating teachers were asked to use Universal Learning strategies whenever possible for the duration of the quarter, particularly when working with students on science projects or coursework. Science was selected as a focus area because it is a specialized subject with which few staff members, outside the science department, are intimately familiar; it is typically a challenging subject for students and unfamiliar teachers alike. When supporting students, they were asked to use Universal Learning methods: ask the student to “read” the required “text,” ask the student the three questions, and then instruct the student to complete the assignment (e.g., a worksheet), repeating as necessary until the work was completed. Participating teachers were asked to log their experiences weekly in the following categories: time spent preparing for science

teaching, time spent teaching science, number of student tasks completed, perceived efficacy (did the student learn?).

Participating teachers were asked to complete OLBI twice during the trial period: once at the beginning and once at the conclusion. Participants were also asked to complete a recorded interview along with their second OLBI survey. The questions for the concluding interview were:

- Describe your work this past quarter with regard to teaching unfamiliar material.
- How do you feel about teaching unfamiliar material?
- What are your “knee-jerk” strategies when teaching unfamiliar material?
- Why do you fall back on those strategies when teaching unfamiliar material?
- Did you use Universal Learning strategies this quarter? How often?
- Did you find Universal Learning strategies useful? Why or why not?
- How do you prepare for teaching unfamiliar material? How much time do you spend preparing?
- How has your experience of burnout changed between the beginning of this quarter and now?

Teachers were encouraged to answer the final interview questions as broadly as possible in order to collect a wide range of responses.

Research Tools

This study utilizes the Oldenburg Burnout Inventory (OLBI), a questionnaire created by Demerouti (2003). The OLBI consists of 16 questions that place participants on a two-dimensional burnout score (8-32 for each dimension, 16-64 overall score). I opted to use the OLBI instead of the more commonly used Maslach Burnout Inventory

(MBI) for several key reasons. First, the OLBI is shorter than the MBI and less burdensome for participants, an important factor to consider in a study whose participants are notably short on time. Second, the OLBI focuses specifically on the relatively materialistic dimensions of exhaustion and disengagement, as opposed to the MBI's more psychological focus on emotional exhaustion, depersonalization, and reduced personal accomplishment. The OLBI dimensions aligned more closely with my focus areas of workload and autonomy and created a better portrait of burnout in relation to labor practices than the MBI.

This study required no specialized data-collection tools. I collected quantitative and qualitative data using Google Forms, a free data-collection software incorporated into my study setting's email server. I recorded interviews using a smartphone audio recording. I manually transcribed these interviews to text and used word-processing software to analyze the data for keywords, themes, and patterns. I used simple data-processing software to analyze quantitative data.

Data Analysis

I collected three data categories for this study: OLBI scores, quantitative material data (frequency of strategy use, time spent teaching, time spent completing prep work, self-assessed teaching efficacy (did the teacher find that the student learned?)), and qualitative data regarding teacher experiences of burnout-adjacent factors with regard to use of universal learning. In conjunction with this data, I created a variety of regression models based on teacher-reported qualitative data, focusing especially on models that used burnout as an independent variable. I then created a regression model using each category of collected data as an independent variable against each dimension of burnout.

I examined the data for potential relationships between quantitative factors and burnout rates, with a specific focus on the correlation between time spent and burnout scores.

After transcribing and processing all survey/interview responses, I sorted responses by keywords and themes. Patterns I looked for included level of interest/perceived efficacy, level of perceived burnout, amount of perceived time spent, sense of student/teacher autonomy, and strategies employed when teaching unfamiliar material. After developing several thematic groupings, I averaged OLBI scores and other quantitative data within each group and compared them with the intent of finding further correlations between labor time, universal learning usage, and burnout.

Summary

Despite limited sample size and temporal restraints, the above methodology describes an approach to studying the efficacy of a practice-based burnout intervention in a high-school setting that extends beyond the limitations of burnout inventory testing. It demonstrates my intent to explore the impact of universal learning on teacher burnout in a secondary PBL school via a mixed-method study that incorporates quantitative data from both the OLBI and teacher self-reporting as well as qualitative data from teacher surveys and interviews. It accounts for the particularities of my school setting, but emphasizes the diversity of participants with hope that their data will provide useful information for other school settings, both traditional and non-traditional. I outline a research procedure that includes two surveys/interviews (initial and concluding), two concurrent OLBI questionnaires, and weekly data self-reporting from participants over a nine-week trial period. Finally, I present my data analysis methodology, emphasizing the diverse advantages of a mixed-methods approach to data collection in a school setting,

particularly with regard to a research focus that is both psychological in nature and material in cause. In the next chapter, I will report the findings of my study, as well as an analysis of the quantitative data and a breakdown of qualitative themes that appear in survey and interview responses.

CHAPTER FOUR

Results

Introduction

This study was conducted at a project-based charter school in St. Paul, Minnesota. As described in the previous methods chapter, 10 teachers (five special education teachers, three general education teachers, two special educational assistants) were selected to participate in a trial that included an initial survey, nine weeks of data collection, and a closing interview. The intent of the study was to identify contributing factors to teacher burnout in a secondary project-based-learning school and to test the efficacy of universal learning strategies as an intervention against burnout. I collected two broad categories of data for this study: self-reported causes/symptoms of teacher burnout, and self-reported use of pedagogical strategies when teaching unfamiliar material. I collected data using three tools: initial survey responses, closing interview responses, and pre- and post-intervention burnout scores as measured by the Oldenburg Burnout Inventory (OLBI). This data was collected at two intervals, first in October/November 2022 at the start of quarter two and second in January/February 2023 at the end of quarter two. In collecting this data, I attempted to answer the question: *how do universal learning strategies impact teacher burnout in project-based-learning secondary schools?*

Demographic Information

All participants in the study responded to a demographic survey distributed along with the pre-intervention OLBI questionnaire and the initial survey. All participants identified as white; six identified as female, three as male, and one identified as using they/them pronouns. As mentioned previously, five of the participants were special

education teachers, three were general education teachers, and two were special education assistants (EAs). Their teaching experience ranged from zero to 27 years; three had taught for over 20 years, three between 10 and 20, and four for less than 10. Table 1 displays demographic information against pre- and post-intervention burnout scores.

Table 1

Demographic Information and OLBI Scores

position	years of teaching experience	gender identity	overall OLBI score, pre-intervention	overall OLBI score, post-intervention
EA	1	male	--	35
EA	2	they/them	--	44
sp. ed. teacher	3	female	--	42
sp. ed. teacher	7	female	44	38
sp. ed. teacher	9	female	--	--
sp. ed. teacher	14	female	--	40
sp. ed. teacher	18	male	39	42
gen. ed. teacher	24	female	36	34
gen. ed. teacher	26	male	34	32
gen. ed. teacher	27	female	29	28

Burnout Inventory Scores, Initial

Five out of 10 participants completed the OLBI questionnaire and reported their initial burnout inventory scores; participation was negatively impacted by an influx of additional staff surveys and the general overwhelm of the beginning of the school year. The OLBI consists of 16 statements, eight regarding exhaustion (experiences of tiredness, reduced drive, and energy depletion) and eight regarding disengagement (experiences of dissatisfaction, inefficacy, and cynicism/disinterest). Participants are asked to respond to

each statement on a scale of 1-4 (strongly agree to strongly disagree). The lowest possible OLBI score is 16 (8 exhaustion, 8 disengagement); the highest is 64 (32 exhaustion, 32 disengagement). There is no clinical consensus on what OLBI scores qualify as low, moderate, or high burnout; the most simplistic reckoning of these scores considers the lower third of possible scores (16-32, mostly 1s and 2s) as low, the middle third (33-48, mostly 2s and 3s) as moderate, and the upper third (49-64, mostly 3s and 4s) as high.

Initial OLBI scores ranged from 29 to 44. With the exception of one, all burnout scores fell within the middle third of possible burnout scores (33-48) indicating moderate burnout. No scores fell into the “high” range (49 or higher); one, 29, fell into the “low” range (32 or lower). Disengagement scores ranged from 12 to 19; exhaustion scores trended higher, ranging from 13 to 25.

All but one participant answered “strongly agree” (indicating low burnout) to the statement “I always find new and interesting aspects in my work.” More than half of participants answered “strongly agree” (indicating high burnout) to the statement, “During my work, I often feel emotionally drained.” A majority of participants responded “agree” or “strongly agree” to the statement, “After my work, I usually feel worn out and weary.”

Though the sample size was too small to determine major trends in the initial burnout inventory scores, special education teachers universally scored higher than general education teachers.

Initial Survey Results

Of the 10 teachers selected for this study, seven responded to the initial survey; as with the pre-intervention OLBI questionnaire, participation was negatively impacted by

the confusion of the beginning of the school year, as well as several other staff surveys that were distributed at the same time. The survey was broken into four sections: burnout, use of time (inside and outside of the workplace), responses to unfamiliar teaching subjects, and demographic information.

Burnout

Participants were invited to respond to questions about burnout with open-ended written responses; no leading suggestions or multiple choice options were provided.

In response to the question “What does burnout feel like to you?” participants provided a wide variety of responses. Significant themes include exhaustion (43% of responses), discouragement/hopelessness (57% of responses), physical responses (43% responses), and decreased work ability (43% of responses).

In response to the question “What, if anything, about work energizes you?” 100% of respondents mentioned teaching and working with students as a major energizer. Seventy-one percent of responses specifically identified student learning or progress. Respondents said they felt energized when “helping students to discover their gifts,” “connecting with students, especially when they have ‘aha’ moments in their research,” and “seeing the times they grasp something.” Forty-three percent of responses also identified collaboration with colleagues as an energizing factor.

In response to the question “What, if anything, about your work causes you to feel burned out?” participants provided diverse responses. The most frequent theme was overwork, mentioned by 57% of respondents. Representative responses discussed “having more work than is possible to do during my contracted hours,” “feeling unable to

keep up,” and having “too many little tasks [...] the list will never be finished.” Other themes included parent/family interactions (43%) and staff conflicts (43%).

The question “What practices, if any, do you engage in to conquer burnout?” elicited notably diverse responses. Indeed, the only commonality of the responses was that none of them related to workplace practice: all responses involved activities and practices outside of work. The only responses that mentioned work at all discussed work/life boundaries and workplace attitude (“I try to let go”).

Use of Time

Participants were asked to provide numerical estimates (hours per week) for four workplace practices: teaching within their license area, teaching outside their license area, prep time, and behavior intervention. All four questions elicited a wide range of responses. It was difficult to isolate any trends due to the small sample size and the wide range of responses.

Participants reported between four and 40 hours spent teaching within their license area, and between zero and 6 hours teaching outside their license area (43% reported zero). Due to the nature of project-based learning, which requires all teachers to spend a large portion of their day supporting learning outside their license area, this range might indicate confusion about the intent of the question, suggesting that this data should be disregarded. Questions regarding prep time and behavioral interventions elicited more focused responses. Participants reported between .5 and five hours of weekly prep. Participants reported between three and 10 hours per week spent on behavioral interventions, with one major outlier (25 hours). The small sample size and wide range of these responses made it difficult to draw conclusions regarding teacher work time and its

relationship to burnout, though a clear positive correlation between prep time and OLBI score emerged. The results of these questions in conjunction with OLBI scores are displayed in Table 2.

Table 2

OLBI Score Against Time Spent

pre-intervention OLBI score (overall)	time spent, subject-area	time spent, unfamiliar	time spent, behavioral	time spent, prep work
29	4	6	3	.5
34	5	5	26	2
36	4	4	4	2
39	--	--	--	4-5
44	30	0	10	5
--	--	--	3.5	--
--	30-40	0	10	--

Unfamiliar Subjects

Clearer patterns emerged when teachers were asked about resources used to support teaching practice. One-hundred percent of respondents reported that they rely on coworker expertise, community experts, and student expertise. Eighty-six percent of respondents reported “making things up on the fly” or similar improvisatory responses. Fifty-seven percent of respondents reported internet videos/explainers as a useful tool; less than half of respondents reported teaching databases or pre-written curricula as useful resources.

Eighty-six percent of respondents reported science as an unfamiliar subject; this is unsurprising, as non-science teachers were the target of this study. Fifty-seven percent of respondents also reported math as an unfamiliar subject.

Fifty-seven percent of respondents reported that they felt responsible for teaching unfamiliar subject material. Of those respondents, 43% reported anxiety or discomfort regarding unfamiliar subjects: “I feel like I should know the information, but I don’t”; “I avoid it and feel shame about it and stress.” No respondents reported enthusiasm for teaching unfamiliar subjects, and only one respondent wrote of it at all positively (“I try to learn what I can and be positive when approaching the work”).

Trial Period Data

Participants engaged in a short training on universal learning strategies during the first week of the 2022-23 school year. In general, participants responded positively to the training and expressed curiosity about universal learning strategies. Participants were asked to record data for quarter two of the academic year. Participants were provided with a suggested spreadsheet for keeping data; only one participant elected to use the spreadsheet, while all other participants elected to collect informal data.

One participant resigned from her position one week into the trial period and left the teaching profession. As a result, the research pool decreased to nine participants after the first week of the trial. The resigned participant did not share any exit data, and did not collect any data related to universal learning, teaching unfamiliar subjects, or burnout. Though we cannot draw any conclusions regarding burnout or pedagogical interventions from this participant's decision to leave the teaching profession, it adds an interesting data

point to a study that, at least in part, explores factors impacting the decisions of teachers to stay in or leave the teaching field.

As a whole, usable trial period data was inconsistently collected by a minority of participants. Trial period data was therefore excluded from the results analysis. Though there is no formal data to analyze, it is amusing (or at least, telling) that in a study that intended to measure solutions to teacher overwork, nearly all of the participants elected not to add the additional task of weekly data collection to their workload.

Burnout Inventory Scores, Closing

Nine participants completed closing OLBI questionnaires. Closing burnout scores closely mirrored initial burnout scores, ranging from 29 to 44 with a median of 38 and a mean of 37.2 (compared to 28 to 44, median 36, mean 36.4). These scores indicate very little change in burnout as measured by the OLBI from October 2022 to February 2023. The greatest individual change was a four-point decrease from 44 to 38. As with the October 2022 data set, exhaustion scores generally trended higher than disengagement scores (14-25, mean: 20 vs. 14-21, mean: 17.2). Similarly, the divide between closing OLBI scores for special education vs. general education also mirrored the initial scores: the five highest overall scores were special education staff (four case managers, one EA). This disparity was even higher in exhaustion scores: all six participating special education staff scored higher than their three general education peers. Due to the incomplete sample size of the initial scores (and the small sample size of the pool as a whole) it is difficult to identify any trends in burnout changes over time from this data set; the data appears to be largely unchanged over the trial period.

Closing Interviews

As a whole, the closing interviews provided more comprehensive data, consistent themes, and noticeable trends than the initial surveys. Nine out of 10 participants participated in a closing interview; one participant, as previously mentioned, left the teaching profession partway through the study and did not participate in a closing interview.

All participants were engaged in their interviews and responded to inquiries with specificity and at great length. Interviews generally followed the format described in chapter three, with some modification for follow-up questions and clarification.

After completing the interviews, I scanned the transcripts for recurring ideas, terms, and phrases. I identified several clusters of key terms, and then scanned each transcript for relevant terms and color-coded relevant quotations within each interview. After several analyses, six key strategies emerged as responses to teaching unfamiliar subjects: student-led pedagogy, modeling, use of information technology (especially search engines), collaboration, prep time, and a strategy that I will label “positive ignorance”: in other words, the active unfamiliarity with a subject that is central to the Rancièrian understanding of Universal Learning. I assigned each teacher a score (0-2) for each strategy based on self-reported frequency of use (0: none; 1: infrequent/occasional; 2: frequent); these use scores against opening/closing OLBI scores are presented in Table 3. The overall average burnout score of teachers using each of the six strategies vs. the overall average burnout score of teachers not using the strategy are presented in Table 4.

Other prominent themes included causes of burnout and sentiments about universal learning as a pedagogical philosophy.

Table 3

OLBI and Strategy Use When Teaching Unfamiliar Material

closing OLBI score (w/ change over time)	student-led strategies	positive ignorance	modeling	information technology	expert collaboration	prep work
28 (-1)	2	1	0	0	0	2
32 (-2)	2	1	0	2	2	2
34 (-1)	2	1	2	2	0	2
35 (--)	2	2	0	0	0	0
38 (-6)	0	0	2	2	2	2
40 (--)	2	1	2	2	0	0
42 (--)	2	2	2	2	2	0
42 (+3)	2	1	2	0	2	2
44 (--)	2	2	0	2	0	1

Table 4

Average Overall OLBI Score Against Strategy Use

Strategy	Student-led	Positive Ignorance	Modeling	Googling	Collaboration	Prep Work
Average OLBI score, frequent use	37.125	40.3	39.2	38.3	38.5	34.8
Average OLBI score, infrequent use	--	35.2	--	--	--	44
Average OLBI score, no use	38	38	34.5	35	36.2	39

Strategy 1: Student Expertise

Nearly all (with the exception of one, 89%) participants mentioned student expertise in their closing interviews. Participants rarely went into great detail regarding student expertise and often fell back on the school “project process” as a catch-all phrase for student-led pedagogy; the general implication suggested that both staff and students were aware that student expertise was a necessary component of a project-based-learning education. Participants frequently invoked situations in which they were unfamiliar with the subject material and turned the learning experience over to the student’s guidance as a result. Representative quotes demonstrate this openness to student-led learning: "I let them take control in the academic part for themselves, because they know what they're talking about"; "I really believe in student-driven work being really transformative for a lot of kids"; "If I'm really lost, and the kid is cooperative, sometimes I'll ask them about what they know and, like, try to get them to explain more to me so that I can either figure it out or help them unlock what they need to know." Participants generally expressed the benefits of student-led learning, but also identified situations in which it was less effective. One teacher stated, “Sometimes you'll work with a kid who says [expletive] you; their vibe is not to join you on the journey of learning." Another invoked a particular student: “My most difficult student, who rails against the rules, he does best with clear and consistent expectations and careful communication, and everything needs to be structured for him." As a whole, the sample pool found student-led teaching to be a positive and energizing strategy for both teachers and students.

Strategy 2: Positive Ignorance

Nearly all (all but one, 89%) participants mentioned positive ignorance as an effective strategy when teaching unfamiliar material. "I mean, how else would you do it?" said one teacher. "You'd have to have encyclopedic knowledge of literally everything; I mean, who is that person?" Other participants invoked situations when directly faced with the need to say "I don't know": "I have to be honest when I don't understand something, be honest about when it doesn't work well"; "I'm always fine saying 'I don't know.'" Participants generally stated that they found at least some situations in which students benefited from teacher ignorance; several interviews noted, however, that there were some teaching situations that required advanced knowledge. Humanities work ("when I'm gonna be speaking to, like, power dynamics in our society") was cited in several interviews as an area that required a more informed background than math or science.

One teacher noted the temptation to pretend or make up answers in unfamiliar situations, and noted the value of combatting that impulse: "There's always an inclination to pretend that you know what you're talking about. And that's where you get into trouble. That's where I've gotten into trouble as a teacher." He stated that he has become a better teacher since learning to embrace positive ignorance. Other participants noted the lure of familiar materials and the value of attempting new or unfamiliar subjects.

Participant reports about the relationship between burnout and positive ignorance were particularly notable. Several participants noted the benefits of positive ignorance as an intervention against overwork: "If I worried about teaching everything I didn't know - like, preparing for everything - I would have no time in the day"; "I would go bonkers if I

did [prep work].” Other participants identified positive ignorance as an intervention against anxiety and related overwork: “It allowed me more, I guess, grace with myself.” One teacher discussed a teaching session at length, noting the impact of positive ignorance on both his own anxiety and that of his students:

I felt very overwhelmed [...] and not confident at all that I could help guide the students through [a text]. So I came into class, and I’d first be transparent about that, but then came back to the [universal learning] questions and focused on the principles [...] Then we went meta: presence over prep; how I was not particularly prepared, and in many ways none of them are prepared, so we just have something to read and we have to be present.

Overall, participants found positive ignorance to be beneficial both to students as a pedagogical tool and to teachers as an opportunity to re-engage and step away from overwork. Though most participants agreed that positive ignorance was not an ideal strategy in every teaching situation, they noted its benefits as a work reducer, a stress reliever, and an opportunity to re-engage in the learning process alongside students.

Strategy 3: Modeling

Fifty-seven percent of participants mentioned modeling as a useful pedagogical tool in unfamiliar teaching situations. Modeling was especially referenced in conjunction with other resource-based strategies, i.e. use of information technology and collaboration: “Modeling, ‘what are your tools?’ I grab a book, I find an index, I figure out what chapter they’re on”; “What do good readers do? How do I model that for students? [...] Students need to practice that all the time, even when they’re confident readers. I think struggling readers don’t realize that really good readers do that too; and that’s okay”; “They see us

figuring it out, too. I think modeling is [...] extremely important to the learning process”; “[...] they’re watching me learn and I learn along with them.” Modeling was generally identified as an impromptu teaching opportunity rather than an intentional, pre-planned strategy; teachers did not describe constructed modeling lessons, but rather described positive responses to moments of ignorance or unpreparedness as unintentional instances of modeling. In other words, modeling was described less as an active strategy than as a passive opportunity that arises when teaching unfamiliar material.

Strategy 4: Information Technology (“Googling”)

Sixty-seven percent of participants mentioned using information technology, particularly search engines (“Google,” “Googling”) as a useful pedagogical tool in unfamiliar teaching situations. Google was frequently mentioned alongside modeling and identified as an opportunity to model research skills (“Googling is a skill”). Participants expressed using information technology in front of students as a modeling opportunity, alongside students as a co-learning opportunity, and away from students as a quick prep opportunity.

One teacher, who earned the lowest overall burnout score in both the initial and concluding questionnaires, explicitly discussed *not* using search engines when confronted with an unfamiliar subject: “I’m trying a new thing where we don’t Google for 10 minutes, and we just come up with our own questions and answers to things and then try to follow up on those. That’s my new life plan: no Googling.” This perspective on information technology was unique to one teacher and was not reflected in any other closing interviews.

Strategy 5: Collaboration

Forty-four percent of participants mentioned collaboration with expert colleagues as a useful tool when confronted with an unfamiliar subject. “When I’m on uneven footing, I try to be honest about it; I try to find another person to help me about it,” reported one participant, whose response reflected the general sentiment of other collaborators. Participants tended not to elaborate on collaboration as a strategy, but generally noted it as a positive, stress-relieving practice. “Teaming with people is really fun because you get to see them do it up close,” stated one teacher. “Support and affirmation from coworkers helps reduce the burnout,” stated another.

Strategy 6: Prep Work

Sixty-seven percent of participants mentioned prep work as a useful intervention against unfamiliar teaching situations. Contrary to expectations, many participants discussed prep work as an energizing, enjoyable practice and wished they had more time to engage in it. “Prep work around teaching is actually invigorating for me”; “I feel like prep is maybe the most fun thing to do”; “It is energizing when I do the [prep work] and it all works out perfectly”; “I do like doing it. I do have a plan. This is going to be okay.” Several participants described projects that they supported or classes that they taught at great length, and identified moments of their prep time that they found notably exciting or refreshing:

During the school year, everything I read [...] many of the things I cook: it all ends up being about work. On some level. I try to make it work; at this point of my life this job intersects with my interests pretty closely. [It helps] pull me out of a rut. It’s a thing that brings me happiness, but it’s a thing that’s for work.

Despite requiring a significant amount of time outside regular work hours, 55% of participants identified prep work as a favorite part of their job.

Attitudes toward prep work were not, however, universally positive. Several responses identified prep work as an unpleasant but overall beneficial component of teaching: “I guess it takes more [time/energy] than I want it to. But I do it because it makes things easier;” “I try to do research. I think that’s kind of a mixed bag”; “[Prep work] the night before I teach: that’s not enjoyable.” Other responses identified prep work as potentially beneficial but too difficult to complete due to energy/time restraints: “I don’t prepare. I think that would mean that I would have to kind of keep up with what’s happening in math and science class [...] but I don’t do that”; “If I worried about [...] like, preparing for everything . . . I would have no time in the day.”

Closing Interviews: Other Trends

Though participants mostly discussed strategies for teaching unfamiliar materials in their closing interviews, several other trends arose. Participants discussed their experience at burnout at length. Participants also discussed their impressions of universal learning as a pedagogical philosophy.

Burnout. When asked about their comparative sense of burnout at the time of the closing interview (late January, early February) and the beginning of the trial period (late October, early November), 22% of participants explicitly stated that they were feeling burned out. One-third (33%) of participants explicitly stated that they felt less burned out than at the beginning of the trial period: “I feel really good right now”; “Honestly maybe less [burned out]”; “A lot better.” The remaining 44% gave ambiguous answers; three of these ambiguous respondents (75%) cited seasonal or annual cycles as a contributing

factor (“It’s also the beginning of February”; “It does feel worse at this point in the year, every year”; “I think there’s a real natural progression around stress for teachers”).

Overall, 33% of respondents cited “winter” or “the weather” as a contributing factor to burnout (“It coincides with seasonal affective disorder in this part of the country”; “It’s terrible weather outside”). Forty-four percent cited external factors (taking a class; life challenges outside of work; lack of exercise) as contributing to burnout; 44% cited school-related factors (special education work, student behaviors, administrative duties). Only one participant described no increase in burnout or increase in factors contributing to potential burnout whatsoever; perhaps unsurprisingly, this teacher scored lowest on the OLBI questionnaire at both initial and closing intervals.

No participants discussed teaching practice as a contributing factor to burnout; several stated the opposite. “Learning is never something that makes me feel burned out”; “My burnout does not have to do with my instructional piece. That’s not my concern”; “[My burnout] is not connected with what we did [practicing universal learning strategies].” Participants offered a variety of responses to inquiries about teaching practices and their impact on stress and burnout. “Everything is chaotic; we’re trying to do so much in so little time with so many kids;” “Pressure can make it hard to learn and hard to perform;” “I feel like I don’t have enough foundation to let myself go. I can’t really swim; as soon as I can’t feel the bottom, then I feel like I’m way too focused on the wrong things”; “[I feel] anxious. And under-qualified.” Lack of student engagement came up several times: “I’m struggling in class, because it does demand a curiosity. And that fountain feels a little dry right now. I don’t know how we cultivate that”; “The burnout really comes from trying to teach the same thing over and over again with the student

when I've learned the thing 50 times but the student has still yet to engage with me.” Though every participant discussed aspects of teaching unfamiliar material that caused stress, anxiety, or burnout, every participant discussed at least one intervention that led to positive student and teacher outcomes. None expressed an overall negative attitude toward teaching unfamiliar material; this differed from initial survey responses, which presented generally negative views of teaching unfamiliar material.

Responses to Universal Learning. Participants expressed almost universally positive (89%) sentiments regarding universal learning as a pedagogical philosophy; no teachers expressed negative sentiments, and only one expressed neutrality (“I did not [use universal learning strategies] [...] I'm sure they would have been very useful if I did.”) Of the participants who did use universal learning strategies, 100% expressed that the strategies were already in line with their general philosophy of teaching: “The way you described it seemed to sort of line up with the way that I was approaching things”; “Well, the strategy that you [showed us] [...] I think I do have to do that every day”; “I think the [project-based-learning] project process in general is [...] pretty compatible with the idea of universal learning.” Three participants initially expressed doubt that they had used universal learning strategies during quarter two, and then described responses to unfamiliar teaching subjects that directly aligned with universal learning strategies. Most participants who used universal learning strategies described following the spirit, but not the exact practice, of the universal learning questions; only 33% of participants explicitly described using the universal learning questions. Of the participants who described their use of the questions, two (both EAs) described using them in impromptu teaching situations; one (a general education teacher) described incorporating them into the

structure of his course. All three described the questions as useful, both as a labor-saving strategy and as a pedagogical tool.

Analysis

Qualitative data from opening and closing interviews was compiled in a data-processing program and sorted against OLBI scores as well as limited data regarding time use. As stated previously, self-reported strategy use in unfamiliar teaching situations was given a score of 0-2 (0: no mention of strategy in interview; 2: discussion of frequent strategy in interview). After several iterations, patterns began to emerge when data was grouped into below-mean closing burnout scores (below 38, “low burnout”) and above-mean burnout scores (38 and above, “high burnout”). With this sorting in place, I was able to analyze the data with regard to burnout over time and the correlation of various strategies with closing burnout scores.

Burnout Over Time

No patterns emerged demonstrating a correlation between pedagogical practices and burnout overtime. As previously noted, burnout scores were largely unchanged from October to February. The average overall score increased marginally; in closing interviews, three teachers cited "winter" or "the weather" as a major contributor to burnout, so this marginal increase is unsurprising given the timing of the trial period.

As discussed previously, several participants specifically stated that instruction has no impact on burnout for them, and one teacher specifically cited universal learning strategies as contributing to decreased burnout. However, none of these participants demonstrated a significant decrease in overall burnout scores. In fact, the one participant who demonstrated a significant decrease in burnout (42 to 38) was the only participant

who explicitly *did not* use universal learning strategies. Nevertheless, we cannot draw any conclusions from this limited quantitative data. Qualitative statements from closing interviews demonstrate positive attitudes toward the relationship between universal learning and burnout in 67% of participants and no negative attitudes toward the relationship between universal learning and burnout. These statements indicate the possibility of an inverse relationship between use of universal learning strategies and burnout, but the relationship is not supported by OLBI scores.

Strategies and Burnout

Though teaching strategies appear to have no impact on burnout over time, there does appear to be a correlation between use of certain strategies and OLBI score. Higher OLBI and self-reported burnout tended to correlate with one set of strategies (modeling, collaboration, and use information technology), while lower OLBI scores and self-reported low burnout tended to correlate with another (prep work). Student-led pedagogy and positive ignorance, the two strategies most associated with universal learning, had less correlation to burnout scores but trended slightly toward lower burnout.

In order to better understand the correlation between burnout and teaching strategies, participants were divided into two groups: closing OLBI score falling below the mean (37.2) and scores falling above the mean. The below-mean, “low burnout” group consisted of four participants with OLBI scores ranging from 28 to 35 (average 32.25); the above-mean, “high burnout” group consisted of five participants with OLBI scores ranging from 38 to 44 (average 41.2). Each group was then assigned an average use score for each strategy based on the average use score of all members of that group.

In general, the low burnout group scored significantly higher in prep (1.5 vs. 1) and somewhat higher in student-led (2 vs. 1.6) and positive ignorance (1.25 vs. 1.2). The high burnout group scored significantly higher in modeling (1.6 vs. .5), information technology (1.6 vs. 1), and collaboration (1.2 vs. .5). If student-led strategies are considered the dominant model for teaching unfamiliar subjects in this setting regardless of burnout, we can perhaps identify two sub-categories of participants: low-burnout preppers vs. high-burnout Googlers/modelers/collaborators. Though this categorization at first appears reductive, the correlation between low burnout and prep work vs. high burnout, information technology, and modeling holds true over several methods of analysis. Above-mean burnout correlates with either modeling or Googling 100% of the time, vs. 50% for below-mean burnout. 80% of high-burnout participants use Google, and 80% of high-burnout participants use modeling; 60% use both strategies. In contrast, only 25% of low-burnout teachers use both strategies; only 25% use modeling, and only 50% use Googling. In converse, 75% of low-burnout participants note using prep work as a strategy, vs. 40% of high-burnout teachers who use it frequently and 20% of high-burnout teachers who use it rarely (60% overall). This data aligned with reported prep work hours: low-burnout participants averaged three hours of prep work daily, vs. high-burnout participants' two.

No such strong patterns with regard to positive ignorance. Though 100% of low-burnout participants reported using positive ignorance on at least some occasions vs. high-burnout participants' 80%, only 25% of low-burnout participants reported using it frequently, vs. 40% of high-burnout participants. Positive ignorance can be regarded similarly to student-led pedagogy, then, as a relatively neutral practice in this setting.

Trends in Strategy Discussions: Prep Work vs. No-Prep Strategies

As indicated above, two significant trends arose when strategies were sorted for high burnout and low burnout. Low burnout participants tended to engage in prep work at a significantly higher rate than high burnout participants. Contrastingly, low burnout participants tended to engage in Googling, collaboration, and modeling at a lower rate than high burnout participants.

Prep Work. Participants who reported that prep work was a significant part of their teaching strategy and who actively made time for prep work demonstrated significantly lower rates of burnout than teachers who did not (mean overall OLBI score 34.8 vs. 39). This data suggests a clear correlation between prep work and low burnout. Teacher statements about prep work reflected this correlation: “It’s a thing that brings me happiness.” “The research invigorates me;” “I feel like prep is maybe the most fun thing to do.” One teacher, who scored moderately high on the OLBI and stated that she rarely if ever engages in prep work, perhaps said it best:

I think knowing something or having some base knowledge in a thing makes a person feel a bit more competent, and competency is a good feeling in your job. Sometimes you go on a learning journey with a kid; and, like, you know that your competency has been taking them on that journey.

That the teacher who stated this does not regularly engage in prep work is telling; teachers who did not engage in prep work rarely discussed this as an active decision, but rather as the result of material limitation. The teacher who stated that prep work is “maybe the most fun thing to do” also spoke from a hypothetical perspective; she followed that statement by saying, “But given the, like, diverse and expansive demands

of this job, I feel like that is not prioritized when I have time and energy.” In other words, she would engage in prep work, *if she had more time*. Nearly every teacher interviewed expressed some form of this sentiment; they expressed that prep work is a necessary component of teaching unfamiliar material, and that lack of preparation leads to difficult, potentially high-burnout circumstances.

Prep work was viewed as positive in certain circumstances and unnecessary in other circumstances. A majority (62.5%) of participants who identified positive ignorance as a beneficial strategy also identified prep work as a beneficial strategy. These participants generally found a balance of prep work and universal learning to be a positive approach to teaching unfamiliar material. As one teacher put it: “I think there’s a place for [universal learning.] I also think there’s a place for having a structure and kinda knowing where you’re going, what you’re doing.”

No-Prep Strategies and Burnout. If prep work is the strategy that most correlates with low burnout, it would follow that strategies used by teachers who do not engage in prep work would correlate with higher burnout. However, this does not necessarily appear to be the case. No consistent patterns emerged when strategy-use frequencies were sorted by high prep work vs. no/low prep work: teachers who engage in prep work are about equally likely to engage in student-led teaching, modeling, Googling, and collaboration as teachers who do not or rarely engage in prep work. The only significant result of this analysis was a stronger correlation between high positive ignorance and no/low prep work than between high positive ignorance and high prep work (frequency score 1.75 vs. .8). As the correlation between burnout and positive ignorance is negligible, these results tell us very little beyond the fairly obvious

conclusion that a strategy contingent on little-to-no prep work is more regularly used by participants who do not engage in prep work than by teachers who do.

An analysis of strategy use sorted by high burnout vs. low burnout tells a different story. Higher burnout participants tend to use modeling, Googling, and collaboration at significantly higher rates than low burnout teachers, and positive ignorance and student-led pedagogy at somewhat higher rates. Even if these general results do not hold true when sorted for strategy correlations for individual participants, they do indicate a pattern. Strategies that require reactive, in-the-moment solutions to unfamiliar subjects have a stronger correlation with high burnout than those that do not. Even if this correlation has no clear interaction with prep work, it suggests an interesting conclusion: teachers who feel that they must react to unfamiliar material tend to experience higher burnout than teachers who do not.

Conclusion

Participants earning below the median burnout score tended to be less collaborative, less modeling-focused, and more prep-focused in their strategies; 25% of low-burnout participants scored a 1 or 2 in collaboration and modeling, while 75% of low-burned out participants scored a 1 or 2 for prep work. Participants earning above the median burnout score tended to be more modeling-focused and more prone to using information technology while teaching unfamiliar material; 75% of more burned out participants scored a 1 or 2 in both categories. High burnout participants were somewhat more prone to collaboration than less burned-out participants and less prone to prep work (50% in both categories).

A large majority (89%) of participants explicitly reported that they semi-regularly used Universal Learning strategies during quarter two. Three-fourths (75%) of less-burned-out participants reported using them regularly, vs. 25% of more-burned-out teachers. As a rule, the less-burned-out participants reported enjoying universal learning strategies regularly, while more-burned-out participants reported finding universal learning strategies useful only some of the time.

Though low-burnout participants tended to engage in prep work at significantly higher rates than high-burnout participants, no significant patterns emerged with regard to reported time spent on prep work. Closing interviews reported between zero and four hours of prep time, with two participants reporting innumerable amounts of prep work; these numbers closely mirror numbers reported in the initial survey. As a rule, high-burnout participants generally reported less prep time than low-burnout participants. Participants who regularly engaged in prep work averaged a significantly lower OLBI score than teachers who did not regularly engage in prep work. (34.8 vs. 39).

Burnout scores stayed mostly consistent over the course of the trial period. Participants who regularly used universal learning strategies experienced no greater or lesser change than teachers who irregularly used universal learning strategies; the individual largest decrease in burnout over time (four points) was, in fact, the only participant in the study who reported that she did not use universal learning strategies during the trial period.

As a pool, the participants found universal learning strategies to be a useful tool, especially when teaching unfamiliar material. They were less inclined to use universal learning strategies when teaching familiar materials, especially humanities. They

generally reported that universal learning was one of several useful strategies, but demonstrated limited feedback that indicated it had a major impact on teacher burnout. In the next chapter, I will explore what we can learn from this inconclusive data, and postulate next steps for better understanding universal learning's impact on teachers who are at-risk for burnout.

CHAPTER FIVE

Conclusion

Introduction

In this study I attempted to answer the question: *how do universal learning strategies impact teacher burnout in a project-based-learning secondary school?* Though the results of this study are far from conclusive, some patterns emerge that provide, if not demonstrable evidence of the efficacy of universal learning strategies as an intervention against burnout, then at least indications for areas of research into the relationship between pedagogical strategy and burnout, especially in teaching situations that involve unfamiliar subjects. In this chapter, I will present several of the key findings of this study, discuss what those findings might imply for teachers, and suggest how they could be applied to further research. I will also discuss some of the limitations of this study in terms of scope, practicality, and data collection/analysis.

Major Findings

One of my hopes for this study was that it would provide clear, quantitative data that demonstrated the material impact of universal learning in terms of burnout, especially with regard to exhaustion and time use. Due to a number of factors, this was not the case. Some of the clearest findings were some of the most expected: special education teachers tend to be more burned out than general education teachers; teachers with less experience tend to be more burned out than teachers with more experience; teachers tend to score slightly higher on the Oldenburg Burnout Inventory (OLBI) in February than they do in October. The study found no evidence that pedagogical strategies have a significant impact on burnout over time, and demonstrated no strong

correlation between time spent on prep work and burnout. These results align with previous findings from Iancu et al. (2018) that suggest a limited relationship between teacher burnout and burnout interventions. Though this study takes up Iancu et al.'s suggestion to explore professional development strategies, it does not indicate that professional development has a significant impact on burnout, thereby confirming the results of Iancu et al.'s meta-analysis. In terms of purely quantitative analysis, then, this study was largely inconclusive. A mixed-methods analysis, however - one that incorporates qualitative evidence derived from closing interviews in conjunction with OLBI scores - reveals some clear patterns regarding rates of burnout.

Prep Work and Burnout

As stated above, this study demonstrated no strong correlation between time spent preparing for teaching unfamiliar subjects and burnout. A different story arises, however, when OLBI scores are compared to teacher attitudes regarding prep work. As discussed in chapter four, teachers who reported that prep work was a significant part of their teaching strategy and who actively made time for prep work demonstrated significantly lower rates of burnout than teachers who did not (mean overall OLBI score 34.8 vs. 39); similar patterns were reflected in other analyses. A majority of teachers discussed prep work in a positive light and expressed a desire for more, not less, prep time; teachers who did not engage in prep work (and who tended to have higher rates of burnout) generally discussed an inability to devote more time to prep work due to temporal limitations. These findings at least partially go against the suggestion, in studies by Lee (2019), Schaak et al. (2020), and Skaalvik and Skaalvik (2018), that increased labor hours increase teacher burnout. At least one labor practice that requires an increase in labor

hours appears to correlate with decreased burnout scores. It would be irresponsible to conclude that increased labor hours have no impact on burnout, but these findings do suggest that the nature of the work taking place during those extended hours may have more impact than the amount of time it requires.

Though more research would be required to make a confident statement regarding burnout and prep time, these findings suggest a correlative, but not causative, relationship between prep work and burnout. A majority of participants discussed a desire to prepare their lessons, but only the less burned-out teachers managed to find the time and energy to do it. The more burned-out teachers, then, turn to other strategies to make up for their lack of preparation. As overall OLBI scores in this pool were significantly more impacted by exhaustion than disengagement (mean exhaustion score was 2.8 higher than mean disengagement score), the data suggests that prep work is not a cause of exhaustion, but a valuable intervention that teachers sacrifice due to lack of temporal resources.

No-Prep Strategies and Burnout

As discussed in Chapter Four, high-burnout teachers tend to use modeling, Googling, and collaboration at significantly higher rates than low-burnout teachers. Teachers who work independently (in other words, teachers who did not mention collaboration when discussing unfamiliar teaching situations), who do not rely on information technology to find fast answers (in other words, teachers who did not mention Googling or other internet solutions), and who do not consider modeling to be a significant component of their job as teachers (at least when working with unfamiliar material) tend to be less burned out than teachers who do consider collaborating,

Googling, and modeling to be a significant part of their job when teaching unfamiliar material.

What can we determine from this information? Once again, this study found no evidence of causation between use of non-prep strategies and high burnout. Rather, I found evidence suggesting that teachers who experience higher burnout (and, as stated above, higher rates of exhaustion) tend to be more reliant on ready-at-hand resources than teachers who experience lower burnout (and, again, lower exhaustion). Simply put, teachers who feel engaged and active in their jobs are less likely to feel the need to find a fast solution to an unfamiliar teaching situation than teachers who feel exhausted and unengaged. This relationship reflects Santoro's findings (2019) that suggest teacher demoralization occurs when teachers have less ability to engage in their jobs in a personally and professionally fulfilling way. It also reflects the findings of Cheon et al. (2014), Fernet et al. (2014), Benson (2022), and others that indicate a positive relationship between teacher autonomy and low burnout. Teachers who feel more autonomous in their ability to provide (or to not provide) a solution tend to experience less burnout than teachers who tend to rely on other sources (either colleague expertise or information technology).

This suggestion opens up a series of philosophical questions, many of which will be difficult to answer through empirical research. Are less burned-out teachers more comfortable with not knowing (and by extension, not providing) an answer? If so, is this comfort a result of low burnout, or a mindset that preserves it? Would high burnout teachers benefit from better embracing the unfamiliar, or allowing themselves "more grace," as one teacher put it, when presented with a teaching situation where they feel, as

another put it, “underwater?” How related is this phenomena to digital burnout, yet another arena in the vast and ever-expanding sea of burnout literature (recall the teacher who stated that her new teaching and life philosophy is “no Googling,” and who scored significantly lower on the OLBI than any other participating teacher)?

I find it far too easy to answer these questions with a response that suggests burnout to be the result of individual will, and I find it hard to believe that individualized strategies such as CBT and mindfulness - demonstrably suggested to be ineffective interventions against burnout (see Chapter Two) - could have a major impact on this data. Nevertheless, I find it interesting that Googling and collaboration, both identified in these interviews as strategic alternatives to prep work, are in some ways antithetical to positive ignorance, the most frequently invoked alternative to prep work and the strategy most directly related to universal learning. Universal learning emphasizes the embrace of the unknown, and requires a comfort in the collaborative student-teacher exploration that results from unfamiliarity. Perhaps nothing is less aligned with this pedagogy than relying on an AI-created result from a search engine, or seeking a definitive answer from the expert math teacher. Though this study found no definitive relationship between the use of universal learning strategies and burnout, it did provide some indication that this “fast answers” approach to unfamiliar subjects tends to increase teacher burnout. Perhaps universal learning could be proposed as an active intervention against the impulse to Google or to call in an expert - in other words, an active mitigation against teaching practices that tend to correlate with (if not actively bring about) high burnout. This line of thinking could expose a rift between Mitra’s advocacy for digital resources and Rancière’s, Vlieghe’s, and other post-critical pedagogues advocacy for thing-centered

ignorance, a counter that disrupts Stamp's suggestion (2013) regarding the similarities between Mitra's and Rancière's pedagogical approaches.

Universal Learning and Burnout

As stated above, there is no demonstrable correlation between universal learning strategies and burnout. Nearly every participant in this study used positive ignorance and student-led strategies when teaching unfamiliar material. Though there was a slightly higher correlation between below-mean burnout scores and universal learning strategies than above-mean burnout scores and universal learning strategies, the difference is insignificant. We can determine, then, that a large majority of teachers in at least one project-based-learning secondary setting use universal learning as at least one pedagogical option when teaching unfamiliar material on at least a semi-regular basis; however, this strategy has less of a relationship to burnout than other strategies mentioned in teacher interviews (most notably, prep time and modeling).

Despite the inconclusive nature of this aspect of the study, the data suggests two findings that, though underexplored, could provide potential opportunities for further exploration. These are: 1. frequency of strategy use and burnout, and 2. schoolwide impact of universal strategies on burnout.

Infrequent vs. Frequent Use of Universal Learning Strategies and Burnout.

Though 89% of participating teachers stated that they at least occasionally used universal learning strategies, they expressed differing degrees and frequencies of use for positive ignorance. Seventy-five percent of below-mean burnout teachers described an occasional or circumstantial use of positive ignorance vs. 25% of below-mean burnout teachers who described frequent use. On the other hand, only 40% of above-mean burnout teachers

described occasional or circumstantial use vs. 40% who described frequent use (20% of above-mean teachers did not use positive ignorance strategies). Looked at another way, the average burnout score for high-frequency positive ignorance users was 40.3 vs. 35.2 for lower-frequency users. Further research is required, but these means suggest that, though frequent use of positive ignorance strategies correlates to higher burnout, occasional or circumstantial use correlates with relatively low burnout. Perhaps a balance of prep work and positive ignorance, combined with the confidence and knowledge of when to use what, is a demonstrable mitigation against burnout. As one teacher put it, quite plainly: “I think there’s a place for it. I also think there’s a place for having a structure and kinda knowing where you’re going, what you’re doing.”

Schoolwide Impact of Universal Learning on Burnout. Though no strong correlations arose in this study due to the near-universal use of universal learning strategies within the participant pool, it is important to note that participant burnout scores as a whole are quite low. Two-thirds (66%) of OLBI scores fell at or below the possible median (40), and no scores entered the high range (49 or above). Though profession-wide averages are difficult to determine, these scores indicate a relatively low-burnout work environment in a high-burnout field. Though it would be irresponsible to attribute this relatively low burnout score to any one factor, it is notable that nearly all teachers in this low-burnout space were open to trying an unfamiliar, explicitly radical pedagogical strategy and frequently reported that it already aligned with their pre-existing teaching philosophy. Little can be determined due to the limited nature of this study, but it is inarguable that an overwhelming majority of participants responded positively to

universal learning, and that a large majority of participants demonstrated low to low-moderate rates of burnout.

Implications for Teachers

Despite the relative inconclusiveness of these results, we can derive some implications for teachers who are concerned about burnout and who are interested in exploring pedagogical strategy as a potential mitigation. This study cannot provide any data-driven evidence that universal learning is an effective intervention against burnout, but it perhaps demonstrates the potential utility of universal learning strategies for teachers who are already feeling burned out.

As discussed above, this study can only demonstrate a correlative relationship between burnout and pedagogical strategies. There are certain strategies that correlate with increased burnout, and there are certain strategies that correlate with decreased burnout. An immediate takeaway might be to assume that low-burnout strategies are useful for decreasing burnout, but we must consider the opposite: if a pedagogical strategy does not *cause* burnout, it could instead be an intervention that intends to ameliorate the effects of burnout caused by other factors. In other words, strategies like modeling, Googling, and collaboration might correlate with high burnout not because they increase burnout, but because they offer respite for teachers who are already experiencing burnout. They may even prevent that burnout from getting worse.

We can look to teacher interviews to better understand this possibility; do teacher self-reports demonstrate positive sentiments toward universal learning strategies as an effective mitigation against burnout? It is useful to return to responses from the four most burned-out teachers and their thoughts about the efficacy of universal learning.

One participant, a veteran special education teacher (OLBI score 42), identified the effectiveness of universal learning as situational. “I think I do have to do that every day [...] I have to be honest when I don’t understand something, be honest when it doesn’t work well [...] It changes the teacher-student power dynamic. So I think there’s a place for it. I also think there’s a place for having a structure and kinda knowing where you’re going, what you’re doing.” He found that universal learning was a useful strategy when used in conjunction with experimental prep work and highly structured environments.

Another teacher, a recently-licensed special education teacher (OLBI score 42), noted universal learning’s utility on a personal level. Regarding teaching situations in which she was unfamiliar with the material, she stated, “[Universal learning] allowed me more, I guess, grace with myself in those moments [...] it opens up my own growth as a learner and it shows students that they too are capable of [...] independently gaining new information. And surpassing their - what they think [are] their learning barriers.” She noted that, despite finding it energizing, she does not engage in prep work due to the “diverse and expansive demands of this job,” but that she found that universal learning brought about a helpful mentality that encourages teachers to take a step back and trust students to take control of their own learning.

An educational assistant, who reported the highest burnout score in the study (44), discussed the utility of universal learning in situations where there is no right answer. “I find that when I’m in language arts classes, I kinda feel like, since I don’t feel confident in my ability to know more than anyone else, I do the [universal learning questions], and they’re a way of letting students guide that.” They discussed the high stress of trying to

find answers to indefinite questions in classes where they are not the lead teacher, and found that universal learning provides a way forward that supports the student without interfering with the lead teacher's work.

The fourth teacher, a middle-school special education teacher, discussed universal learning as a necessary tool to combat the overwhelming demands placed on the generalist special education teacher: "I mean, how else would you do it? You'd have to have encyclopedic knowledge of literally everything; I mean, who is that person? [...] I know that if I don't have [prep] time that I'll just figure it out. If I worried about teaching everything I didn't know - like, preparing for everything, I would have no time in the day." Without an attitude of positive ignorance, she would find her job all but impossible; universal learning becomes a clear labor-saving strategy for a teacher who is asked in her job description to do too much.

The purpose of universal learning, for Rancière and other post-critical pedagogical theorists, is not to create a stop-gap for teachers who are already underwater; rather it is to create the conditions for emancipation in a university setting. Nevertheless, the cornerstone of their pedagogy is universality. If a university professor can opt for positive ignorance as a pedagogical position because they believe it to be advantageous for her elite students, so should a special education teacher struggling to succeed under the demands of an inefficient, underfunded, deficit-model school system. These four teachers could not demonstrate that universal learning eliminated, decreased, or even mitigated against burnout; and yet, all four of them spoke positively of the practical, pedagogical, and personal benefits of practice that makes their jobs, if not easier, than at least a bit more enjoyable.

Limitations

This study was limited by several variables. My dual role as a teacher and researcher paired with response bias limited the range of responses. A limited sample size and temporal limitations made it difficult to confidently assess trends and correlative data.

Dual Role as a Teacher and Researcher

My role as colleague and fellow teacher impacted the responses to this study. Participants tended to view me as holding a personal investment in universal learning, and tended to overemphasize their positivity toward it as a pedagogical philosophy as a result. However, when asked for examples to support their answers, teachers almost universally provided clear uses of universal learning and responded honestly about their use of other strategies.

Response Bias

Participation in this study was voluntary; the teachers who volunteered for this study were, as a whole, the teachers who were most interested in practicing an experimental teaching strategy. Teachers less inclined to practice universal learning strategies or to find them useful naturally did not volunteer to participate in the study. As a result, the data is skewed toward positive responses to universal learning. Participants' understanding of burnout may have also played a role in their participation; teachers who are aware of burnout and the conditions leading to burnout were potentially affected by their perception of the intended purpose of the study.

Sample Size

This study was based upon a sample pool of ten participants, one of whom dropped out of the study without returning any data. The participants were universally white, urban, under the age of 60. This study lacked significant diversity, and the sample pool was small enough that single responses could have a significant impact on the data. The sample pool represented slightly under 25% of staff at the setting school. In order to strengthen the results of this study, it should be expanded to include a significantly higher percentage of the setting school. Further studies in this area should be expanded to incorporate multiple project-based-learning schools of comparable size.

Temporal Limitations

Perhaps the least conclusive aspect of this study was the impact of universal learning on burnout over time. This was due largely to the time constraints: nine weeks is an insufficient period of time to explore the impact of a particular intervention on burnout. For a study to seriously explore the impact of pedagogical practice on burnout over time, at least a full calendar year is necessary; the repeated mention of seasonal and school-year rhythms on burnout in closing interviews demonstrates the necessity of eliminating time of year as a factor.

Further Research

This study evokes more questions than conclusive findings. Though it suggests a correlation between burnout and certain pedagogical strategies, it presents no evidence that the relationship between burnout and pedagogy is causative. Part of the difficulty of determining causality is the philosophical nature of self-reported pedagogical approach; another is the improvisatory nature of teaching, especially in unfamiliar circumstances. It

is difficult to create conditions in which a pedagogical strategy is always deployed, and then to analyze clear material results of that deployment. Frequent discussion of pedagogical strategies not related to universal learning (Googling, modeling, collaboration, and prep work) in closing interviews is a clear illustration of this problem: a teacher can be aware of universal learning, know that they ought to be using it for the purpose of study, and nevertheless turn to a different strategy with which they are more familiar. The highly personal nature of teaching does not beget cut-and-dry experimentation.

Future studies into the relationship between burnout and Universal Learning, then, must focus on the explicit use of universal learning strategies vs. the use of other strategies. More controlled circumstances in which a control group of teachers using a non-universal-learning strategy (i.e. Googling, or prep work) is tested against a variable group of teachers using clearly defined universal learning strategies (i.e. the three questions) for change in burnout over time. For example, a study could place two groups of teachers in comparable unfamiliar teaching situations (perhaps, teaching elective classes in subjects outside their content area, or holding daily tutoring sessions in a non-expert subject); the study would test a control group using one strategy (perhaps Googling, or prep work) against a group trained in universal learning and then regularly test for changes in burnout (measured by the OLBI and self-reporting).

Universal learning is of course only one pedagogical practice; the relationship between pedagogical practice (or indeed, any teacher labor practice) is underexplored. Other studies exploring work practices and burnout could produce interesting results. Even work practices associated with Universal Learning could produce worthwhile areas

of study. What is the impact of explicitly limiting prep work on burnout? What is the impact of explicitly limiting Google or other information technologies (this study based on too-limited data points, suggests interesting results). Do teachers who only teach within their subject area experience higher rates of burnout than teachers who regularly teach outside their subject areas?

Finally, this study suggests an exploration into why teachers *do not* seek out new pedagogical strategies when experiencing burnout. As a rule, teachers experiencing less burnout were more inclined to explore universal learning in their practice; teachers experiencing more burnout were less inclined to experiment. A study into these risk-averse behaviors and burnout within the education field could produce intriguing results; that Universal Learning strategies necessarily require high risk-tolerance makes these studies even more useful in exploring the benefits of post-critical pedagogy.

Conclusion: “We Are Working All The Time”

Over the course of this study, I visited an exhibition of the work of the Minneapolis-based visual artist Piotr Szyhalski, who creates agitprop art under the moniker “Labor Camp.” Szyhalski’s art is filled with propaganda-style slogans, and much of the exhibit consisted of the overwhelming repetition of textual motifs to bring about some combination of humor and dread. One of these slogans, printed annually on freely distributed posters, is the phrase “We are working all the time.” I took one of these posters from the exhibition and hung it in my classroom behind my desk. I am not sure what my students think of it: whether they note the humor of the ironic corruption of Soviet-style sloganeering into a late-capitalist setting, or whether they think it just a weak attempt at a motivational poster to keep them on track with their math homework. One of

them did not seem to think either and wrote his name across it with a teal Expo marker, followed by a smiley face. Maybe he understands Labor Camp's ethos better than any of us.

I began this study feeling relaxed, optimistic, and confident in my embrace of universal learning strategies as a personal blockade against impending burnout. Now, at its conclusion, I find myself thinking more and more of Szyhalski's poster. I am not burned out (my OLBI score is, compared to my colleagues, quite low), I do not feel anywhere near Santoro's demoralization, and I have no intentions of leaving the teaching field anytime soon. Nevertheless, I am exhausted: I feel constantly underprepared, constantly searching for answers, constantly fighting to keep my students afloat in a world that demonstrates no interest in giving them any sort of grace after three years of COVID-demolished education. Five-day weeks feel interminable, and I have taken more sick days this winter than I have ever taken in my life. My desk is a mess, my lessons feel aimless, and I find myself feeling more and more behind each day as the year goes on. When I talk to my students and my colleagues, they express the same. All of us: we are working all the time.

I find myself less assured that universal learning is a realistic strategy for American teachers now than I did when I began this research. I find myself less assured that it is even an effective strategy for me. The results of my study did little to dispute that: there is no demonstrable link between use of universal learning strategies and teacher burnout in project-based-learning secondary schools. Indeed, the clearest correlation that emerged in closing interviews indicated a high correlation between prep work, the strategy most antagonistic to universal learning, and low burnout. Though this

study left me with far more questions than answers, all qualitative data indicates that my hypothesis was incorrect. There are more questions to explore, and there is data that suggests various future areas of study, but the link between burnout and universal learning strategies - or even pedagogical strategies at all - is weak.

Nevertheless, I am encouraged by my colleague's anecdotal reports of universal learning's efficacy, and I am even more heartened by their willingness to embrace it as an experimental teaching strategy despite limited training and limited evidence of its efficacy. Project-based-learning necessarily requires a willingness to follow untried paths, often in the footsteps of relatively ignorant - but no less brilliant - students. My colleagues and I have no choice but to let go of our controlling impulses if we have any hope of fulfilling the mission of our school; to try to master something as mutable as a cooperatively run school of student-led experiments would drive anyone to burnout. If Universal learning strategies can help us to let go and embrace a bit of creative chaos, then I have to believe that keeping Rancière's questions in our collective toolkit is worth it, quantitatively demonstrable or not.

Summary of Results

This study attempted to determine a measurable relationship between universal learning strategies and teacher burnout. It did not find any conclusive data that indicated a strong correlation between pedagogical strategy and burnout. Nevertheless, I remain intrigued by Rancière's characterization of universal learning. I still believe that all students have the capacity to learn, and I still believe that teachers, when given the opportunity to embrace that fact, can give themselves a break. I know from personal experience that when I focus on my students' gifts - and when I intentionally orient my

student-teacher interactions to demonstrate respect for those gifts - that I feel less exhausted, that my students feel less exhausted, and that, at least once in a while, some learning gets done. My hope, data-driven or not, is that other teachers - especially those teachers who find themselves on the road to burnout - can find some rest in this universal approach to learning. In this study, I asked: *do universal learning strategies have an impact on teacher burnout in a project-based-secondary school?* Quantitative data cannot yet provide a decisive answer, but the personal testimonies of at least four more-burned-out teachers in this study seems to indicate, at least some of the time, yes.

REFERENCES

- Benson. (2022). *Assessing Relationships among Autonomy, Supportive Leadership, and Burnout in Public Elementary Teachers*. ProQuest Dissertations Publishing.
- Biesta, G. (2010). A new logic of emancipation: The methodology of Jacques Rancière. *Educational Theory*, 60(1), 39-59.
<https://doi.org/10.1111/j.1741-5446.2009.00345.x>.
- Carton, T. (2016) Burnout as alienation in the counselling field: The descent from homo-faber to homo-economous. *Sociology Mind*, 6, 33-39.
<https://doi.org/10.4236/sm.2016.62002>.
- Cheon, Reeve, J., & Vansteenkiste, M. (2020). When teachers learn how to provide classroom structure in an autonomy-supportive way: Benefits to teachers and their students. *Teaching and Teacher Education*, 90, 103004.
<https://doi.org/10.1016/j.tate.2019.103004>
- Covell, 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. <https://doi.org/10.1177/0143034309106496>
- Creswell, & Creswell, J. D. (2018). *Research design: qualitative, quantitative, and mixed methods approaches* (Fifth edition.). SAGE Publications, Inc.
- Demerouti, E. (1999). *Oldenburg Burnout Inventory*. APA PsycTests.
<https://doi.org/10.1037/t01688-000>
- Demerouti, E., Bakker, A., Jonge, J. de, Janssen, P. P., & Schaufeli, W. (2001). Burnout and engagement at work as a function of demands and control. *Scandinavian Journal of Work, Environment & Health*, 27, 279–286.

- El Helou, M., Nabhani, M., & Bahous, R. Teachers' views on causes leading to burnout. *School Leadership & Management*, 36(5), 551-567.
<https://doi.org/10.1080/13632434.2016.1247051>
- Rajab Esfandiari, & Mahdi Kamali. (2016). On the relationship between job satisfaction, teacher burnout, and teacher autonomy. *Iranian Journal of Applied Language Studies*, 8(2), 73–98. <https://doi.org/10.22111/ijals.2016.3081>
- Fernet, Lavigne, G. L., Vallerand, R. J., & Austin, S. (2014). Fired up with passion: Investigating how job autonomy and passion predict burnout at career start in teachers. *Work and Stress*, 28(3), 270–288.
<https://doi.org/10.1080/02678373.2014.935524>
- Freire, P. (1982). *Pedagogy of the oppressed* (M. Bergman Ramos, Trans.). Continuum.
- Freire, P. & Freire, A. M. A. (1995). *Pedagogy of hope* (R. R. Barr, Trans.). Continuum.
- Galloway. (2012). Reconsidering emancipatory education: Staging a conversation between Paulo Freire and Jacques Rancière. *Educational Theory*, 62(2), 163–184.
<https://doi.org/10.1111/j.1741-5446.2012.00441.x>
- Gorski, P. C. & Chen, C. (2015). "Frayed all over:" The causes and consequences of activist burnout among social justice education activists. *Educational Studies*, 51(5), 385-405. <https://doi.org/10.1080/00131946.2015.1075989>
- Hodgson, N., Vlieghe, J., & Zamojski, P. (2017). *Manifesto for a post-critical pedagogy*. Punctum Books. <https://doi.org/10.21983/P3.0193.1.00>

- Iancu, Rusu, A., Măroiu, C., Păcurar, R., & Maricuțoiu, L. P. (2018). The Effectiveness of Interventions Aimed at Reducing Teacher Burnout: a Meta-Analysis. *Educational Psychology Review*, 30(2), 373–396. <https://doi.org/10.1007/s10648-017-9420-8>
- Karger, H.J. (1981). Burnout as alienation. *Social Service Review*, 55(2), 270-283.
- Kim, Crooks, C. V., Bax, K., & Shokoohi, M. (2021). Impact of trauma-informed training and mindfulness-based social–emotional learning program on teacher attitudes and burnout: A mixed-methods study. *School Mental Health*, 13(1), 55–68. <https://doi.org/10.1007/s12310-020-09406-6>
- Kristensen, Borritz, M., Villadsen, E., & Christensen, K. B. (2005). The Copenhagen Burnout Inventory: A new tool for the assessment of burnout. *Work and Stress*, 19(3), 192–207. <https://doi.org/10.1080/02678370500297720>
- Lee. (2019). Emotional labor, teacher burnout, and turnover intention in high-school physical education teaching. *European Physical Education Review*, 25(1), 236–253. <https://doi.org/10.1177/1356336X17719559>
- Lewis. (2010). Paulo Freire’s Last Laugh: Rethinking critical pedagogy’s funny bone through Jacques Rancière. *Educational Philosophy and Theory*, 42(5-6), 635–648. <https://doi.org/10.1111/j.1469-5812.2010.00690.x>
- Ljubin-Golub, Rijavec, M., & Olčar, D. (2020). Student Flow and Burnout: The Role of Teacher Autonomy Support and Student Autonomous Motivation. *Psychological Studies*, 65(2), 145–156. <https://doi.org/10.1007/s12646-019-00539-6>
- Maslach, C. (2017). Finding solutions to the problem of burnout. *Consulting Psychology Journal*, 69(2), 143-152. <https://doi.org/10.1037/cpb0000090>

- Mitra, & Rana, V. (2001). Children and the Internet: experiments with minimally invasive education in India. *British Journal of Educational Technology*, 32(2), 221–232.
<https://doi.org/10.1111/1467-8535.00192>
- Mitra, S. (2003). Minimally invasive education: A progress report on the “hole-in-the-wall” experiments. *British Journal of Educational Technology*, 34(3), 367-371.
- Mitra, S. & Dangwal, R. (2010). Limits to self-organising systems of learning: The Kalippupam experiment. *British Journal of Educational Technology*, 41(5), 672-688. <https://doi.org/10.1111/j.1467-8535.2010.01077.x>
- Rancière, J. (1991). *The ignorant schoolmaster: Five lessons in intellectual emancipation* (K. Ross, Trans.). Stanford University Press.
- Santoro, D. A. (2018). *Demoralized: Why teachers leave the profession they love and how they can stay*. Harvard University Press. <https://doi.org/10.7202/1071443ar>
- Schaack, D.D., Vi-Nuan Le & Stedron, J. (2020). When fulfillment is not enough: Early childhood teacher occupational burnout and turnover intentions from a job demands and resource perspective. *Early Education and Development*, 31(7), 1011-1030. <https://doi.org/10.1080.10309289.2020.1791648>
- Schipani, Daniel S. *Religious Education Encounters Liberation Theology*. Religious Education Press, 1988.
- Stamp, R. (2013). Of slumdogs and schoolmasters: Jacotot, Rancière and Mitra on self-organized learning. *Educational Philosophy and Theory*, 45(6), 647-662.
<https://dx.doi.org/10.1080/00131857.2012.723888>

Vlieghe, J. (2018). Rethinking emancipation with Freire and Rancière: A plea for a thing-centered pedagogy. *Educational Philosophy and Theory*, 50(10), 917-927.
<https://doi.org/10.1080/00131857.2016.1200002>