

Systemic Shock: The Effect of the Pandemic on Teachers' Beliefs on the Nature and  
Purpose of Grading in High School

by

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## CHAPTER ONE

### Introduction

#### Overview

Is the purpose of schooling to prepare students to be productive members of society, or to develop their intrinsic talents on an individualized basis, or to prepare them to transform the society they are part of? These questions are embedded in the complex sets of beliefs which high school teachers rely upon in their conceptualizations of how to instruct, give feedback, and assess their students. The practice of grading reflects a teacher's perception of the value of all these components in the educational economy of what is valued in high school.

Grades are consequential. The long accepted currency of high school as evidence of hard work, demonstration of learning, and predictor of future outcomes, they affect student motivation, college admissions, and high school graduation rates. Families, colleges, students, and teachers participate in this system of traditional grading knowing that it is imperfect and often harmful, because the long standing norms have been culturally transmitted for decades via direct experiences, popular culture, and amplified fears of the college admissions process. Traditional grading practices arguably stand in need of reform to be more equitable, foster greater trust between teachers and students, and encourage individual learning. However, such reforms are difficult to implement, because this requires mass change in practices, and teachers are often attached to their grading practices and hold onto them as a bastion of autonomy.

While various grade reforms have been implemented in many schools, the role of resistance to change in teacher belief systems has created obstacles to successful



implementation (Bonner, Torres Rivera, & Chen, 2018). There has been long standing research about how teachers perceive grades, but there has not been sufficient research on how teachers change their perception of grades, and what factors lead to these shifts.

During the COVID-19 pandemic, circumstances compelled teachers to adopt new grading practices, some of which were in line with existing grading reform proposals. Between 2020 and 2022, due to the COVID-19 pandemic, teaching conditions changed dramatically. By March 25, 2020 all public school buildings in the US had closed, and in 48 of the 50 states, remained closed through the end of the school year (Ferren, 2021). By February 2022 more than 75% of the four year colleges in the US had changed to test free or test blind admissions policies through 2023 (Jaschik, 2021).

As a response to the school closings and shift to remote schooling, grading policies changed significantly during and after the pandemic. Through the summer of 2021, many school district grading policies continued to be adjusted to allow greatly increased options for Incomplete or Pass/Fail, reflecting the effect of two years of disrupted learning in the high schools of the USA (Esquivel, 2021). Grades carry a different meaning in the context of these fundamental changes in structures. The cumulative effects of the pandemic and radical changes in how education was participated in and organized produced what I refer to as a *systemic shock*, in the manner that shock waves ripple through physical environments such as water or air.

Could this lead to large-scale positive changes in grading practices? Only if the experience of the pandemic changed teachers' beliefs about grading in a lasting way. This project aims to find out whether that happened. I am going to enter the gap of understanding of the effects of these grading policy changes, as teachers have gone

through the transition to emergency remote learning in the pandemic, and since returning to face to face instruction.

Referencing a reform adopted with increasing frequency since the early 2000s, in late 2020, Townsley suggested that the pandemic might push teachers to embrace a change to standards-based grading (SBG): “In what may be a silver lining for schools previously considering a transition to SBG, the pandemic may help stakeholders better understand *why* SBG will better communicate students’ learning separate from non-cognitive behaviors” (p. 10). The recognition that teachers have widely resisted implementing SBG is an indicator of the intractable nature of teacher perceptions of autonomy around grading. As Knight and Cooper asserted in 2019, “...the practical applications of SBG continue to clash with centuries’ old grading traditions and deeply ingrained belief systems among parents, students, and teachers” (p. 68). Their study on implementation of this type of shift in grading practices demonstrated that isolation and inconsistency of training and practices resulted in teachers continuing to resist this type of grading reform (Knight & Cooper, 2019, pp. 68-70).

Two widely published authors on grade reform, Feldman and Reeves, called for attention to pandemic grading as an area of concern in an interview published in September 2020, stating “We need to be more intentional about excluding from grades criteria that can perpetuate inequities” (p. 26). The details of including extra credit and performance on homework took on new meaning once students were doing all their work at home, and the fact that the student’s home environments prohibited some from even accessing support elevated the inequities of these long-held practices (Feldman & Reeves, 2020).

A fundamental problem with grading is the fact that it perpetuates the historic inequities which are an intrinsic part of schools in the USA. Feldman articulated this clearly in 2019, “Many traditional grading policies that seem innocuous on the surface can reinforce existing disparities, rewarding students who already have more resources and punishing students who come to the classroom with fewer resources” (2019b, para. 10). However, there is no agreement on what grading practices do remove inequities, even between Feldman and Reeves (2020). Reeves argues for normalizing the use of Incomplete, while Feldman disagrees, stating that Pass/Fail or Incomplete grades perpetuate inequities for economically disadvantaged students over the long term, by keeping them from competing for scarce scholarship dollars.

The power of the grade in self concept and access to university admissions and financial aid has been well documented (Guskey & Brookhart, 2019). Grading, which is “deeply ingrained not only in education but in our culture” (Vatterott, 2015, p. 6), plays a key role within schools as teachers use grades to provide feedback (Guskey, 2015), promote or retain students (Kohn, 1999), sort students for special classes (Guskey, 2015; Vatterott, 2015), and determine eligibility for college scholarships (Reeves, 2016). Graduation from high school, a crucial gatekeeping mechanism in society today, is inextricably dependent on grades from the four years of high school (Neuendorf, 2018). On top of all this, grades have been used to manage or modify adolescent behavior since the early 20th century (Feldman, 2019a). Teachers report adjusting grades to affect behaviors such as effort, attitude, attendance and participation (Knight & Cooper, 2019). Outside of schools, some parents reserve or cancel some privileges based on grades, and sports and activity advisors delay or deny participation as a motivator for students to keep

their grades above a minimum (O'Connor & Wormelli, 2011). The cumulative effect of all these factors is that grading is a default expectation and practice in society.

### **Problem Statement**

The significance of a grade's meaning to learners, instructors, and outside stakeholders merits continuous revisiting, as report cards have remained a constant throughout decades of school reform, educational shifts, and societal questions about the fundamental purpose of schools. The value of a grade is essentially a construction of understanding between these three forces, and delving into how that construct has shifted during the pandemic can bring new understanding of how measuring learning happens and also how it can be improved from the perspective of teachers.

The issue I am interested in is whether teachers think about the grading process differently post-pandemic in 2022, in terms of their beliefs of purpose and value. This matters for continued efforts to improve grading practices, as teacher beliefs play a crucial role in the successful implementation of any reform. The policies and practices of high school grading have gone through radical shifts during the course of the pandemic, ranging from school districts eliminating Ds and Ns, to more than 150 colleges shifting to Pass/Fail grades in Spring 2020 (Basken, 2020, para 1). These events and conditions led me to wonder how the crisis created by the COVID-19 pandemic and the reaction to changes in teaching conditions and policies affect how teachers consider their grading practices. It is possible that they reverted to pre-pandemic measures of learning, but the experience of teaching in distance learning during extended trauma could have shifted how they consider what to measure in terms of learning, and how to communicate this.

The primary research question was: *Have teachers changed their beliefs and perspectives on grading practices since the systemic shock of the COVID-19 pandemic? If so, why, and if not, why not?* Secondary questions addressed were: *How do high school teachers describe their pre-COVID-19 thinking regarding the role of grading as an indicator of learning? How do high school teachers describe their use of grading as an indicator of learning during the disruption to teaching and learning caused by COVID-19?*

The widely studied practices of normative curve grading, criterion-referenced grading, and standards-based grading, all point to specific reasons to create a system of grading which is valuable to students, teachers, and post-secondary institutions (Guskey & Brookhart, 2019). This overlaps with the area of accountability in schools, and the role that standardized tests and end of course tests play in school funding and strategic planning. The fact is that while innovations in grading systems have been developed, implemented, and evaluated, it is well established that systems change is ultimately dependent on the acceptance and implementation at the school and classroom level (Feldman, 2019). Teachers have long protected grading as their last bastion of autonomy (Feldman, 2019, p. 7.). Yet as stated in Senge, et al. (2012), “Organizations work the way they work because of the ways people think” (p. 25). In the aftermath of the COVID-19 pandemic and all the shifts in teaching and grading practices, I explored the possibility that the systemic shock may have changed how teachers think about their grading practices, and whether they are now more open to reform in grading systems.

## Personal Connection

I work as an administrator in a large urban school district in the upper midwest of the United States. At the time that this research began, I was working to implement grading reform across the traditional and alternative secondary schools. This collaborative task has been ongoing, with many partners in the conceptualization and execution of this initiative. As a member of a team of people talking and thinking through the various aspects of grading practices, my own beliefs on assessment have been challenged and also affirmed.

*I know how to balance a chemical equation. I know that populism is a powerful force in society. I know my neighborhood in Albuquerque, NM.* It is impossible to measure these types of knowledge without classifying them in some sort, to be able to compare to me not knowing these things. The act of grading is to classify observed knowledge as excellent, proficient, below standard, or as a B or C. To measure learning or knowledge is to reduce the observation of such learning to a data point, which can be counted. In *How We Use Numbers to Decide What Matters*, Stone (2020) clarified the mental moves involved in counting as classifying and tallying, “Counting and naming both require us to find similarities between things that are different” (p. 5). This reveals that inherent tendency for bias in grading, as the teacher who is tallying evidence of learning is also classifying what *is evidence of learning* as they recognize it. Implicit bias here is almost impossible to avoid (Feldman, 2019).

Working in public education since 1989, I have observed how grades motivate people in many different ways, including demotivating them as learners. I have observed that grades are an amplification of the relationship between student and teacher, and can

serve to increase or decrease trust. It is a factor of the scale of schools which has kept grades such a constant in public education, as it is too difficult to write or speak long narratives about what has been learned by large numbers of students. Thus assessment of learning is reduced to a data point, a grade (Guskey, 2015).

My own experience as a child was of not caring about grades, and seeing learning as its own pleasure. I recognize this as a privilege, in that I was able to value school as being just one aspect of education. This was part of my extended family's culture, that what matters is what you do with all this knowledge and access to levers of change which education affords you. In some ways, this has also disadvantaged me, in that I assumed for years that my colleagues shared my "don't sweat the small stuff" attitude in teaching and learning. As parents of sons who went through the same public school system in which I work, we learned quickly that most teachers still did care deeply about their power to construct a grade, and their beliefs that behavior and work habits were a valid component of this.

On a personal level, grading was always both exhilarating and daunting to me as a classroom teacher. I was excited to see what the students created in their work, and yet also plagued by a nagging doubt that I could give feedback which would be accurate and still motivate and spur them to greater growth. After writing hundreds of college recommendations, the role of grades as a communication from high schools to post secondary stakeholders began to resonate for me on a different level. To what end did those hard earned grades of all those students have any meaning outside the teacher/student relationship? The foundation of my experiential knowledge comes from my tenure as a high school teacher in both Puerto Rico and Minnesota. Grading students

in history, philosophy, dance, and Spanish classes, as well as working as an International Baccalaureate (IB) examiner, and writing on a SAT II Test Committee for the College Board, gave me deep insights about how the other side of standardized and criterion-based assessments are built and carried out. Conversations with thoughtful colleagues over the years have further provoked my curiosity about why grading is seldom questioned in terms of teacher orientation and student achievement. Overall, I sought a better understanding of how teachers give feedback and assessment on student learning, to increase student trust and efficacy in their role in the school system, as part of their grading process. The practical goal was to understand whether teachers have shifted their beliefs and practices on grading in response to the COVID-19 pandemic. I hope to bring an understanding of how teachers can improve their practices in terms of communication and increasing trust as part of their grading practices to the general public understanding of grading practices.

This has all led me to the curiosity about how the systemic shock effect of the pandemic has affected how teachers see the value of grades. I assumed that teachers were frustrated by the changes imposed on them by these grading systems decisions, and either re-thought their own beliefs or worked to re-impose their prior beliefs and practices. I am curious about how grades carry such meaning and weight institutionally, in the face of all the knowledge that they are subjective at best, and inequitable throughout.

### **Rationale and Potential Impact**

This area of research touches on daily classroom practice for high school teachers and students but is also relevant to district policies on grading structures, weighted grades, and credit recovery. Implementation of grading system reforms has proven to be a



difficult task on a large scale (Knight & Cooper, 2019). The global policy and practical adaptations during remote learning forced many teachers to use grading practices which mimicked some of the aspects of many grading reforms, such as offering retakes and not grading homework. It is possible the systemic shock of the pandemic has produced a shift in teacher beliefs which will make implementation of grading reforms more successful. All of these issues are being revisited in many schools and school districts now, as the lessons of distance learning and the COVID-19 pandemic are still being discerned and recognized.

Grades have a significant impact on student motivation, trust of schools, and access to funds and university admissions (Kohn, 1999, p. 268). It is still the case that GPAs are an essential criteria in scholarship applications, and every state university system in 2022 listed significant financial awards based on a combination of GPA and admissions testing scores (College Scholarships, n.d.). The grading policy changes during the pandemic carried out by schools, school districts, and universities have been justified by the understanding that students were unable to demonstrate learning, or even access learning opportunities. The results of these decisions are being seen and felt now, as GPAs and college applications are being looked at differently. It is possible the grades from 2020-2022 will need translation, but perhaps the teachers have made the translation themselves in their beliefs and practices.

The unique circumstances of the global disruption of the pandemic may have provoked this change, and future work on shifting grading to a more equitable and productive system could build on the new mindsets. It is also important to discover if teachers have not changed their beliefs and continue to perceive the value and structure of

grading as they did prior to the pandemic. Either way, the results will have significant meaning for educational leaders working towards improvement in teaching and learning in high schools.

### **Methodology**

The purpose of this constructivist grounded theory study was to explore the effect of the pandemic shifts in policies of reporting grades on high school teachers' beliefs about the purpose and value of the grades they construct. The study took place in a midwestern urban school district, by means of surveying 50+ and then interviewing seven educators who taught a range of courses. My overall aim was to understand how these teachers recognized their perceptions about the value of grades as they constructed them, and if they were more open to changing their practices and beliefs as a result of the shifts in practices during the pandemic. The results could bring an understanding of how current reform efforts in high schools can be better implemented.

There are key definitions that will need to be researched and clarified for the purposes of this study. The first part of the research will include a survey of these terms, and a proposal of how they will be used in this study: grades, assessment, standards, motivation, report cards, points, and rubrics. Current research trends reveal much about how these show up in high schools across the US and globally (Woods-Groves, et al. 2019), but the focus on how teachers operate within these systems and reforms, and whether their perceptions and beliefs have changed has not been heavily researched.

### **Summary**

An intriguing aspect of studying how teachers describe their practices is the connection to their own deeply held beliefs on the purpose of schools, as teacher

practices remain impervious to reform efforts in many fields, and grading seems to be particularly guarded as a domain of teacher autonomy (Guskey & Link, 2019). This autonomy gives teachers power but the varied practices used in grading leads to distrust. Research in the area of what grades mean now to students, teachers, post secondary institutions and stakeholders overall is needed on a regular basis, to keep up with changes in society overall.

With the suspension of standardized tests as an admissions requirement by many colleges during the COVID-19 pandemic, there was an increase of students applying to many of the most selective schools (Nietzel, 2021). The question arises of how this will affect the reliance of colleges on grades and other data points as a result. Further, the question of bias being avoidable if admissions rely more heavily on references and interviews must be looked at. Finally, the idea that bias may be lessened by dropping standardized tests is important to take into account. These considerations reflect on the concept of how a teacher and student use grades to communicate on learning and also motivation, which is part of the basis of the social construction of grades for shared meaning.

In the following chapter, an examination of the history and critiques of grading, examples of the challenges of implementing grading reform, and an overview of the changes brought about in grading by reactions to the COVID-19 pandemic are explored. Systems theory and chaos theory are used to analyze the impact of external changes on teacher belief systems, and potential shifts also. In Chapter Three, the qualitative constructivist study is described, with an emphasis on using two sets of semi-structured interpretive interviews. The research results and analysis in the final chapters are shared

with considerations for future practice and policy decisions in high schools.

## CHAPTER TWO

### Review of Literature

The literature reviewed for this study covers the history and critiques of grading in secondary schools, theories of how change comes about in organized public systems, the role that teacher beliefs play in educational practice and reform implementation, and a survey of the effect of the COVID-19 pandemic of 2020-2022 on grading policies and instructional practices in the US. The literature accessed included scholarly and mainstream articles, theoretical and pedagogical texts, and current affairs journalism to address the following research questions: *Have teachers changed their beliefs and perspectives on grading practices since the systemic shock of the COVID-19 pandemic? If so, why, and if not, why not?* Secondary questions addressed were: *How do high school teachers describe their pre-COVID-19 thinking regarding the role of grading as an indicator of learning? How do high school teachers describe their use of grading as an indicator of learning during the disruption to teaching and learning caused by COVID-19?* While grading has been studied widely since the early 2000's, the drastic changes made to grading policies as a result of the pandemic demand new research surrounding the short and long term effects of these changes on teacher practice and beliefs, to inform implementation of grading reform initiatives.

To understand the context of grading in high schools, research was focused on the basis of an inductive argument of what is known about grading, and what is known about teacher perceptions of grading. This was grounded in the context of what is known about the policy and practice changes in grading for high schools during the COVID-19 pandemic from 2020 through 2022 (Machi & McEvoy, 2016). Following the examination

of these themes, an argument of advocacy is posited, to analyze and critique the knowledge gained from the discovery argument, and answer the research questions.

### **History and Critiques of Grading**

Determining what a grade is, how it is constructed, and how the process has come to be the fundamental feature of high school processes that today involves examining the history and traditions which teachers, students, and educational institutions have participated in up to this point, including a short survey of how we measure what can be known.

### ***Measurement of Knowledge***

Determining how to improve grading practices as an accurate communication of learning must begin with an investigation into the sources of grading practices, and teachers' perceptions and beliefs on grading over time. At its core, grading is an expression of a judgment by a teacher, as they have measured a student's learning. Delving into how a teacher arrives at that judgment involves taking an epistemological perspective of how learning is observed and perceived. Epistemology, or the study of how knowledge is constructed, has long been a core of philosophical inquiry. The core questions of epistemology include how and when do we know things, and what is the relationship between perception, belief, reliability, and reason in evaluating our knowledge? (University of Sheffield, 2022). The application to teachers discerning how they know what a student has learned is fundamental to this study. Dewey centered this critique in 1916 by dissecting the natural urge of students to think out a problem, which the traditional classroom distorts to the student thinking out what the teacher wants, not the student's own relationship with the subject matter. "A pupil has a problem, but it is

the problem of meeting the peculiar requirements set by the teacher. His problem becomes that of finding out what the teacher wants, what will satisfy the teacher...” (Dewey, 1916, p. 156). This distinction between what a student is learning for their own purposes and what they are learning to meet the grading purposes of the teacher is important to keep in mind while examining the larger picture of grading practices and teacher beliefs. This reveals an intrinsic gap in the goal of teaching and learning, which is, who does the learning of the student benefit? According to Dewey (1916), the learning serves the teacher and educational system, as “the problem of the pupil is not how to meet the requirements of school life, but how to *seem* to meet them- or, how to come near enough to meeting them to slide along without an undue amount of friction” (p. 156). This insight about the effect of a school structure on a student’s motivation to learn is also an apt predictor of how implicit and explicit bias are at the core of most school structures, as the students learn first what the teacher or school is looking for, and to do well, conform to those expectations regardless of the students’ own thought processes and cultural stores of knowledge.

How does the teacher perceive and form a judgment on a student’s learning? In *Thinking, Fast and Slow*, Kahneman (2011) drew upon years of social and cognitive psychological research to posit that humans’ judgment and decision making works in two systems: the automatic operations and associative memory of continuously constructing a coherent interpretation of our world, and the controlled operations of our conscious thinking. As Kahneman stated, “The main function of System 1 is to maintain and update a model of your personal world, which represents what is normal in it” (p. 71). Thus, intuitive thinking also describes the basis of how teachers view student work, as

compared to their personal models of what is normal. The inherently individual representation of what is the norm, or what is desirable in student expressions of their learning then becomes implicit in how a teacher judges student behavior and work products. Looking at grading practices through Kahneman's (2011) economic and psychological lens demonstrates that the act of teachers' deciding how much a student has learned must be seen as a reflection of what the teacher knows first. This epistemological imperative is further complicated when looking at how learning is measured or counted. The social policy researcher Deborah Stone (2020) analyzed the process of counting as a two part act. First, we classify what we are counting, and then we tally (Stone, 2020). She articulated this in the context of grading by analyzing her own thought process as a university professor,

Whether I'm putting a letter grade or a number grade on a student's paper, having to categorize the work forces me to question myself and articulate my reasons for doing so. I'm always aware that my students' hopes and self-image are riding on my decisions, and that each student deserves to question me about why I gave the grade I did. (p. 31)

Classification is widely recognized as a heuristic which humans use to manage large amounts of information into manageable categories of knowledge. The sources of grading as a means of classifying student learning into categories which teachers, families, school systems, and employers can then recognize as indicators of aptitude, potential, and work habits are explored in the next section of this paper. What must be kept in mind also is the fact that classification can also lead to stereotyping, prejudicial thought, and explicit biases being a core tenet of how grades are formed. Riley and Ungerleider pointed this



out in a 2019 study on teacher perceptions of grading, "... teachers generally base decisions on their personal beliefs and expectations which tend to support and promote student success. However, problems may still arise if a teacher's perception of a student's effort or behavior does not match the reality of that student's experience" (p. 213). Here is evidence of the epistemological gap between what a teacher knows of what a student knows.

### ***Definition of Terms and Grading Practices***

For the purposes of this study the following terms will be used and defined as:

*Grade*: A score or mark assigned by a teacher which communicates how the teacher has assessed student learning (Brookhart et al., 2016).

*Assessment*: Judgment by a teacher, or by means of a standardized test, of a student's learning and/or knowledge (Criag, 2011; Emmanuel et al., 2014).

*Standards*: Descriptions of what a student should know and be expected to do at specific points in their development and in specific content areas (Knight & Cooper, 2019).

*Grading Scale*: The boundaries of what grades can be assigned, as well as how non-numeric grades such as letters or check mark grades can be translated into numeric grades.

**Table 1*****Example of a Grading Scale***

Letter Grade	Percentage	GPA
A	90–100%	4.0
B	80–89%	3.0
C	70–79%	2.0
D	60–69%	1.0
F	0–59%	0.0

(adapted from Guskey, 2015)

*Report Cards:* Platform for communication of student grades and/or learning to families. In high school, this becomes part of a cumulative transcript which communicates all of a student’s grades to prospective universities, scholarship committees, and employers (Guskey, 2015).

*Points:* Data in numerical form assigned to levels of knowledge or mastery on student work by the teacher. The common and traditional form for assigning a grade is to take the number of points earned on an assessment, divide it by the points possible, and multiply the result by 100 to compute a percentage grade (Reeves, 2016).

*Rubric:* An assessment tool which uses explicit criteria to describe levels of mastery and quality on an assignment or assessment, and then is used as a scoring guide for assigning points or a grade (Brookhart & Chen, 2014).

The three significant categories of grading to be discussed are normative, criterion referenced, and standards based. Normative grading, often referred to as norm referenced, or grading on the curve, is the process of assigning grades based on a student’s achievement in a course relative to how other students in the same course have demonstrated achievement. The belief underpinning normative grading is that

intelligence shows up in a classroom of students in a normal distribution pattern and that grades that reflect this array are more objective (Feldman, 2019, p. 23). This stems from wide adherence to the theory of a 'natural' bell curve results in the natural world.

Criterion-referenced grading is the practice of crafting a grade which reflects how much a student demonstrates knowledge and understanding of content as measured by a standard criteria (Popham, 2014). This reflects the belief that all students are capable of optimal learning, and the grade reflects each student's learning regardless of how other students have demonstrated achievement. This reveals a distinct purpose in grading from that of normative. Criterion-referenced grading works within the ideals of mastery learning, predicated on the premise that all students can learn (Guskey, 2015, p. 55).

Standards based grading can be described as a grading system "in which students' achievement and progress in school are evaluated based on their proficiency in meeting clearly articulated learning standards" (Link & Guskey, 2022, p. 2). This broad definition encompasses the use of rubrics, assessment, and recognized content standards to construct a grade which is reported to the student and on a report card. This can also involve the conversion of a rubric score to points, and the additional conversion of points to a letter grade, or percentage grade. There are varying levels of standards based grading in practice currently, ranging from narratives reflecting mastery, to full use of rubric scores reported to students and on report cards, to rubric scores being converted to letter grades solely for the purpose of reporting on a transcript as communication to external stakeholders (Guskey & Brookhart, 2019, p. 116).

### *History of Grading*

The above terms have no universally agreed upon definitions, as they reflect more than a century of use and application in U.S. public education alone, and with each innovation and reform, evolve in the nuances and understanding of educational practitioners. The history of how and why high school grades are constructed in the USA is essential to address as part of understanding teacher beliefs and perceptions of their own grading practices today.

Stone (2020) wrote that “It’s much harder to define output for intangibles than for physical things, and even harder to measure quality...rests on an abiding faith that anything worth doing deserves to be measured. How else can we know whether we’re succeeding?” (p. 125). This desire to know if all the funding put into schools leads to the result that students are learning—that education is successful—is the justification for grading systems, and now standardized testing. The development of grading in the USA is inextricably connected to the history of industrialization, endemic racism, behaviorism, and the population growth of the past century.

Public schools in the USA have existed in some form since the early 19th century, when Horace Mann referred to the goal of providing equality of opportunity as the “great balance wheel of society” (as cited in Spring, 2020, p. 6). This equality of opportunity referred to everyone being able to pursue economic wealth, not necessarily assuring the same status or income. The growth of the U.S. population from the 1840’s to the 1890’s was the result of territorial expansion as land was taken from indigenous peoples, the other colonial powers of Spain, Russia, and Great Britain, and the newly independent Mexico via wars and treaty machinations. As industrialization began to replace

agriculture as the engine of economic growth, immigration from Asia, Europe, and Latin America increased, to the point in 1910 when 14.7% of the population as counted in the US Census was foreign born (Gibson & Lennon, 1999).

During this same period in Great Britain, the development of the examination as a means of sorting and labeling people fit for university entrance and governmental work was implemented and became widely recognized as a means of making “intellectual labor visible, to remap institutional power relations, and to endow cultural capital with exchange value” (Shuman, 2000, p. 5). This emerging institution in Europe, mirroring the long standing examination systems of China, helped to professionalize intellectual workers in a standardized sense. While the newly democratic capitalist nation of the USA was consolidating its borders and legal structure, the intrinsic tension of individuals’ culture versus the economic and social imperatives of the state was being argued about as part of the rise of capitalist critiques in Europe. Analyzing this tension, Shuman wrote “One of the most significant problems of Marxist thought ... has been the need to account for the phenomenon of the professionalization of intellectual labor and its disturbance of nearly all the crucial concepts of historical materialism...” (2000, p. 17).

The rise of examinations and capitalism coincided in the USA in the early 20th century with the expansion of population and territory, creating the conditions for a different approach to giving feedback in the context of education. The 19th century goal of schooling serving as a vehicle for self determination shifted to a social and moral goal, which included creating a national culture and shared set of norms and values (Spring, 2020, p. 32). The number of children attending high schools in the USA grew from 203,000 in 1890 to 1,600,000 in 1918 (Feldman, 2019, p. 20). This eight fold increase

precipitated an increase in the number of schools, but also in the arrangement of students in grade/age bands, and the number of students in each classroom, to be assessed by individual teachers. In addition to the increase in the scale of schooling, students by the 1920s presented a much wider diversity of backgrounds, languages, ethnicities, and incomes. The result of all these factors, along with the new language of intelligence testing and behaviorism, brought about significant changes in the goals of teaching, and feedback given as part of the process. As Feldman pointed out, the scope and purpose shifted, “Now, schools were expected to ‘Americanize’ the diverse, unruly mass of immigrants, rural transplants, and the poor by preparing them with the discipline and habits that factories (and densely inhabited cities) prized” (2019, p. 21).

In the decades after the 1920s, the social functions of the school expanded to becoming a general welfare institution, assuming responsibility for recreation, health concerns, and diet. This reflected the general fear of the time that community was breaking down in urban settings (Spring, 2020). These urban settings which were home to migrants from sharecropping in the US South and parts of Latin America, Asia, and Europe, now working in industrial conditions and developing new systems of living in community. “As a result of the school becoming a welfare agency, it became the symbol and hope for achieving the good society” (Spring, 2020, p. 33).

High school grading practices of the 1920s and 1930s were a reflection of the goals of creating a national culture of patriotism and docility, but also showed early signs of the sorting effects as a value. These three components of assessment, motivation and sorting, have remained fundamental to teacher and family perceptions of the value of grading ever since (Guskey & Brookhart, 2019, p. 100). The dimension of grading as

feedback on a student's learning has been part of general grading practices at the same time, but is now more likely to be cited as the ideal goal by practitioners seeking to isolate learning from the other factors. Prior to the large scale school systems of the 20th century, teachers generally presented oral reports or written narratives to families, which gave guidance on future instruction, apprenticeships, or higher education (Craig, 2011). The creation of compulsory education laws, starting in Massachusetts in 1852 and culminating in *Brown vs the Board of Education* in 1954, caused schools to develop more efficient and standardized ways to report on student progress (Ramsey, 1985).

In addition to a difference in scale of students being assessed, however, the 1920s through 1950s were a time of explicit racism, sexism, and xenophobia in American education. Feldman highlighted some glaring statements of this in *Grading for Equity* (2019), quoting the dean of the Stanford School of Education in 1909 who stated “urban schools should give up the exceedingly democratic ideal that all are equal and that our society is devoid of classes.” (p. 22). Since the 1890s the demographics of students in US schools has changed in racial and ethnic makeup, from majority white European and English speaking to plurality multi racial African, Asian, Latino, Indigenous and European, with many languages spoken in school districts across the nation. The development of grading systems took place alongside the shift of school to promote the general welfare and a patriotic social/cultural identity. This has become an essential aspect of how grading for behavior and motivation evolved, as teachers used the tool of feedback to shape and force students with diverse cultural and racial backgrounds to conform to the norm of white European English speaking traditions (Yosso, 2005).

In *On Your Mark*, Guskey (2015) stated that the most important step in making grading more effective is to clarify the purpose of grading in every classroom and school (p. 5). The long held goal of schools in the USA to shape general welfare and a civic identity have deeply affected this purpose, although the effectiveness of grading to achieve these goals is widely recognized as ineffective or even harmful, particularly to students whose backgrounds are multilingual and of black, brown, indigenous communities (McGrady & Reynolds, 2013). The widely held goals of schools today, to develop human capital for economic and civic development, or to foster individual growth of talents and skills, are not universally agreed upon, and this plays out in grading systems as individual teachers determine how and what to measure in a student's learning (Spring, 2020, p. 88). As demonstrated in Randall and Englehard's 2010 study examining the grading practices of teachers, their beliefs and perceptions fill in where systems are not explicit (p. 1380).

Currently, normative grading is widely used in the USA as a default grading practice and reflects the convergence of the growth of high school student populations with the mid 20th century interest in behaviorism and the belief that a normal-curve distribution is a representation of real things in nature (Fendler & Muzaffar, 2008, p. 65). As Fendler and Muzaffar (2008) articulated in 'The History of the Bell Curve: Sorting and the Idea of Normal', "by locking in the idea of normal-as-average, bell-curve thinking guarantees some degree of failure in all educational projects and makes sorting appear normal" (p. 82). The legacy of behaviorism is significant in the traditions of normative grading also. This theory of learning which posits that humans can be taught to act via a series of rewards and punishments has influenced the development of normative



grading practices as motivational, not only communicative of knowledge acquisition (Feldman, p. 20). Kohn (1999) argued convincingly in *Punished by Rewards* that behaviorism does not work effectively in motivating intellectual behavior, and in fact, a system of “do this and you can get that” is fundamentally a means of control, by which people maintain their power over others (p. 267). The conflation of a belief in the normal bell curve and utility of using grades to shape behavior is reflected in the widespread use of normative grading in US high schools today. The shift from narrative feedback to percentage grades was an incremental process, enacted in many local decisions, and there were few teachers in schools who questioned this, as it seemed to be supported as a modern and scientific innovation (Guskey, 2001). While some studies were carried out in the 20th century which demonstrated the subjectivity of much grading, the emergence of computerized platforms for report cards also served to flatten the debate about the formation of grades (Guskey & Bailey, 2001).

Grading practices in universities have played a key role in shaping high school grading practices, in both the model of how to assess and in how university admissions systems intersect with high school transcripts. The traditions of grading in universities in the USA reflect the influence of European models, with tier grading systems being used in the 18th and 19th centuries. As Brookhart et al. (2016) pointed out, based on these precedents “American universities invented systems for ranking and categorizing students based both on academic performance and on progress, conduct, attentiveness, interest, effort, and regular attendance at class and chapel” (p. 831). This neatly captured the concerns of both secondary and higher education educators in constructing grades which can both give feedback and also shape moral and civic behavior. Over the 20th

century grading in universities also changed with the effect of behaviorism and aptitude testing, but the 1960's draft and general society-wide re-assessment of culture and equity had both had inflationary effects on grading in colleges and universities (Brookhart et al., 2016, p. 833). As university grading practices and admissions requirements have changed, high school systems have been adjusted to better fit. This continued to be the case in 2020-2022, as decision makers in higher education began to eliminate the ACT or SAT as a requirement for college applications, and high school grades became a larger proportion of those admissions decisions (Kinney & Rowland, 2021).

At this time in the USA, there is no universal regulation or requirement for how grades are created or reported. Neither is there a set of rules in most of the states, nor in many school districts. This aggregate of grading as an individual teacher's communication to a student, their family, and any post secondary institution or employer, has created an environment in which teachers can rightfully claim their rights to decide how and what to grade. As such, some states have even passed laws defending the right of a teacher to have final decision on a grade, even beyond that of a principal or superintendent (Alexander & Alexander, 2018, p. 88). This is the context in which teachers have developed their autonomy on constructing grades, based on their beliefs, experiences, and context in which they are working. This will be referred to as traditional grading, as the aggregate of grading traditions utilized by teachers in schools across the country.

### ***Role of Teacher Beliefs in Creating Grades and Implementing Reforms***

The significance of teacher belief systems plays a key role in this discussion on the nature and purpose of grades. For the purposes of this study, beliefs are defined as

statements about reality held to be true by an individual, which may shift over time. Conceptions here are defined as the organized system of beliefs held by an individual (Remesal, 2011, p. 474). The role of teacher conceptions in the implementation of policies have been researched widely in the past twenty years. Erickson (2010) called out the particular power of beliefs and conceptions surrounding grading practices by referring to it as the “third rail” of schools (p. 22), fundamental to the legitimacy and respect for teaching and learning, but also so essential to the operations of classrooms and schools that it is dangerous to touch them. These personally significant beliefs and conceptions on how to grade are connected to their beliefs in the purpose and value of education and schooling overall, and have merited much specific investigation.

There has been wide research on teachers’ grading practices, with a preponderance of these studies consisting of asking teachers directly how they decide which factors contribute to a students’ final grade (Guskey & Brookhart, 2019, p. 88). In studies by Cross and Frary (1999), McMillan and Guskey (as cited in Guskey & Brookhart, 2019) results confirmed that teachers traditionally use academic achievement as well as many non achievement factors in determining grades to “mitigate social consequences associated with ...determining eligibility for nonacademic privileges at home or at school” (Cross & Frary, p. 54). Beyond grading for an array of factors it is well documented that there has been wide variation on how grades are constructed even within many schools, and that both achievement and nonachievement factors were combined to come up with final grades. Studies by Aronson (2008, as cited in Guskey & Brookhart, 2019, p. 95) and McMillan and colleagues (2019) found that attendance, perception of effort, and the ability to increase likelihood of higher grades are widely

used by teachers in their individual grading practices. The subject matter is found to make a significant difference in determining the components of a grade, with elective subjects standing out in terms of the weighting, “Teachers grade non core subjects differently, with greater weight placed on non achievement factors” (McMillan, 2019, p. 96). Adding to this recognition of the nuances which the subject being taught bring to teacher beliefs, Cross and Frary made the distinction in 1999 that participation should be graded in subjects such as learning another language, in which developing oral skills are impossible without high level participation (p. 66).

Investigations into teacher perceptions on grading reveal similar trends of teachers perceiving effort, improvement, work production, and ability as all valuable in constructing and assigning grades. Sun and Cheng (2013, p. 97) found that secondary teachers saw grades as useful for encouragement of successfully completing and improving on production of work which can be assessed. They concluded that teachers also valued ‘fair’ grading, which is accomplished by individualized grading, resulting in variability within different classrooms and schools. This theme of teachers valuing grading as a motivator, not simply a tool to communicate learning, pervades much of the results of research on teacher perceptions of grading. Bonner and Chen (2009) found four essential factors which influenced teacher perceptions of what creates effective grading (see Table 2).

**Table 2*****Four factors which reflect teacher perceptions of effective grading***

Raising grades based on non achievement factors
Varying grades for effort and allowing students to obtain highest grade possible
Using a variety of assessment types
Managing student behavior

(Adapted from Bonner & Chen, 2009)

The set of practices and perceptions described above describe the range of practices which teachers perceive as fair and effective, and which will be referred to as ‘traditional grading’ in this study. The distinctions made by teachers also depends on the curricular track which they perceive their students to be on. Cross and Frary (1999) highlighted this in 1999, “...our belief that grade transcripts play a more important role in the opportunities available to college bound students than for students not planning to go to college” (p. 57). As much study has shown, teachers have developed many forms of individualizing grades to create what they perceive to be effective practice. As McMillan put it, “Grading *for* learning may be as important as grading *of* learning when thinking about the purpose of grading and its consequences” (2019, p. 107).

Given the decades of deep research and innovations proposed around grading, it is clear that teachers have access to multiple pathways to improve this powerful system for the benefit of the students and themselves. Yet many teachers resist or modify the reform practices and achieve their goal of maintaining the traditional system. Bonner, et al. framed this phenomenon in stating “Teacher beliefs are a ‘messy construct’ to define and measure, but important because they strongly affect teacher behavior. They are difficult to change as teachers like all individuals tend to persevere even in erroneous beliefs

rather than act on new information” (2018, p. 73). In 2016, Brookhart et al. conducted a study using their own framework which focused on “both the interpretation of the construct (what grading means) and the implications and consequences of grading (the effect it has on students)” (p. 827). The results showed that teachers involved in a standards-based grading reform implementation persisted in interpreting higher grades as a reward for excellent work, based on effort, quality, attitude towards achievement and progress in learning. Responding teachers noted that grades are “fairer if they are lowered for lack of effort or participation” and that they considered the consequences of grading decisions as it would affect students’ future efforts and efficacy (p. 827). In a survey of studies of teacher perceptions of grading the results were consistent with grading practice surveys, in that teachers view grading as a means to have “fair, individualized, positive impacts on students’ learning and motivation, and to a lesser extent, classroom control” (Brookhart et al. 2016, p. 828).

The findings as reported reflect the very critiques of traditional grading, but seen through the lens of teacher beliefs reveal why they endure as individual practices. As Brookhart et al. (2016) summarized traditional beliefs on grading (see Table 3).

**Table 3**

***Summary of Traditional Teacher Beliefs on Grading***

Teachers idiosyncratically use a multitude of achievement and non-achievement factors in their grading practices to improve learning and motivation as well as document academic performance.
Student effort is a key element in grading.
Teachers advocate for their students by helping them achieve high grades.
Teacher judgment is an essential part of fair and accurate grading.

(adapted from Brookhard et al., 2016, p. 828)

These themes of how teachers' beliefs on grading endure in the midst of reform efforts are matched by Randall and Englehard (2016), stating that teachers consistently consider four major factors in constructing a grade: academic achievement, ability, effort, and behavior. While these factors differ slightly from the teacher beliefs cited above (Brookhart et al. 2016), the role of teacher decisions as to what to base their decisions on is a reflection of their conceptions overall.

The effect of teachers' decisions on which of the factors contribute to a grade can be traced in part to teacher training programs and geographic conditions. In the 1999 study by Cross and Frary, they found that training is likely to have a very limited impact on how teachers think about grading interpretation and use (p. 69). Link (2018) clarified this in a study which explored the relationship between teacher perceptions of grading practices and their geographic location of employment and pre-service training. It was found that high school and middle school teachers were more likely to base their grades in part on student behavior than elementary teachers. Additionally, teachers in urban areas were more likely to grade in this manner. There is some evidence that secondary teachers believe that older students should be demonstrating greater responsibility for their own learning developmentally (Ellerbrock et al., as cited in Guskey & Link, 2016, p. 312). This discrepancy was compounded by the fact that 82% of teachers in urban areas were graduates of traditional teacher preparation programs (where assessment strategies are more likely to be taught) while 96% of suburban teachers were trained in assessments. Assessment and grading are taught more frequently in traditional teacher preparation programs than in non-traditional teacher preparation programs (Link, 2018, p. 78). Thus, students in urban secondary schools are more likely to experience grading

based on their behavior (Link, 2018, pp. 75-78). The fact that urban students are more likely to be students of color and also live in high-poverty neighborhoods demonstrates that teacher interpretations of student behavior can have a severe and inequitable impact on student grades.

The effect that a teaching environment has on beliefs and conceptions is also of note. Guskey and Link (2016) pointed this out as an important factor in understanding how traditional grading practices endure:

Newer teachers also may be complying with the pre-established grading norms of their more experienced colleagues or prescribed grading policies within their school or district, thereby fostering consistency in teachers' grading practices over time. ...teaching context may be a contributing and even neutralizing factor with regard to teachers' grading practices. (p. 314)

The effect of this lack of explicit training for many teachers also add to the 'presumption of a shared-identity-bias', as discussed by Olsen and Buchanan (2019):

In the absence of formal attention to grading policies and practices in teacher preparation or professional induction, teachers implicitly receive the message that grading is merely a technical act. That makes it easier for them to presume that whatever they experienced as students in their own past is sufficient... This means that their grading views derive largely from the past in backward looking fashion. (p. 2017)

As pointed out by Bonner et al. (2018), teachers are affected by the requirements of the environment in which they work, including the policy constraints. Citing Bandura's idea that the physical and socio structural affects people no matter what (1997), they



stated that “teachers must reconcile their beliefs about their professional autonomy and expertise in teaching and assessment with external policy mandates” (2018, p. 73). The environment in which educational reforms are communicated and implemented thus matters significantly.

Knight and Cooper explored this intersection in a 2019 investigation of the perceptions of high school teachers on the interconnected effects of grading reform on planning, instruction, assessment, classroom environment, and student behavior (p. 68). They found that most teachers made compromises of grading practices from the formal systemic changes to a more individualistic version of the same. One teacher responded that one must “balance the reality of the current school system with idealistic grading” (p. 78). The social effect of a teacher’s environment was also key, as implementation efforts done in collaboration with other teachers produced more perceived successes (p. 79). Knight and Cooper pointed out that as grading reform is not just about grades, but also about instruction, “implementation requires systemic changes that affect many facets of stakeholders’ beliefs and practices” (p. 89). Feldman (2019) called out these beliefs and practices as “teachers solve for weaknesses in our software and dysfunctional omnibus grade design in unique ways, guided by individual *beliefs* about what motivates students and what aspects of a course are most important...and diverse ideas about what students need to learn and know” (p. 52). Or, as Cross and Frary found in 1999, “That grades are likely to be biased by the subjectivity teachers use in assessing and combining these ingredients may be perceived as less of a concert than discounting effort, ability, attitudes, conduct and growth as irrelevant considerations.” (p. 70).

Beyond the understanding that grading reform is about instruction, assessment, and the experience of the classroom, it also reflects underlying beliefs about the purpose of schools and education in the context of society. Olsen and Buchanan (2019) asserted this in a study of a year of grading reform professional development in New York City Public Schools, “One tension is schooling as preparing young people to succeed in the current world versus preparing young people to change the world” (p. 2017). This inherent purpose of how and why teachers are engaged in their work of assessing and grading is an ongoing aspect of discovering how they make the choices which they do. Another aspect revealed by this tension is the suspicion of the claim that humanist qualities in students will logically follow if grading is restricted to academics alone, not to include non academic factors such as effort, timeliness, and behavior (Olsen & Buchanan, 2019, p. 2020). This component of teacher perceptions of the role and purpose of grading and assessment is related to the purpose of schooling, but also the goal of teaching as related to the development of the student as an individual, not just their academic progress.

The purpose of grading is seen as key in evaluating the value of a grade also, as pointed out by Guskey and Link in 2022, “the criteria for determining ...any system of grading or reporting lies in *how well it serves as a communication tool for students and parents.*” (p. 6). They established three criteria for determining grading and reporting effectiveness, which reflect this essential purpose: report student performance based on key grade level or course standards rather than a single content-area grade, report student achievement using a limited number of performance categories, and report academic achievement grades separately from information related to noncognitive factors (pp. 6-7).

In a study of teachers' perceptions of assessment, Remesal (2011) stressed that teachers' conceptions are one of the key factors influencing classroom decisions, and thus are particularly critical during times of system school reform, as teachers are often the last stakeholders in the sequence of changes (p. 472). She distinguished between the pedagogical function of assessment and the societal function of assessment, with the former serving the purpose of promoting reflection and monitoring of both teaching and learning. The societal function of assessment however serves as accountability of students' achievement and teachers' professional labor (p. 473). This elevates a crucial distinction in teacher beliefs around grading which most reform efforts miss, the fact that grades communicate performance of the teacher as well. An interesting aspect of this study is the exploration of how beliefs can be understood as gathering in systems, and can explain the complex relationship between belief and behavior: "while we express a certain belief, our current actions, as a situated reaction, might be driven by another belief or set of beliefs which remain unspoken in the background" (Green, as cited in Remesal, 2011, p. 474). The non-linear relationship between belief and behavior was a focus for this study.

If teacher beliefs and conceptions tend to be impervious to efforts of grading reform, the challenge is to discover what does lead to successful changes in teacher beliefs. Fullan (1996) has written extensively on the dynamics of change in educational systems, and focused on the role of teacher conceptions in the article, "Turning Systemic Thinking on its Head". He asserted that educational change is "inherently, endemically, and ineluctably nonlinear", and that as a result even the best laid plans will be fragmented by implementation (p. 2). Further, he stated that "only when greater clarity and coherence

are achieved in the minds of the majority of teachers will we have any chance of success” (p. 2). This is where Green’s construct (as cited in Remesal, 2011) that beliefs may be layered and fluid brings meaning to Fullan’s notion of teachers’ achieving clarity and coherence. Looking at the epistemological basis of knowledge, if a teacher cannot explain and agree with how and why a grade is constructed, they cannot ‘know’ that a grading system is accurate and fair. This theme of teachers’ metacognitive awareness of their own beliefs and grading process informed this study in both methodological and theoretical aspects, as the interviews involved asking the teachers to reflect on their own analysis of their thinking.

Guskey and Bailey asserted in 2001 that there are a few general categories of agreement in the broad array of grading practices in the USA (2001). Their survey of studies pointed to the consensus that grading and reporting are not essential to instruction, that there is no single method of grading which serves all purposes equally well, and that it will always involve some subjectivity (Guskey & Bailey, 2001). These points of convergence have formed the basis of a series of critiques widely debated over the past 20 years, concerning the formation and reporting of high school grades.

### ***Critiques of Grading***

These critiques can be categorized as critiques of reliability, effect on motivation, and the inequitable effect of grading practices on students. The consistency and reliability of grading has been studied since 1913, when Finkelstein carried out a study at Cornell University and concluded that,

Few teachers stop to consider what the making system under which they work really implies; that the variability in the marks given for the same subject and to

the same pupils by different instructors is so great as frequently to work real injustice to students. (as cited in Guskey, 2015, p. 6)

In 2019, ASCD published a comprehensive review of research on grading, *What We Know About Grading: What Works, What Doesn't, and What's Next*, edited by two significant researchers, Guskey and Brookhart. The summary of hundreds of research projects is summarized, including extensive work establishing that reliability in grading is a common goal and widely unobtainable (p. 27).

This unreliability can be attributed in part to the logistical challenges of using both a percentage and letter grading scale, commonly practiced in high schools. As most transcripts are published with a four point scale Grade Point Average (G.P.A.), and many schools use electronic grading programs which are based on the 100 point percentage system, a translation has to take place. As Guskey (2015) showed, this results in a grading scale which identifies sixty or more levels of failure compared to the one level identified by an F on a four point scale:

**Table 4**

***Typical Letter Grading Scale***

Failure	Passing	Passing	Passing	Passing
F (0 points)	D (1 point)	C (2 points)	B (3 points)	A (4 points)

***Percentage Grading Scale***

Failure	Failure	Failure	Failure	Failure	Failure	Failure	Passing	Passing	Passing	Passing
0	10	20	30	40	50	60	70	80	90	100

(Adapted from Guskey, 2015, p. 27)

Thus, without descriptions of degrees of failure, the grade becomes flawed in what is communicated about learning.

Reeves (2011), Guskey (2015), and Brookhart et al. (2016) all agreed that the percentage grading scale only offers the appearance of precision, given the fact that there is no precise measuring device which leads to misclassifications instead of specific feedback. The flaws of using an electronic grading system based on the 100 point percentage scale are compounded as grading categories are created by individual teachers, with varying weights. Feldman (2019) demonstrated the inconsistencies of this system in *Grading for Equity* by contrasting the cumulative scores of two students whose vastly different comprehension is hidden by the weighted points earned in the three categories:

**Table 5**

***Categories Which Favor Homework, Class Activities and Participation***

Teacher Q's categories	Category weight	Student Z category Score	Student Y category score	Student Z weighted points	Student Y weighted points
Homework	30%	80%	60%	.24	.18
Tests and Projects	40%	60%	95%	.24	.38
Class Activities	20%	90%	70%	.18	.14
Participation	10%	100%	60%	.10	.06
Total Weighted Percentage				76%	76%

*Adapted from Feldman, 2019a, p. 54*

***Categories Which Favor Summative Assessments of Understanding***

Teacher R's categories	Category weight	Student Z category Score	Student Y category score	Student Z weighted points	Student Y weighted points
Homework	5%	80%	60%	.04	.03
Tests and Projects	85%	60%	95%	.51	.81
Class Activities	5%	90%	70%	.05	.4
Participation	5%	100%	60%	.05	.03
Total Weighted Percentage				65%	91%

*Adapted from Feldman, 2019a, p. 54*

As can be seen, Student Z was not able to demonstrate learning on the tests and projects, but in the first series of weighted categories finishes with the same 76% as Student Y, who demonstrated a high level of learning. In the second example, the total weighted percentage reveals Student Z's lack of mastery on the content and Student Y's achievement of learning. The fact that the examples show the same scores and percentages and are only different in the weight given each category is another example of the inherent unreliability in many grading systems (Feldman, 2019).

The above examples also illustrate how mistrust and demotivation are generated in grading, as Student Z could advance without intervention on her lack of comprehension based on Teacher Q's weighted categories, and Student Y could easily give up on her work in Teacher R's class, as her learning is not valued in the final grade as much as her participation and homework.

The critique of grading as falsely used to motivate student learning was presented by Kohn in *Punished by Rewards* (1999), where he argued with in depth evidence from the fields of psychology and management that the decades of behaviorism's influence in

education had created a lack of understanding of the value of intrinsic motivation compared to systems of rewards and punishments.

When we repeatedly promise rewards to children for acting responsibly, or to students for making an effort to learning something new, or to employees for doing quality work, we are assuming that they could not or would not choose to act this way on their own. If the capacity for responsible action, the natural love of learning, and the desire to do good work are already part of who we are, then the tacit assumption to the contrary can fairly be described as dehumanizing. (Kohn, 1999, p. 26)

Brookhart, et al. (2016), Feldman (2019), Guskey (2001) and Reeves (2006) all agreed with Kohn on this point, and cite years of research which supports this idea that poor grades do not motivate, and even worse, grading overall may demotivate students to learn. As Dewey noted (1916), students who learn to do school well may not be learning content for their own purposes, but for the purpose of pleasing the teacher. It is not an accident or confusion on the part of teachers which has kept their belief that grades should be in part about behavior. Kohn (1999) stated that grades are used as a means of control, particularly when teachers are reacting to the accountability of large systems, with standardized testing driving accountability measures (p. 152). As discussed earlier, the goal of shaping a student as part of a majority culture plays a role in the deep attachment teachers have to using grades to influence behavior.

Equity of grading as a criterion is another fundamental reason for the past decades of inquiry into grade reform. Feldman builds on this critique in calling out the disproportionate effects of grading:



Perhaps most disturbingly, extrinsic motivation systems are often endorsed as particularly appropriate, even necessary, to manage students who are from low-income families, have struggled academically, or who have historically been underserved. Many educators, whether limited by unconsciously racist assumptions or guided by theories of a “culture of poverty”, too often apply a “deficit lens” to African American, Latino, and low-income students, believing that those groups of children require and even hunger for immediate, concrete rewards and extrinsic incentive systems- that their environment simply does not support, and they cannot handle intrinsic motivation. (2019a, p. 36)

As a teacher interprets a student’s responses for the purpose of assessment, it is impossible to avoid an inherent and implicit bias. Research in the past decade has shown that while teachers nationwide are 80% white, the majority of students in urban areas are of color (Staats, 2014, as cited in Feldman, 2019a). Using grades to evaluate behavior will end up reflecting the bias of the teachers who perceive the behavior. As Feldman (2019a) argued, it may be impossible to erase implicit bias, but it may be possible to change grading systems so that the subjectivity of assessing behavior is reduced and students are able to demonstrate their learning in openly accessible assessments of their comprehension. It is important to note that while grading may have a harmful effect on any student, the disproportionate effect on students who are also dealing with systemic racism in much of their education is compounded. The call to reform grading in large urban school districts with a high proportion of BIPOC and economically disadvantaged students is thus particularly crucial.

## **Proposed Reforms to Grading**

Parallel to criticisms of grading as inaccurate, unreliable, inequitable, and sometimes even harmful, there have been waves of efforts to reform grading, which have been adopted in various forms and scale over the past few decades. As with any reform in education, there has been no universally accepted philosophy or strategy. For the purposes of this study the broad categories of criterion-referenced assessment and grading and standards based grading are surveyed, followed by an overview of adjustments to implementation efforts in various environments.

### ***Criterion-Referenced Assessments as Source of Grades***

The innovation of measuring a student's achievement against a standard or criterion alone, as opposed to interpreting the achievement in comparison to other students was proposed by Glaser in 1963, as a means of reducing the effect of normative grading (as cited in Popham, 2014). The shift was precipitated by a focus on accurate feedback but began to turn educators' attention towards the question of every student being able to learn to the same standards. Popham (2014) stated:

An inherent assumption of criterion-referenced assessment, then, is that by articulating with sufficient clarity the nature of the curricular aims being assessed, and by building tests that enable us to measure whether individual students have achieved those aims to the desired level, we can teach students better.

Criterion-referenced measurement, in every significant sense, is a measurement approach born of and preoccupied with *instruction*. (para, 8)

Developing rubrics as the tool for measurement of mastery of comprehension per specific criteria became an essential aspect of this reform. There has been no single term

used for the uses of criterion-referenced assessments and rubrics, but some of the labels include: feedback for mastery, formative and summative assessment practices, performance criteria, and criterion based testing (Brookhart & Chen, 2014). The components of criterion-referenced assessments have been used in many systems and are now inextricably linked to the uses of rubrics for student feedback and also in accreditation evaluations. As Brookhart and Chen (2014) stated, “Formative assessment and accreditation may seem strange bedfellows, since accreditation relies heavily on summative assessment data. However, they both rely on clear statements of criteria for the quality of student work, and therefore they both provide an impetus for rubric use despite their differences in assessment purpose” (p. 346). This shows the inherent value of rubrics to many systems, but also the potential for misinterpretation of criterion-referenced tools if not clearly connected to instruction. The crux of the challenge in utilizing criterion-referenced assessments lies in the translation to grade reporting.

This change in seeing how students should be taught and also assessed took on new energy in the 1990s, with the advent of electronic grading systems, increased accountability based on standardized student achievement testing, and increasing awareness of the need for cultural competency and dismantling of racialized systems.

### ***Standards Based Grading***

While criterion-referenced assessments as a source of grades were a component of many reform initiatives, the concept of standards based grading became an entity recognizable as an entire systemic reform. In the absence of a national curriculum in the U.S.A, states and local school governments had long relied on traditional textbooks for

curriculum guidance. In the 1980s, a movement calling for national and state educational standards was sparked by the publication of “A Nation at Risk” which communicated that education in the USA had mediocre standards (Kamenetz, 2018). By 2004 every state had some form of state educational standards and there were national standards developed as well (US Department of Education, 2022). By the late 1990s, a system of grading to reflect student learning per these standards was developed to address the significant issues with traditional grading. Advocates of standards based grading have developed many iterations of it, but according to Guskey and Bailey (2001), the essential differences are that teachers report student learning on standards instead of content area grades, and they assess grade achievement using a scale similar to the ones used by state or provincial assessments. A survey of research on implementation of standards based grading shows that a growing number of school districts and individual schools have turned to this area of grading and instructional reform since the early 2000s. There is an emerging body of research on how implementation efforts have proceeded, with some clear advantages to students who gain a sense of efficacy as the responsibility for their learning is recognized (Knight & Cooper, 2019). The nuances of standards based grading reporting are an area of much diversity, and in at least one study teachers expressed a strong desire for professional autonomy and insisted on imbuing their own professional beliefs on teaching practices and grading even if not aligned with a standards based system (Bonner et al., 2018).

Both ASCD and NASSP have published multiple articles on how to roll out and support standards based grading, and include the core principles of creating clear expectations for what is being taught, how it will be assessed for learning, and how

proficiency on that standard will be measured and reported (Neuendorf, 2018). A theme of the studies on implementation is also that communication among teachers, administration, families, and students is essential for successful adoption in school communities (Veenstra, 2021, p. 15). Elementary schools where this reform is adopted must address the report card as communication to parents and families first. This form of communication is addressed by Guskey in steps recommended to avoid confusion and pushback:

1. Clarify the purpose of the report card: What information, and for whom?
2. Differentiate grading criteria: Product, Process, Progress
3. Move from letter grades to standards (2001)

While this may be helpful in primary grades, the challenge that these types of grades on a transcript brings to the secondary grades increases the likelihood that teachers, families and students will argue against a system with which they are unfamiliar. As Reeves pointed out, the traditional grading system has served those who teach well, and extraordinary evidence is needed to motivate teachers to change their beliefs (Reeves, 2022). In an essay targeted at secondary implementation of this reform, Townsley (2019) asserted that school leaders need to have deep understanding of three main principles of standards-based grading, to be able to successfully address teacher concerns and community pushback. The connection between state standards being assessed also on standardized tests is an important aspect of how teachers and families can understand the shift (Townsley, 2019, p. 35).

### **Adjustments to implementation of grading reforms**

Interestingly, or unsurprisingly, with all of the innovation and new practices available, there is still much pushback on grading reforms. One of the early proponents of grading reform, Reeves, stated in 2022 that he now just calls it ‘accurate and fair grading’, to avoid the backlash associated with standards-based grading. This may be connected to the fact that while standards-based reform and testing have dominated US education policy since the 1990s, evidence is still inconclusive if it has positively impacted student learning and achievement (Bonner et al., 2018, p. 72). Bonner suggested that these mixed results may be related to the mediating variables of differences in *how* teachers implement instruction and what their beliefs about standards and assessment are (p.73).

In a 2019 study of high school teachers engaging with a year of professional development on rethinking grading, Olsen and Buchanan studied how grades do encourage enabling factors such as engagement, and how in secondary school grades are often still a teacher’s primary means of motivating students in the economic system of the school. They concluded that as grading is part of the economics, history, and power of how schools are organized, “Grading is to teachers what water is to fish: It surrounds them” (p. 2031). Without changing all the other components of schooling and offering another manner of incentivizing the students, partial rethinking of the grading did not ‘stick’.

Knight and Cooper investigated the interconnected effects of standards-based grading (SBG) on teaching, learning, assessment, and student behavior in a 2019 study, and concluded that,

...the practical application of each SBG grading component continues to clash with centuries-old grading traditions and deeply ingrained belief systems among parents, students, and teachers. Therefore, specific SBG practices continue to evolve as school leaders learn more about the effects of SBG and seek to meet the needs of individual communities. (p. 68)

This evolution of standards-based grading and instructional practices is observable in schools and school districts where initiatives are called “Grading for Learning” (Rochester Public Schools, 2022) or the more general grading for mastery or achievement. As Bonner and Chen pointed out in 2009, a predisposition on the part of teachers to be academically enabling when dealing with individual students is part of a ‘success bias’ which many use in modifying grading structures to motivate students.(p. 73). This challenge of how to motivate students to academic growth outside of the grade is well documented. As McMillan (2019) stated “...it would be helpful to provide a clear rationale for how “pulling for students” is operationalized to better assure fairness and consistency within and across classrooms” (p. 105). While families and students’ prior beliefs, perceptions, and practices about grading pose significant challenges to successful and systemic implementation of reforms (Peters et al., 2017, p. 11), the role which teachers play in implementing any system is fundamental and the focus of this research.

### **Changes in Grading Policies During the COVID-19 Pandemic, 2020-2022**

In early 2020 the novel COVID-19 virus became a global pandemic. The effect on teachers, students, and schools was swift and dramatic. On February 25, 2020 the Center

for Disease Control (CDC) issued a warning that schools should prepare for changes, with a CDC director Messonneir saying “You should ask your children’s schools about their plans for school dismissals or closures. Ask about teleschool” (EdWeek Timeline, 2020). By March 11 the World Health Organization (WHO) declared a global pandemic, and by March 25th all public schools in the USA were closed, leaving 50.8 million public school students out of school, and teachers in over 100,000 public schools turning to a new form of instruction online (EdWeek Timeline, 2020).

As schools and teachers developed systems and strategies to teach remotely within a matter of weeks, new issues emerged. By May 2020 80% of teachers reported interacting with the majority of their students daily or weekly, but also that their work load and dissatisfaction with their jobs increased markedly (EdWeek Timeline, 2020). The reality of the COVID-19 pandemic being lethal became clear that spring as well, as hundreds of teachers died in May 2020, along with many students’ family members (2020). Additionally, many teachers were now working from home while caring for their own children who were also learning to be remotely taught students. These added layers of concern of creating a new way of teaching and assessing online while navigating the pandemic, provoked dramatic levels of exhaustion and plummeting morale (2020). The conditions from May 2020 through July 2022 continued to shift in schools across the country and globe, as wellness and health concerns were balanced with essential goals of educating school children during a time of foundational disruption. Fullan, a noted writer on change dynamics in education, wrote in September 2020 that he assumed during the early months that schools would re-open rapidly, but “the situation is chaotic within any given country and is off the chart when considered globally” (2020b, p. 26). This note of



unprecedented uncertainty permeated decisions and implementation of adjustments in schools throughout the pandemic.

The effects of the COVID-19 pandemic have been felt at all levels of society, from global economic and political systems to individual mental health conditions. As Stiglitz, writing for the International Monetary Fund pointed out in fall 2020, “While the pandemic has revealed the enormous cleavages across the countries of the world, the pandemic itself is likely to increase disparities” (para. 4). This awareness of enhancing disparities in student achievement was also named by Feldman and Reeves in 2020, “Last spring students with more resources and supports were more insulated from the effects of the pandemic...Other students with insufficient technology or were caring for younger siblings had their learning essentially place ‘on hold’ ” (p. 23).

At the individual level educators were also dealing with what Boss called “ambiguous loss” (2022, p. 3) . She named this as a “crucible for high anxiety and stress: the loss of homes, dreams, plans for the future, the loss of certainty about safety and health for self and family, and loss of trust in the world as a safe, fair, and just place” (p. 5). These conditions affect every person uniquely, but cumulatively may begin to affect beliefs and conceptions over time.

In practical matters, decisions were made about grading and assessment policies in 2020 which posed significant changes from existing practices. As there has never been a national grading policy, or even statewide systems, the more than 14,000 individual school districts and schools began to respond to the pandemic and remote learning with a wide array of changes (EdWeek, 2020). More than 30 states waived graduation requirements for 2020, including rules for examinations and minimum attendance hours

(EdWeek, 2020). The option to change all grades to Pass/Fail, or to assign a passing grade to all students, was used in some schools that spring, and a shift to versions of Pass/No Credit continued the following year. Of the six largest school systems in California, five changed grading systems to ‘hold harmless’ for spring 2020 (Tadayon, 2020, para.3). To hold harmless meant that no failing grades would be issued. The California policy changes were supported by Ed-Trust, an advocacy organization which urged all districts to move to a pass/fail to minimize the impact of school closures on student outcomes (Tadayon, para. 7).

In Minnesota school districts also shifted to Pass/Fail in 2020, with some using a Pass/No Credit (P/NC) option in which the NC did not affect G.P.A.s negatively (Klecker, 2020, p. 4). In the St Paul Public Schools district students could earn an A+ through C-, with any grade lower than C- counting as an in progress grade, which was neutral for G.P.A. purposes (Klecker, 2020, p. 7). Both the California and Minnesota state college systems adjusted their own grading and admissions criteria that spring to support the shift to Pass/Fail grading (Klecker, 2020; Tadayon, 2020).

In the 2020-2021 school year, grading policies continued to shift, as schools reopened in some areas of the country and remained closed in others. Fourteen states mandated schools to reopen, while two had limited closure mandates and 34 left closing decisions up to individual school districts (Ballotpedia, 2022). A total of 66% of students nationwide were in those states where school closings were a local decision. In Fairfax County, Virginia, grading adjustments for 2020-2021 continued throughout the year, with an announcement during the last quarter that students could choose a grade of No Mark (NM) instead of Failure (F) in any class (Fairfax County Schools, 2022). These policies

were justified by concerns for student mental health and wellness in addition to continuing disruptions and inability of students to access instructional services and support. In an EdWeek Research Center national survey in spring 2021, 81% of teachers reported that work was more stressful than pre-pandemic (EdWeek, 2020).

As teachers and administrators struggled to deliver instruction and feedback in these conditions, an unexpected result was that parents and families gained access to the classroom as it shifted online, and into their homes. Link and Kauffman (2021) pointed out that online learning revealed the connection between teaching and assessments, and the clarity when there was none (p. 2). It was difficult in remote learning to find evidence for all four areas identified by Brookhart, et al. (2016) which teachers generally recognize in grading: effort, quality of work, attitude towards achievement, and progress in learning. Only quality of work was easily observable in the online learning environments. The legal implications of inequitable and unfair grading practices are clear, as established in the case of *Goss v. Lopez* (1975) which made it possible for families to challenge a grade (Link & Kauffman, 2021, p. 4). The autonomy of schools and teachers to define student achievement in grading which is well protected by federal law is balanced by this emerging cultural dynamic (Alexander & Alexander, 2018).

A 2021 report from the Center for American Progress by Ferren highlighted the disproportionate effects of school closings and remote instruction on BIPOC students and their teachers, concluding that white students were more likely to attend schools which reopened in the fall of 2020 and stayed open (para. 5). Additionally, students in high poverty urban areas were much more likely to have challenges to access nutritional and health services, and also high speed internet and devices for remote learning (para 10).

Both this report and the Center for Reinventing Public Education summary of 2021 by Kaufman and Diliberti highlighted the increased workload on teachers, sagging morale, and struggles to engage with online learners (p. 4). The indicators that teachers were beginning to leave their jobs in record numbers were also cited, with three times the number planning to leave the profession as in a normal year (p. 6). The aggregate effect of low morale of colleagues and low engagement of students will affect a teacher's individual experience and set of beliefs about their own work. The uniqueness of this crisis was that while teachers, students, and families navigated the continual shifts in learning conditions and grading policies during the COVID-19 pandemic in a myriad of ways, they shared the experience globally.

By the fall of 2021 in Los Angeles Schools, the grades of the first eighteen months of the pandemic demonstrated that even with Pass/Fail and hold harmless policies there was a significant increase in the number of Ds and Fs, particularly for Black and Latino students (Esquivel, 2021). District officials directed teachers to

...base academic grades on whether students have learned what was expected of them during a course — and not penalize them for behavior, work habits and missed deadlines. The policies encourage teachers to give students opportunities to revise essays or retake tests to show that they have met learning goals, rather than enforcing hard deadlines. (Esquivel, 2021, para. 5)

This adaptive instruction to support students during extraordinary circumstances was also the basic structure of reforms suggested as part of standards-based grading. The impetus to try out grading reforms was motivated in part by new awareness of disproportionate living conditions and life experiences. Just as parents now had access to online

classrooms, teachers now had inside views of students' homes, and the vastly different situations which their students lived in. As a Los Angeles school administrator put it "The COVID pandemic just highlighted across the nation a trend of looking at the inequities in learning circumstances for students, but those different circumstances of learning have always been present" (Esquivel, 2021, para. 12).

Universities also made significant grading policy changes during 2020 and 2021, reacting to the crisis by also using Pass/Fail and hold harmless policies. Zimmerman, a columnist at Inside Higher Ed, pointed out the original movement to Pass/Fail grades in the 1960s was also a reaction to a crisis, and the reasons given then were to produce learning which engaged their passions and interests as well as change the grade system which "seemed to eliminate both" (Zimmerman, 2020, para. 4). While many colleges did change their grading policies for the first two years of the COVID-19 pandemic, most reverted to previous policies by the fall of 2021 (Tamez-Robledo, 2021). The debate on whether to reform grading policies at the university level was robust and continues today (Kinney & Rowland, 2021), but the significance of university level policy changes to high school grading practices is most powerful in the arena of admissions to university. The shift to more open admissions, and dropping the requirement to take the ACT or SAT for admissions was swift and widespread in 2020, and continued into 2022. By summer of 2022, 75% of the colleges and universities had dropped these tests as requirements for admission (FairTest, 2022). Applications to these schools increased by 11% in 2021, but the absence of test scores increased the weight that high school grades then play in admissions.

Kohn (2020) cited the possible benefits of the lockdown in bringing awareness of the need for changes in grading systems, calling for an end to standardized tests and admissions tests as they were carried out before 2020, and possibly ending the use of grades as they were traditionally used. He concludes that “We’ve always been able to do better. This is an actionable as well as a teachable moment—a chance to turn an epidemiological crisis into an educational opportunity” (Kohn, 2020, para 13). This idea that a crisis could be the beginning of positive change in the systems of assessment and grading ties into how chaos and systems theory can be used to explain how and why teachers’ thinking and perceptions may have changed during the pandemic.

### **Theoretical Framework**

“The brain downshifts under stress. When we are fearful, we revert to our most habitual behaviors” (Senge, et al. 2012, p. 36). Senge was referencing the stress that teachers and administrators experience as pressures to perform by improving student outcomes in a time of standardized testing and funding crises. The pressures of changing teaching and learning to a remote model while also managing the biological and existential threats of the COVID-19 pandemic created unprecedented stress levels for educators in 2020 through 2022 (Kaufman & Diliberti, 2021). Pandemics have had powerful sociological and political effects on societies throughout history, resulting in what the organizational psychologist Gelfand argued is a tendency for societal norms to tighten up in response to ecological threats which demand pro-social behavior and large scale cooperation (as cited in Spinney, 2022, p. 44). For this study, the question of whether teachers’ beliefs and conceptions have been changed by their experience of the COVID-19 pandemic is viewed through the lenses of systems and complex change theory

and chaos theory. These theories offer possible explanations for the phenomenon of teachers changing or maintaining their perceptions on grading regardless of the changes in systems and conditions.

### ***Systems Thinking***

The idea of systems theory is based on the understanding that the whole is greater than the sum of its parts, while it is also true that the people within a system have dynamic roles which are both affected by, and affect the manner in which the system operates (Senge et al., 2012). As Senge et al. articulated, to understand how educational institutions work one must recognize “...the recurring patterns of systemic behavior and the simpler interrelationships that cause those patterns to exist” (p. 24). These relationships and behavior of students, parents, teachers, and administrators can be clarified by applying the tools of systems thinking such as the ladder of inference, unpacking mental models, and identifying the nested systems and communications patterns of the participants (Senge et al., 2012). Looking through the lens of systems theory, the reasons that grading reforms have often foundered are clearly connected to teacher beliefs and conceptions: “If you want to improve a school system, before you change the rules, you must look first to the ways that people think and interact together” (Senge et al., 2012, p. 25). Key to this guidance about reform is that without paying heed to the thoughts and behaviors of people within, a system will tend to resist outside change, and “...respond in the only way the system knows how to respond: by doing what it has always done, but harder” (Senge, 2012, p. 36). Looking at the effect of the pandemic on teachers’ beliefs addresses a concern Senge articulated, “Those who have not worked within the institutions of education often do not appreciate just how

disempowered most educators feel” (2012, pp. 37-38). Feeling disempowered was deepened from 2020 through 2022, when change became externally forced and increasingly more complex.

### ***Complex Change Theory***

This core aspect of systems being made of individuals who operate within and also exert influence on the same system is fundamental to Fullan’s theory of complex change in educational systems. Fullan and Quinn laid out guidance for managing complex systems change in 1996, arguing that “Effective change processes shape and reshape good ideas as they build capacity and ownership among participants” (Fullan & Quinn, 2016, p. 14). This idea that teachers should participate in shaping change ideas has to be balanced with a nuanced and focused plan, or “Overload and fragmentation combine to reduce educators’ motivation for working on reform. Together they make the situation that the schools face seem hopeless, and they take their toll on the most committed, who find that will alone is not sufficient to achieve or sustain reform” (Fullan, 1996, p. 420). This theory is based on the understanding that change in education is inherently and powerfully nonlinear. This means that the most systemically sophisticated plan will unfold in a nonlinear, broken-front, back-and-forth manner. It will be fragmented (Fullan, 1996, p. 421). Essential to this understanding of the nature of implementing change is that the participants (the teachers) must understand that it will not be clear and linear. “...what is the critical implementation issue: only when greater clarity and coherence are achieved in the minds of the majority of teachers will we have any chance of success” (Fullan, 1996, p. 421). This is a paradox, that change will be



nonlinear and incomplete while also requiring a clear and coherent focus on the part of the participants.

Systems and complex change theories can be readily applied to the question of how and why teachers' beliefs and conceptions of grading might shift, but the dramatic conditions of responding to school closures and pandemic complications brought a new level of understanding of what complex and nonlinear change can be. Writing in early 2020, Fullan clarified that when successful leaders take new jobs they become de-skilled, and learners of context as they participate as learners in moving an organization forward (p. 140). Fullan applied his own theory of complex change to education systems in the first year of the pandemic, saying that "...we are all de-skilled in this prolonged period of non-linear ambiguity" (Fullan, 2020b, p. 26). He argued that school systems globally had been stagnant for some time, and that pent up energy and frustration would be part of the unpredictable changes which will result. "This next decade or so will be one of those times (epochal transition being inevitable). This will be a period during which the new system will be formed" (Fullan, 2020b, p. 27). Postulating that the complexity will continue to become more convoluted and unpredictable in public education systems, he wrote "Since the 1980s education has become part of a system of stagnation...My view is that the world will get better or worse - there is no middle ground" (Fullan, 2020b, p. 27). It is possible that the theories of systems and complex change explain phenomena well in predictable conditions, but not in the face of dramatic crises.

### ***Chaos Theory***

The notion that social systems operate in similar manners to biological systems is a key part of constructivist theory (Fosnot, 2005, p. 11). The interaction of social and

epidemiological phenomena can also be seen as a form of constructivism in the evolution of ideas. Spinney (2022) framed it thus, “Shocks such as epidemics throw up constellations of ideological ‘mutations’. The cultural equivalent of natural selection goes to work, weeding out the less well adapted mutations in the population while the others become more established” (p. 45). Chaos theory was formed in the last half of the 20th century, as a means of pushing back against the dominant paradigm of determinism while seeking new solutions for societal problems (Akmansoy & Kartal, 2014, p. 512). Based on understandings of mathematical fractals and physical decay processes, the theory is that any amount of change can trigger a broad, massive, and diverse impact over time, and that systems self organize from chaos (Parra & Tan, 2021, p. 16299). There has been debate as to whether chaos theory can be applied to the field of education, but its applicability in recent years is widely agreed upon (Parra & Tan, 2021). Knowing that schools and educational institutions are complex systems, applying chaos theory to education makes sense as learning and growth are not linear processes and complexity is conducive to creativity. “An organization’s ability to maintain its dynamism and creativity is directly proportional to the effort it expends toward continuous improvement, taking risks, transformation and development” (Akmansoy & Kartal, 2014, p. 511). In addition to explaining for creativity and innovation, chaos theory has been used to encourage educators in the face of challenges, “...the disorder caused by chaos in education should not frighten educators; on the contrary, it should be used as an opportunity to seek order from chaos and then reorganize the system to adapt to this new situation” (Akmansoy & Kartal, 2014, p. 517).

Looking at the experiences of teachers during the pandemic, the components of chaos theory of perturbations, fractals, and strange attractors are of particular interest. A perturbation refers to a shift in an environment which causes disequilibrium in a system. A fractal is a pattern which recurs at many levels, which in education can be recognized as core ideas that characterize the system (Parra & Tan, p. 16300). An example of this in a school could be authoritarianism, such as a school board exerting authority over a superintendent, who then exercises authority over principals, who do the same with teachers, who replicate the system in controlling their students (Reigeluth, 2004, p. 5). Strange attractors are defined as a fractal which has a strong influence on emerging structures in a system experiencing shocks of growth or decay. An example of this in education is differentiation, in which options are offered to schools or teachers to make decisions suitable to their own context. This can have a powerful ripple effect on other schools, administrators and teachers, and ultimately on students, as the concept of differentiation is attractive to individuals within a complex system (Akmansoy & Kartal, 2014).

The systemic shock of the COVID-19 pandemic affected almost every aspect of school structures while the buildings were closed, but it is unclear to what extent the changes provoked temporary or fundamental changes. I explored if any of these theories explain why teachers' beliefs and conceptions changed or stayed intact as a result.

### **Summary**

This literature review established the inductive logic that based on what is known about grading and teacher perceptions of grading, and what leads to changes in educational systems and teacher thinking, it is possible that the changes of policy and

practice changes in grading during the pandemic may have provoked shifts in teacher beliefs and conceptions. Application of the theoretical basis of systems thinking, complex change theory, and chaos theory to the methodological framework of the research for this study is described in the following chapter.

## CHAPTER THREE

### Methods

As the review of literature in Chapter Two illustrated, deep and sustained research on the structure and nature of grading practices in high schools has revealed fundamental flaws and inequities in how grades are constructed and the effect on student learning and academic achievement. Various reforms have been proposed and implemented, from technical innovations such as removing the use of ‘zero’ to full revision of all assessment feedback to a standards based grading and reporting system. Teacher practice and perception has remained impervious to these reforms in many situations, however, and the intransigent nature of teacher resistance to grading reform continues to be an unsolved puzzle. This study focused on the question of whether teacher beliefs on grading have shifted as a result of the dramatic changes in grading policies during the COVID-19 pandemic of 2020 through 2022. The purpose was to explore if dramatic changes in teaching and learning circumstances led to significant shifts in teacher perceptions of grading and assessment, or if they remain resistant to change.

The primary research question was: *Have teachers changed their beliefs and perspectives on grading practices since the systemic shock of the COVID-19 pandemic? If so, why, and if not, why not?* Secondary questions addressed were: *How do high school teachers describe their pre-COVID-19 thinking regarding the role of grading as an indicator of learning? How do high school teachers describe their use of grading as an indicator of learning during the disruption to teaching and learning caused by COVID-19?* The research paradigm and methodology used in this study are described in this chapter, as well as overviews of the research tools used.

## Research Paradigm

A qualitative research paradigm grounds this study, informed by the understanding that reality is fundamentally social, and is concerned with applications and actions rather than absolutes of truth. This pragmatic worldview guided my choices of methodology and analyses, as I agree that “...research always occurs in social, historical, political, and other contexts.” (Creswell & Cresswell, 2018, p. 11). As the prominent constructivist researcher Charmaz (2017) advocated “...developing methodological self-consciousness to turn a deeply reflexive gaze back on ourselves and the research process” (p. 35). This approach counters the ‘taken for granted’ individualism of much of Anglo-North American worldviews (Charmaz, 2017). Glassner and Strauss set the conditions for an evolving understanding of this reflexive approach to research in establishing the grounded theory model, and I sought to apply this in this particular study (1967).

Knowledge can be described as a map which people use to navigate the world. Applying this assumption/definition to this research, the philosophy of pragmatism clarifies that this research methodology is designed to discover what the teachers’ knowledge of grading is, and how they use this knowledge to guide their decisions on how to grade, how to change their grading practices, and how their experiences over the COVID-19 pandemic have changed their personal knowledge maps. Using the definition of culture as all shared knowledge, I was curious to see if the shared experience of adjusting to remote teaching and learning created a significant change in these knowledge maps. The power of seeing the role which constructivism plays in teacher beliefs and perceptions is what I looked to tap into by using this research methodology.

### **Research Paradigm Rationale**

As the paradigm for this study is qualitative research, the rationale for this lies in both my worldview as a pragmatist and constructivist, but also in the nature of the questions being pursued. The issues of grading and assessment demand awareness of the effects of these practices on students, communities, teachers, and policymakers. As Feldman (2019) made clear, traditional grading policies perpetuate inequities connected to race and economic background (p. 44). The reasons to research this topic are to address the social justice concern of how educational institutions can better create conditions in which all students see themselves as supported, challenged, and connected to their own futures.

### **Setting & Participants**

The setting for this research was a large urban school district in the middle west of the USA, made up of 10+ high schools and 40+ elementary and middle schools. The racial demographics are approximately 20% Black, Latino, Asian, and White, over 50% Free/Reduced Lunch, and over 40% with a home language other than English (Minnesota Department of Education, 2022). There has not been widespread grading reform implemented in this school district, although two low profile SBG initiatives were introduced in the past ten years, with full implementation at one high school, but no overall uptake on this reform idea. Over the past twenty years, there has not been a district wide assessment policy (District Academic Leader, personal communication, April 21, 2022). The leadership at each high school sets a grading policy for that school, and there is wide variety in how the electronic grading systems are set to compute grades (District Academic Leader, personal communication, April 21, 2022). A survey was sent

via email to 400 high school teachers in the school district, asking demographic questions and for some background on their grading experiences. Selecting teachers who have taught for seven or more years was based on research on adult development and mental complexity which indicates that humans operate as self-authoring or self-transforming once past age 25 (Kegan & Lahey, 2009, p. 16). In addition, the study focused on changed perspectives before, during, and after the pandemic, so interviewing teachers who had developed beliefs and conceptions on grading in their practice was necessary. The survey concluded by asking if the subject would be willing to participate in a follow-up interview.

The participants for the interviews were selected by convenience sampling, who agreed to the time involved in a first and second interview, and who expressed interest in reflecting on their grading practices. I sought five to eight teachers for these interviews, regardless of the subjects they teach, to allow for both in depth interview time and also the fact that the second interview would take additional time. A goal was to have a diverse pool of interviewees, not all teaching the same content or with similar teacher training programs. The interviews took place in the fall of 2022.

### **Data Collection Methods**

The data collection tools used were a survey to screen for possible participants, and two qualitative interviews of each participant.

#### ***Survey***

The initial data collection tool was an eight question google survey, asking for subjects taught, length of time teaching, types of assessment tools used, and willingness to participate in the study as an interviewee (see Appendix A). It was estimated to take 5



minutes to complete, and was emailed to 417 high school teachers in the school district being studied via school district email. The survey was piloted with a smaller number of teachers in one school first, to gather feedback on the usefulness of questions. Changes were made to the questions based on their notes of clarity of the questions.

The survey addressed the research questions by identifying teachers with at least seven years of experience so that they would have some perspective on whether their beliefs and practices had changed over time, and evidence of a range of content areas so that a generalized conclusion could be made.

### ***Interviews***

After getting results from the survey, I conducted semi-structured semi-interpretive interviews, following a model created by Remesal (2010). The first interview was designed to capture the subjects' beliefs and perceptions about the purpose and value of grades (see Appendix A). The ten questions were posed in an hour-long session and addressed the research questions by delving into the participants' experiences and beliefs and also their perceptions of how their experiences had affected their beliefs and conceptions.

After coding the first interviews for themes of beliefs and conceptions, the second interview was conducted. The second interview was based on emerging themes from the coding of the first interview, and was individualized for each participant so that they could reflect on their own words as shared in the first interview. I shared my coding of the teachers' first interview and asked for their reaction to their words, and also to the coding categories which I had constructed. The rationale for this is based on the idea that subjective truths and pragmatic knowledge are best evaluated by those who are involved

in the context or experience (Brinkmann & Kvale, 2015, p.65). I wanted to test the constructivist grounded theory which I had created by asking the subjects (teachers) for their assessment of that interpretation. Both of the interviews were recorded and transcribed, using otter.ai voice to text technology (2016).

### **Data Analysis**

The surveys were analyzed on the basis of how many respondents were willing to be interviewed and to discover if they used a range of assessment tools in their instruction. Once a pool of will respondents was determined, invitations to interview were sent to ten teachers who represented a diverse range of subjects taught in high school.

The first interviews were coded for themes based on words and phrases, using a deductive method based on systems theory and chaos theory. These themes were organized in taxonomies once all the interviews were coded. The second interviews consisted of asking the teachers to comment on the preliminary coding, and offer clarifications or new interpretations of the coding categories.

The goal was to discover whether and how the teachers have changed their beliefs and perceptions of the nature and purpose of grading by asking them to review their own statements. This reflects my concern that research be done with participants, not in a position of authority at a remove from participants. Charmaz (2020) described this as “methodological self-consciousness, a deeply reflexive gaze on how our perspectives, privileges, and priorities affect our data, actions and nascent analysis and can spark unsettling views of our own positionality” (p. 166). My position as a school district administrator working on grading reform posed the possibility of suppressing the

participants' comfort in speaking freely, so asking them to revisit their own words allowed for their subjective truths to be confirmed. Fullan's (1996) key critique on the false assumption of systemic reform, "...only when greater clarity and coherence are achieved in the minds of the majority of teachers will we have any chance of success" (p. 2) informed this choice to conduct semi-structured, interpretive interviews. This methodology addresses the teachers' opportunity to create clarity and coherence by reflecting on their own process and the research process as well.

### **IRB**

As part of planning for this research, I submitted an overview of the study design and completed a research proposal to the school district in which I work. There has been a restriction on studies done due to data privacy concerns, but this was approved when I could provide a guarantee that confidentiality could be maintained. After receiving permission from the school district I submitted the Institutional Review Board application, including consent protocols, to Hamline University. Once approved, I began the research, including having all the subjects giving their permission and approving their participation.

### **Conclusion**

While constructivist grounded theory is the overarching basis for this study, the basis of the pragmatic worldview and the value of using interpretive, semi-structured interviews which allow the teachers to comment on, and co-construct the meaning of their own responses is essential to the research being conducted in a manner which achieves the social justice and practical goals of the research overall. Teachers' beliefs and perceptions of the meaning and value of grading matter in the outcomes of the

students' lives but also in guiding implementation of grading reform in large urban schools. Neither can be improved without close attention to the teachers' own understanding.

## CHAPTER FOUR

### Results

#### Introduction

This study was designed to discover if teachers have adjusted their beliefs and conception on grading to the changing environment and policy mandates over the course of the COVID-19 pandemic and accompanying school closures. As Bonner et al. established in 2018, teachers' beliefs on their practices and autonomy must be reconciled with external conditions and policy mandates (p. 73). The survey and interviews addressed my primary research question: *Have teachers changed their beliefs and perspectives on grading practices since the systemic shock of the COVID-19 pandemic? If so, why, and if not, why not?* The secondary questions addressed were: *How do high school teachers describe their pre-COVID-19 thinking regarding the role of grading as an indicator of learning? How do high school teachers describe their use of grading as an indicator of learning during the disruption to teaching and learning caused by COVID-19?* The intricacy of teasing out if teachers' beliefs of the nature and purpose of grading have changed and why or why not was carried out via a survey and two sets of qualitative interviews.

The qualitative research paradigm and methodological self awareness aspect of the second interview, in which I asked the subjects to reflect on their first responses, were intentionally chosen to recognize the role which teachers' ability to articulate their beliefs plays in constructing their responses to changing conditions. In this chapter, I analyze the results of the survey to describe overall themes of teacher perspectives, then will delve

into the taxonomies of meaning and themes which arose in the seven sets of interviews with individual teachers, to address the overall questions of if and why teacher beliefs and conceptions on grading have changed due to the disruptions of the COVID-19 pandemic and accompanying grading policy changes.

## Survey

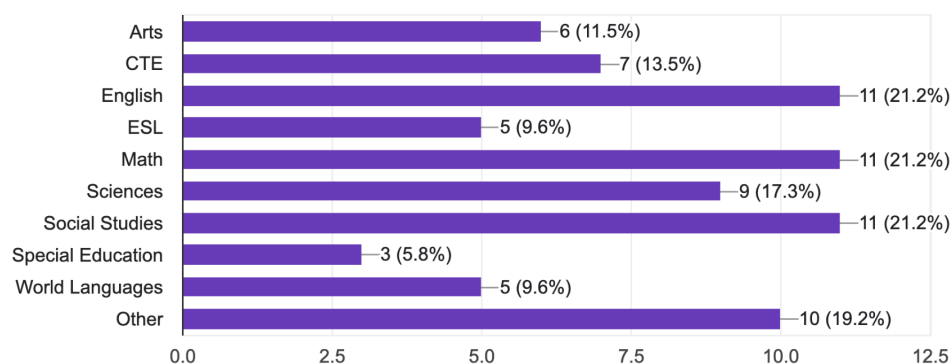
The ten question survey was sent as a google form in an email to 417 high school teachers in a large public school district in the middle west of the United States of America in the fall of 2022. A total of 52 teachers responded to the survey, of which 78.8% had taught for seven years or more, representing a wide range of content areas taught (see Figure 1).

## Figure 1

### *Survey Question #4*

#### #4. What subjects have you taught?

52 responses



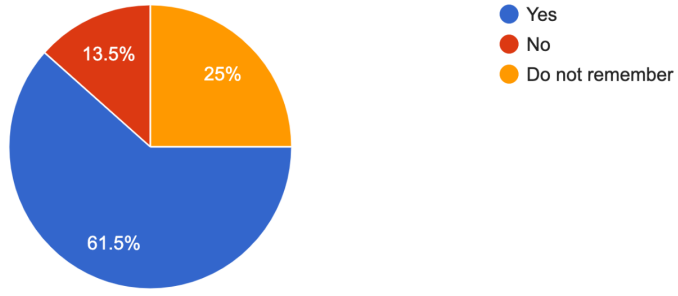
There was a high rate of respondents who remember learning about grading and assessment while in a teacher preparation program, with only 13.5% reporting that they

had not gotten instruction on this (see Figure 2). The question did not ask what they remember from the instruction.

**Figure 2**

*Survey Question #5*

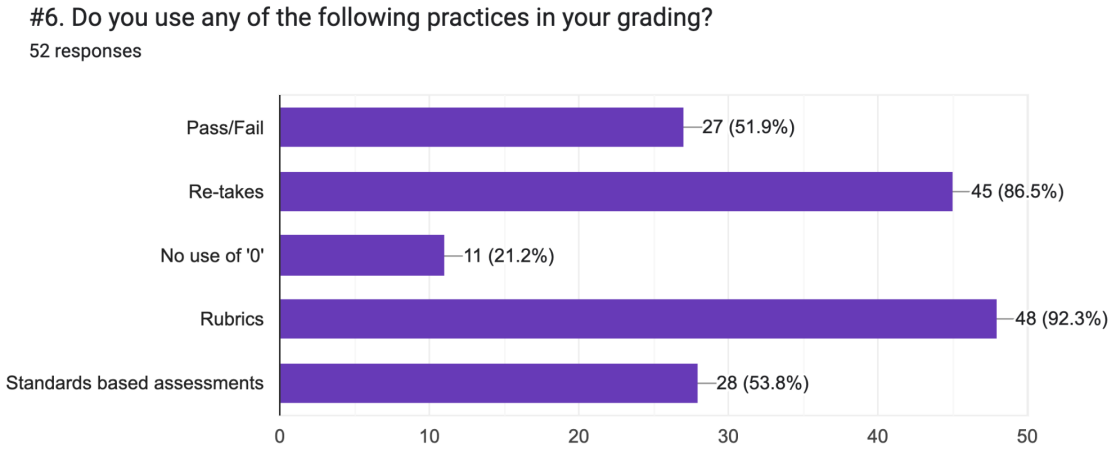
#5. Did you receive instruction on grading practices while earning your teaching license?  
52 responses



Respondents reported that they used a wide variety of assessment tools in constructing their grades (see Figure 3), with rubrics and re-takes used by more than 86%, and over half using pass/fail and standards based assessments in their practices.

**Figure 3**

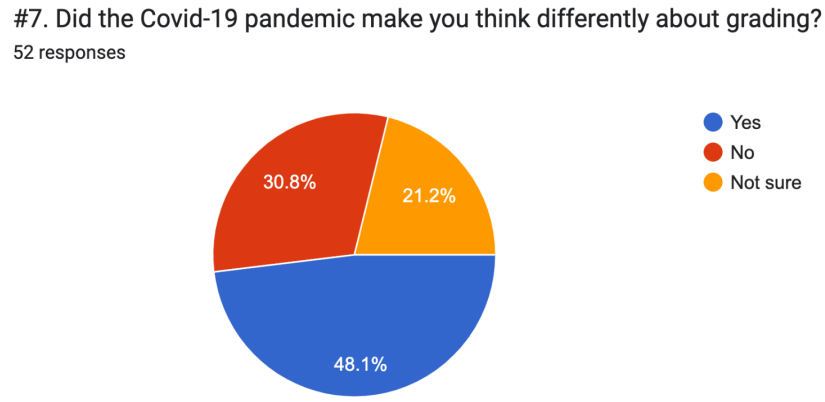
*Survey Question #6*



This question was intentionally designed to capture a wide of responses and also to frame the question in Figure 4, which addressed their awareness of if the COVID-19 pandemic had changed their thinking on grading.

**Figure 4**

*Survey Question #7*





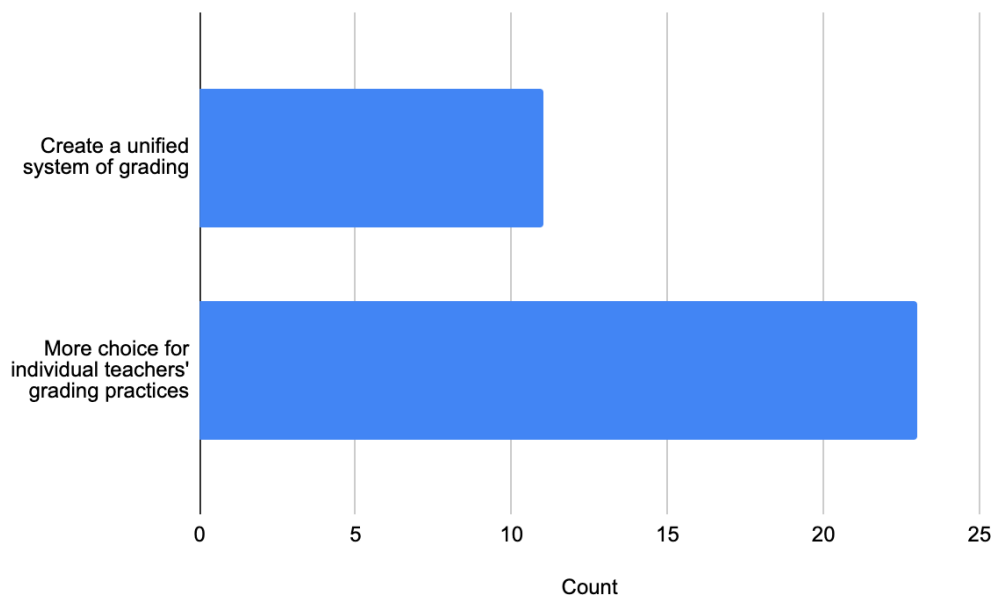
A clear 30.8% of the respondents stated that it had not made them think differently about grading, while 48.1% stated that it had. The portion of 21.2% who reported that they were not sure was intriguing, as this seemed to support the rationale for the methodology of this study, which was based on teachers' being asked to reflect on their articulations of their beliefs and conceptions to create an understanding of what causes change in teachers' beliefs in a complex system. The plurality who responded that the pandemic had made them think differently was also interesting, and the focus of many of the interview questions.

The next question asked their opinion on which grading and assessment practices should be changed at their school (see Figure 5). None of the six options were chosen by a majority, and the two most frequently chosen options were in direct opposition to each other. The options of changing the summative/formative percentages, decreasing the use of pass/fail and keeping the use of '0' were all chosen by 23% or more of the respondents, demonstrating that those particular practices were seen as meriting changes in the school.

**Figure 5***Survey Question #8*

#8. Do you think any of the following should be changed in the grading practices in your school?

Multiple options can be chosen.



As can be seen in Figure 5, twice as many of the teachers responded that there should be more choice for individual teachers' grading practices as those who thought that a unified system of grading should be implemented at their school. This result is not surprising but does reveal the challenge which changing teachers' beliefs on grading involves, as there is a strong tradition of retaining teacher autonomy in their own grading practices.

The ninth question on the survey was open ended, if they chose *other* for question #8. There were 22 different responses to this question (see Table 6), which ranged from advocacy to end the grading policy of allowing *NP* (No Pass) to suggestions on how to bring in standards based assessments as a basis for grading. Overall these responses

reflected the divergence of opinions shown in Figure 5, but themes clearly emerged which also were found in the succeeding interviews.

**Table 6**

*Survey Question #9 ('Other' open ended) Summary: 'What do you think should be changed in the grading practices of your school? n=22*

Maintain traditional grading practices	Change grading practices
Students' GPA should reflect effort	Create a rationale for summative/formatives, to help kids see that struggle is part of learning
Student GPA should reflect Ns, not omit by using NPs	Make re-do's or full credit for work always possible
Grading policies changes only benefit district administrators	Final projects should be accepted as evidence of full understanding. Students should be able to skip lessons if they can demonstrate this.
Pass/Fail should only be used in extraordinary circumstances, not as a normal practice	Connect student grades to achievement. Students now expect that turning anything leads to full credit, not feedback on quality.
We should not be afraid to let students fail	Use standards based assessments, with shared tools across schools
Students have learned to game our system over the past 3 years. They need a traditional structure again.	Use re-do's, and require a reflection on how their learning has evolved during the time.
Implement a consistent late policy	

While this open ended question did not produce a definitive answer, the responses do demonstrate that the respondents have thought in depth about grading systems, and reference the years of the pandemic in many of the responses. The themes of maintaining previous systems and standards are as frequently stated as the themes of changing grading to create more student participation in the construction of grades.

## **Interviews**

Seven participants took part in the interviews, with two interviews for each person. They were chosen from the survey pool of 52 on the basis of representing a range of content areas taught, coming from more than three schools, and having taught for more than seven years. The gender and race of the interviewees was not part of the selection process, but the pool included four women and three men, and five people who identified as White, one who identified as Hispanic, and one who identified as Asian. Five different high schools are represented in the pool of interviewees. They chose their own pseudonyms, which were used in all of the transcriptions. The interviews took place both face to face and virtually, with the first lasting 45-90 minutes each, and the second lasting 15-45 minutes each.

### *Demographics of Teachers Interviewed*

**Table 7**

#### *Demographics of interview participants*

Years teaching	15+ years: 6 participants	7+ years: 1 participant
Years teaching in other districts	All in same district: 4 participants	3+ years in other districts: 3 participants
Subjects taught	CTE, English, Mathematics, Reading, Science, Social Studies, Spanish, Special Education	
Gender	4 female, 3 male	
Race	1 Asian, 1 Hispanic, 5 White	
Pandemic made them think differently about grading	3 -Not Sure 2 -Yes 2 -No	

The interviews were recorded and transcribed on the otterai.com application, and I edited them for accuracy based on my notes which I took during the interviews as well. All of the sessions were held in the late afternoons on school days, and the tone of the interviews was open and relaxed. When the teachers brought up other ideas and concerns I listened for thematic connections and asked follow up questions where appropriate. Most of the teachers expressed deep frustration and sadness about how students have suffered during the changes to teaching and grading during the pandemic, and all shared personal feelings about their own experiences during the past three years of 2020-2022 as well. The responses of the four respondents who teach academic support classes or co-teach with other content area teachers, were markedly distinctive regarding grading, as they see their students' grades in all the other classes on a weekly basis and are struck by

those inconsistencies. The three respondents who teach only within their own content did not reference others' grading systems. The range and breadth of the respondents' experiences was reflected in the variety of beliefs they expressed on the nature and purpose of grades, but all spoke to what they have learned about their own practices as a result of the changed teaching environment and grading policies during and after the COVID-19 pandemic.

### ***Profile of Teachers Interviewed***

Vivian (all names have been changed) has taught Social Studies and CTE for 15+ years, almost all in the same school district. Her courses include a college level history (concurrent enrollment with a state university) and career exploration classes for 9th and 12th graders. She has taught a wide range of classes in her career, and spoke to the dramatic changes she has observed in student work and grading challenges during and since the COVID-19 pandemic. "I try to make the connection about why we do formatives really explicitly, like I am just talking about this because I think it is important for you to be a good citizen."

Al has taught Reading, English, and various academic support classes for over 7 years, all in the same school district. He has a unique perspective on grading practices as his work involves tracking his students' grades in all their classes, as part of the academic support courses. He articulated clearly the widely divergent grading practices his students encounter in their classes, and his belief that grading is a fundamental power dynamic in any classroom, and should become more within the students' power to affect. "I don't really think high school grades are predictive of life success. They are part of a power structure set up by the teachers, not necessarily an objective measure."

Anna has taught various Social Studies courses for 15+ years in the same school district, in both Middle and High School settings. She now teaches mostly 11th and 12th graders in International Baccalaureate (IB) comparative history courses, which students can test in for possible college credit. She noted a shift in the understanding of grades as evidence of learning as opposed to a marker of passing during and since the pandemic, and expressed concerns about how students' engagement with learning as a goal in class has changed as a result. "We did nothing to help ramp students up from the 'no expectations' of distance learning to the 'back to normal' expectations of last year. That left students with nothing to be proud of, nothing to aspire to."

Johan has taught 15+ years in this district, in both self contained Special Education and co-taught high school classroom settings. He has worked with multiple colleagues in the collaborative co-teaching setting, and also has spent much time with his students as they navigate their grades in other courses. This perspective has given him insight into how many other teachers in his building assess and grade. "Very few people have gone back to what they were doing in 2019. I think there's still the legacy of let's slow down and teach less and work harder to make it work for students."

Ben taught science in another state for the beginning of his career, before moving to this district for the past 10+ years. He works with a department of colleagues who collaborate on curriculum and materials, but do not talk explicitly about assessment and grading together. He adamantly stated that the grading policy shifts during the COVID-19 pandemic have led to a decrease in student effort and learning. "We have done them no favors by bringing the expectations down so low that simply submitting work, regardless of quality, gets a passing score."

Sofia came to teaching as a second career, and has now been teaching Spanish in the same school district for 7+ years. She grew up in another country in Latin America, and articulated clearly how the national grading system there had a different impact than the inconsistent grading practices in the U.S.A. As an elective teacher she has noticed that the grading policy changes due to the pandemic have fundamentally affected how students engage with classwork, and how she has had to adjust her courses. “Is it more important that I grade my students on their language fluency, in this elective? Or that they learn how to respect and enjoy the cultures of Latin America, and know that they are seen as a human in the community of my class? They do not need the credit, but we need our students to be part of our community.”

Victoria has taught mathematics and academic support courses in the same school district for 15+ years. Like Al, Vivian, and Johan, she views her students’ grades in other courses frequently as part of her instructional practices, and articulates clearly what she believes that inconsistency of practices does to student learning and outcomes. “Kids are more than just their GPA. It does not define you. During the pandemic I saw teachers desperately thinking their content was really important, and the kids just disconnected.”

The first seven interview questions were designed to discover the teachers’ beliefs and perceptions of their traditional grading practices of prior to 2020, and the second seven questions were designed to discern if or how these beliefs and perceptions had changed. The themes which emerged from the responses to each question are presented in the following sections, with the traditional beliefs unpacked first, and the changed and/or unchanged beliefs second. Overall, clear themes arose from the first and second interviews. The second interviews took place ten weeks after the first interviews, but the



teachers changed none of their statements when given the reflective opportunity to do so. They did deepen and explain further their responses, however.

### *Questions on Beliefs about Traditional Grading Practices*

**Table 8**

*Question #1*

What was the most significant learning you have had in terms of creating a grading structure for your classes?	<ul style="list-style-type: none"> <li>● Using and creating rubrics to assess students work</li> <li>● Do the math to make the grade work.</li> <li>● Seeing how many grading systems their students navigate, and trying to support them all.</li> <li>● Flexibility with students is key.</li> </ul>
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In response to the first question of “*What was the most significant learning you have had in terms of creating a grading structure for your classes?*” (see Table 8), four of the seven teachers cited learning how to create and use rubrics. They described how this changed their practice in terms of setting and maintaining standards for their students, creating a paper trail to defend an assessment and letter grade, and using rubrics as a tool to begin instruction of units. Ben described how prior to using rubrics he thinks that he graded assignments on participation as much as on the final product, and how he and his colleagues spoke about how they just knew what a quality lab report looked like. Anna said “I think the rubric really gives you that evidence and backs up what you think and what you know, as well as helping the students organize what you are expecting from them.” Learning how to teach using rubrics was also cited as reason to be able to work with the students individually, by asking them to self assess and peer assess as part of the units. The power of shared rubrics was also named, as three of the teachers use the IB rubrics in most of their teaching. “When I started teaching the IB classes, applying those

rubrics at a really high level, knowing that other teachers and students internationally were using the same rubric, it really pushed me as a teacher and allowed me to ask more from the students also.” Of note, four of the interviewees work in schools which have had IB programs for more than twenty years, and use those internationally standardized rubrics as part of most of their instruction. Interviewees from the other schools displayed less positive perceptions of rubrics in assessment.

Two of the teachers thought rubrics were too rigid, and that being flexible with students was more important than holding everyone to the same standard. This theme showed up in many of their responses. Three of the teachers, all of whom teach academic support classes, describe how they have developed grading systems to help their students to bridge all the grading systems from their other classes. Al mentioned how he discusses grades with his students as a reflective practice, and asks that they self grade. This practice grew out of his formative experience of seeing grading as a power move, and he wants to share that power with his students. “I believe our grading systems are very strongly linked to power, and while I am not ignoring standards, I do give them the power to determine how they can show me their learning.”

The other teacher who spoke about the rigidity of rubrics as making it difficult for students to score highly also stated that as a student she valued clear structures and high standards from her teachers, so tries to create the same for her students now. She cited learning how to *do the math to make the grade work* early in her career, and how that taught her to see grading is best when done flexibly, to keep the students motivated and not defeated. “If I scored you all by a rubric, none of you would get higher than a C.” She norms the grading instead, by creating piles of the essays based on quality, and then

assigning the grades. Another spoke of the problem with standards overall: “There is no standard life. How are we pretending that these standards are the most important learning to be had?”.

**Table 9**

*Questions #2 & #3*

Describe a time when you were graded as a student and it motivated you to continue learning.	<ul style="list-style-type: none"> <li>● Teacher who gave second chances.</li> <li>● Teacher who had really high expectations for everyone.</li> <li>● Significantly challenging assignment, with grading steps throughout.</li> <li>● Teacher gave specific feedback on how to improve.</li> </ul>
Describe a time when you were graded as a student and it de-motivated you to continue learning.	<ul style="list-style-type: none"> <li>● Teacher changed the grading rules mid project.</li> <li>● Teacher graded people based on their growth, not on final product. Seemed very unfair.</li> <li>● No clue about how the grade was formed, what was expected or how it would be evaluated.</li> </ul>

In response to the next two questions “*Describe a time when you were graded as a student and it motivated (and/or demotivated) you to continue learning*” the interviewees all expressed appreciation for their own teachers who shared high expectations, clear instructions and feedback (see Table 9). Two of them cited examples of a teacher who told them they could change their grade by submitting revised papers, and three described being motivated by particularly challenging assignments where they got to choose their own focus of inquiry. Victoria described a middle school experience: “I don’t think I even remember what the initial assignment was, but we were supposed to show what we learned over the summer, and I just researched tide pools for a whole week, wanting to delve more and more into that topic.”

The demotivating experiences recounted all shared the themes of inconsistency, unfairness, or mystery of how the grade was arrived at. The teachers described the negative experiences of having the expectations for the project changed at the end, having points deducted because the technology did not function at the end of the project, and seeing a friend get a higher grade for similar work. This last example produced the follow up wondering about whether it was fair that a student who had shown growth during the class deserved to be graded higher than a student who had not shown growth. “At the time I was like, this stinks. But now as a teacher, I see how teachers grade on growth in ability. It was motivational for the other kid, but definitely not for me.”

Three of the interviewees described the frustration and personal hurt of not knowing the basis of a grade. Al described how this influenced which classes he engaged in and which he avoided taking. “This particular teacher had a grading process which was extremely hidden from view. That lack of transparency caused me a lot of anxiety because grades were important to me.” Another interviewee described hiding behind her locker to avoid seeing a teacher who had given her a low grade without any feedback or reasons for it. This opacity of a grading system was also referenced as a sign of teachers holding onto their power in the classroom.

### **Table 10**

#### *Question #4*

<p>Do you remember receiving instruction on grading practices while earning your teaching license? If so, can you share what the method or philosophy on grading was?</p>	<ul style="list-style-type: none"> <li>● Instruction on authentic learning and alternative assessment.</li> <li>● Focus on rubrics as a tool for feedback</li> <li>● Grading is important to keeping the system accountable, for both students and teachers.</li> <li>● Keeping a standard for all students, to ensure equity and not pity.</li> </ul>
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The fourth question, “*Do you remember receiving instruction on grading practices while earning your teaching license?*”, produced very little specific information on a pedagogy or philosophy of grading from a licensing institution (see Table 10). All of the respondents said that they remembered learning about grading most significantly while student teaching. For five of them, this learning came in the form of having an inspiring cooperating teacher, who talked through how and why to grade with them as they were doing that work with students. Victoria quoted her mentor teacher saying “A ‘D’ is just a lazy grade. How can you set up your class so that kids can make it at least to a 70%?”. Johan described a learning curve he experienced within his PLC as his mentor colleagues set up a system to facilitate grading, “So the model we used is three formatives and a summative, and so you have three opportunities to learn it. I was really motivated by how on top of it we were in that PLC, and I keep that system when I can.” The science teacher Ben spoke to how he had no idea how to grade anything besides a multiple choice test until his mentor modeled rubrics for lab reports and observation responses.

Two of the teachers learned by opposition from their training while obtaining their teaching licenses. “I just remember that they kept asking for lesson plans, and my cooperating teacher had a whole system based on student notebooks. The kids spent a lot of time gluing assignments into their notebooks. I remember thinking - I just don’t agree with this.” Vivian referenced the lack of training on grading she experienced in contrast to the stories her mother told her of being trained as a teacher in the 1960’s, which focused on measurement of learning. “At the time I laughed, but now I am a little jealous, because I could have used some of that. Instead, I just had to learn how to make the math

work, and weight tests differently from homework, etc.” The idea of trying out grading practices to find what worked for them showed up in multiple interviews.

**Table 11**

*Question #5*

<p>Can you tell me of a difficult case in your grading practices? Of a case which makes you proud in your grading practices?</p>	<ul style="list-style-type: none"> <li>● Plagiarism has gotten much more common - makes it very difficult to maintain high standards and trust.</li> <li>● Students who ask to be excused from work, and then still want a comparable grade at end of quarter.</li> <li>● Student who did not try all quarter, and then aced test.</li> <li>● Student who tried consistently, but still did not show learning or quality work product.</li> <li>● Students referencing the rubric in their essay conferences.</li> </ul>
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The next question was “*Can you tell me of a difficult case in your grading practices? Of a case which makes you proud in your grading practices?*” (see Table 11). This elicited a range of responses, with most of them citing that finding the time to give effective feedback creates the most difficulty in grading, as well as a deep awareness of the subjectivity of their measurement of the students’ learning. “I always wonder if some poor kid just really doesn’t get that good feedback because there wasn’t really anything bad about what they did. But there was nothing really good about it either. You know, there’s just a middling situation.” Three of the teachers described spending more than twelve hours a week grading essays, usually on the weekends. “I try to get all their work posted on Schoology (grading platform) within one week, but I know that if I did not have a rubric to go off, that would be impossible, because each student is unique, and their papers all have unique strengths and weaknesses.”

Those who teach AP and IB level courses cited the frustrations connected to the timing of students turning in their work as well as the amount of time it takes to read and

mark the 85-175 essays they collect two to three times per academic quarter. One spoke about how she holds off giving students their feedback and grade on an assessment until all have submitted it, but now that has led to her having to wait three to four weeks before all the students have completed their work, and thus there is no feedback for anyone during that time. The shift of student behavior since the COVID-19 pandemic was cited frequently as contributing to work being turned in far past a deadline or the expectation by some students to not have to turn in work at all. As one interview said, “I gave a four week extension on this assignment, but she still didn’t turn it in, and then she and her counselor were just expecting that I would waive it so that she could pass.”

This theme of increased flexibility on timelines for student work showed up as a positive for three of the interviewees, as they described their value of understanding each students’ situation and being proud of accommodating the students in their grading practices. Sofia said “It is super hard, because whoever says that grading is objective is a liar. It is so subjective. So, I am telling the truth. I don’t have the power to fail a student knowing that the grandma died two weeks ago and now they have to babysit the siblings until someone else can take care of them. I am going to excuse those assignments and find a way for them to show me their learning differently.” Victoria, who teaches a 9th grade academic support class, said “...sometimes you just have to figure out why they’re not turning stuff in. Then you can work with them from there to get them engaged.” All of the teachers spoke of valuing some flexibility on their part in deadlines, as Anna articulated “It’s not about me. I mean they are doing the learning, and if they have a situation and we communicate about it, I will work with them. But it just comes back to

building relationships, how they learn the power of communication as part of their role in their own life.”

None of the interviewees described feeling proud about their grading practices, but three did describe what they aspire to do which would give them a sense of accomplishment. Ben said “I try to return their work with specifics connected to the rubrics within 48 hours. If I cannot, I have them self assess for me in the meantime, so that I can use that as a starting point.” Al spoke about having a reflective conversation with his students “I try to use a reflective practice as a way to recognize that if adults learn through reflection so too do the older students. I ask them, what are you getting out of this? Here’s the structure - how do you think you are doing? And then we come together and agree on the grade.”

### Table 12

#### *Question #6*

To what extent do you see your student grades as an assessment of your performance as a teacher?	<ul style="list-style-type: none"> <li>● Grades are an assessment of my performance on the whole.</li> <li>● Grades should not be an assessment of me, but of the students.</li> </ul>
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In response to the question “*To what extent do you see your student grades as an assessment of your performance as a teacher?*”, all of the interviewees articulated some connection, with three making it explicit (see Table 12). As Ben said, “You know, if most of my students are getting ‘A’s, I know that my lessons and assessments are working.” Some spoke about how the grades should be an assessment of the students’ learning, but all teachers should look at the performance of their students as a whole to reflect on their own instruction. Ben said “Well, their grades in my class are a lot more indicative of how



I am doing than any standardized test scores are!”. This question did not generate extensive responses overall.

The last of this first set of questions, intended to interrogate their traditional grading beliefs and perceptions prior to the COVID-19 pandemic, was taken from Reeves’ work on fair and accurate grading: “*What enduring principles have you learned in your career? What in brief, do you “know for sure” about teaching, learning, and student achievement?*”. The interviewees responded in a range of levels, from specific statements on grades to universal statements on the purposes of teaching and learning. Victoria took down the notion that a bell curve exists: “There is no bell curve - it is all As or Ns.” There was a theme of the connection of relationships to grading, as Ben put it: “Grading does nothing if you have not crafted a relationship with the student. Only then can you know what they have learned, and if they value it. It has to be on their terms.” Johan clarified that “Students should be graded as individuals.”, and Vivian stated that “You have to be able to explain the why of a grade to a student.”

In other dimensions, Al spoke of widening the frame of grading, “There is too much emphasis on reading and writing, and not enough on other forms of communication, like discourse. Grades are strongly linked to power, so students should have some of that power and self assess, or self grade.” Sofia focused on grading as just part of the importance of schooling: “The key is to see grading as part of the teaching practice, not to see the grading system as the panacea.”, while Anna referenced the personal development which is connected to schooling and grading: “Life asks you to do something, and if we do not maintain high standards, how will students learn the thrill of productive struggle? Don’t you want to participate in your life? Much more exciting that

way.” These responses seemed to reflect the deep commitment the interviewees have to their work, and balanced the frustrations they expressed in answering question #5.

### ***Questions on Beliefs on Changed Grading Practices***

While some of the first seven questions brought up references to changes in practices and behavior since the onset of the COVID-19 pandemic, the second set of questions were explicitly designed to address these issues.

#### **Table 13**

##### *Question #8*

<p>How did grading change in your experience during the COVID-19 pandemic?</p>	<ul style="list-style-type: none"> <li>● Spring 2020 we were just trying to survive - everybody passed. But then we just stayed in the stage of low expectations out of pity.</li> <li>● Doing distance learning, we just asked the kids to submit work, and honestly, a lot of what was submitted was just the bare minimum.</li> <li>● Grading seemed to become ‘proof of life’. Turn in work, regardless of quality or learning.</li> <li>● We were so desperate to get any work out of the kids, we accepted anything.</li> <li>● When we stayed with the P/NP option for more than 1 year we lost all sense of grading as feedback on work.</li> </ul>
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The first of this set of questions was procedural: “*How did grading change in your experience during the COVID-19 pandemic?*” (see Table 13). The interviewees responded with specifics and also with personal reactions and interpretations on the changes from their perspectives. All seven spoke to the shift to Pass/Fail as being understandable in spring 2020, but how the long term effects of keeping a partial Pass/NotPass structure for two years has been harmful to them and to the students. Anna remembered: “Spring of 2020 the grading scale changed. I mean, we were just posting work and wrapping things up. We were literally doing a unit on the US Civil Rights

movement as the protests about the death of George Floyd were happening. A student would email and say there is literally rioting at the end of my street. Yeah. Fair enough. That is what the Pass is there for. Right? Just to get through it.” Beyond the crisis of spring 2020, the interviewees described how staying in the P/NP grading structure limited the understanding of how grades work for high school students. As Al put it: “The students still don’t understand what a grade point average in 10th or 11th grade is - in the past they understood. They don’t get it because they were judged by a different standard. So they may have very few credits and still have a 3.5 GPA.” The theme of students not understanding the expectations and nuances of a traditional grade structure which includes the possibility of an N affecting the GPA, as opposed to continuing to use NPs which do not affect the GPA, was brought up by all seven of the respondents.

There were overall statements on the changed nature of the teacher-student relationship as it affected grading practices also. Vivian said “A lot of the kids forgot what it was like to be a student. And our current 11th graders never set foot in high school until 10th grade, and they still seem like middle schoolers, like a grade is not something to worry about. Just turning something in is good enough.” Johan mentioned the general shift in school wide practices: “We became extremely flexible. Right. I think that still exists to a large degree around what I see my colleagues doing. Very few people have gone back to what they were doing in 2019.” The tenor of the classrooms once schools reopened in fall 2021 was also referenced in terms of student work which could be assessed. Sofia described it thus: “Last year it was just painful. Painful. Students were just ‘I don’t want to talk to anyone. Why can’t I just present to you alone. Don’t make me work in a group.’ That has improved, but how could I grade them on speaking fluency

when they would not speak?”. Five of the interviewees described how students have changed their attitude to grades also. “Primarily what we saw was kids just no longer caring about quality of work, as long as it earned a ‘P’. They have lost the ability to organize their work, or expect to be held to a timeline.” This perspective, that the P/NP grading policy has shifted students’ understanding of what a grade means, was widely spoken to. “The biggest change is that kids feel completely entitled to copy. They just say - I turned something in, didn’t I?”, and “I think that in distance learning, there was this thing, that if a kid submitted, it would just show up as a ‘submitted’ icon on Schoology. And we were so desperate for any proof of life, that I think a lot of us just accepted that. I started to look at those submissions, and sometimes it would just be a blank document!”. While many of these responses were about the student behavior as affected by the changed grading policies, the teachers reflected on how the interaction of grading policies, student understanding, and teacher understanding are intertwined.

**Table 14***Question #9*

<p>Have any of your beliefs or practices changed as a result of the experience of the pandemic?</p>	<p><i>Yes</i></p> <ul style="list-style-type: none"> <li>● Now much more flexible with deadlines and accommodations.</li> <li>● Rely much more on individual communication with students about their situations than before, to make accommodations.</li> <li>● No longer assign homework. If so, it is just reading or research.</li> <li>● Use rubrics from the start of each unit now, because otherwise students just do the bare minimum. This puts the quality of their learning at the center.</li> <li>● Yes, think that we harmed our students by expecting very little, and now they do not see school as valuable.</li> </ul> <p><i>No</i></p> <ul style="list-style-type: none"> <li>● No, deepest beliefs about accountability for learning have been confirmed.</li> <li>● No, am reviving my older grading systems as we crawl back to school feeling like school.</li> <li>● Feel more strongly that students need structured assignments and a timeline, so that they can learn how to structure their own time and lives overall.</li> </ul>
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The question “*Have any of your beliefs or practices changed as a result of the experience of the pandemic?*” resulted in four strong affirmatives and three strong negatives (see Table 14). One interviewee responded with a definitive statement on this: “Yes, I think that we harmed our students by expecting very little, and now they do not see school as valuable”. The practices which were cited as changing included more flexibility of deadlines and timelines, accommodations for individual students’ situations, and increased use of rubrics for instruction and for assessment. Anna stated “I rely much more on individual communication with students about their situations than before, to make accommodations”. Ben said “I use rubrics from the start of each unit now, because

otherwise students just do the bare minimum. This puts the quality of their learning at the center”. One interviewee stated that she no longer assigns homework, as she sees it either being mostly copied from others, and just not completed, “Why would I assign a grade to something which has nothing to do with them learning?”.

The three who said that the experience of the pandemic had not changed their beliefs or practices all expressed strong opinions, such as “No, my deepest beliefs about accountability for learning have been confirmed.”, and “No, I am reviving my older grading systems as we crawl back to school feeling like school.”. Some of the responses could have been part of an affirmative answer, but interestingly were given as a reason to not change: “I feel more strongly that students need structured assignments and a timeline, so that they can learn how to structure their own time and lives overall”. Victoria stated: “I think my beliefs were affirmed by the past three years. We have to treat these kids like individual learners. We have to show them flexibility. You know, I think the Special Ed kids suffered the most during the pandemic because we just let all our expectations disappear, and they need the structure the most of any kids.”

**Table 15***Question #10*

<p>If yes, why do you think differently about grading now? If no, what has been affirmed about your long standing beliefs?</p>	<p><i>Yes</i></p> <ul style="list-style-type: none"> <li>● Really just matters that they are learning, not the deadline for when they learn.</li> <li>● We all learned to adapt and accommodate over the past three years, and teaching &amp; grading should change also.</li> <li>● So much changed during the pandemic, it seems that schools have to change also, or will become irrelevant.</li> </ul> <p><i>No</i></p> <ul style="list-style-type: none"> <li>● Students now have learned helplessness, and deserve to learn how exciting it is to do hard things.</li> <li>● From an equity lens, we should have high expectations for all our students.</li> <li>● Consistent teaching and feedback is the only way students learn. Especially in a chaotic world, we should be consistent.</li> </ul>
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The following question asked why they had or had not changed: “*If yes, why do you think differently about grading now? If no, what has been affirmed about your long standing beliefs?*” Some of the affirmative responses were centered in learning how to respond to the changed experience of the students, while other referenced the teachers’ changed understanding of themselves and wider society as affected by the pandemic. Al said “We’re not getting evidence of learning because they’re (the students) are embarrassed, or uncomfortable. They don’t want to feel judged. Grading as the judgment. It’s work. Now I think the kids need to have some power over that aspect of school.” Johan spoke to the reasons that students came back, “I think people were happy to get back here into the community, or they left completely. So now we need to meet the kids where they are and figure out how to get them going again.” Others said “I think we all

learned to adapt and accommodate over the past three years, and teaching and grading should change also. So much changed during the pandemic, it seems that schools have to change also, or will become irrelevant”, and “It really just matters that they are learning, not the deadline for when they learn.”

Of the interviewees who gave reasons for not changing their beliefs and practices, the ideas that maintaining a standard of quality for work and reinforcing the learning habits of effort, communication, and timeliness were cited. These responses reflected the beliefs that consistent teaching and feedback is the only way students learn and especially in a chaotic world, we should be consistent. “Students now have learned helplessness, and deserve to learn how exciting it is to do hard things”, and “Wallowing in pity for our students did them no favors” are examples of this. Ben referenced his experience as a teacher of color in his response: “From an equity lens, we should have high expectations for all our students. If my teachers had given me a ‘pass’ as a high school student, I don’t think I would have ended up in college and seeing myself as a future teacher.” In chapter five, this theme is investigated fully, as the reasons for changing and for not changing their beliefs appear to be parallel.

### **Table 16**

#### *Question #11*

<p>What do you think should be changed about grading practices?</p>	<ul style="list-style-type: none"> <li>● Have different systems for academic support classes than content classes.</li> <li>● Include student reflection, or other ways of reporting student effort and work habits than in the grade.</li> <li>● Keep the learning the reason for the class, not the title or honors gpa points the reason for the class.</li> <li>● Use good rubrics for all the work, so that it is clear what the expectations are.</li> <li>● Have teachers level set their grades in PLCs.</li> </ul>
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The next question asked for their opinion: “*What do you think should be changed about grading practices?*” (see Table 16). The responses were very detailed and application oriented for all the interviewees. Four of them advocated for a flexible grading system, to allow for teacher autonomy and differentiation with the students. This theme appeared in the survey responses also, and seems to be paired with the teachers’ desire to support students by recognizing their growth in learning, not grading them all by an absolute standard. They spoke of having different systems for academic support classes than content classes, and for elective classes than graduation requirements. There were suggestions of having teachers norm grading in the PLCs, or departments, and also allowing for varied formative/summative assessment proportions in the grading platform used. Al said: “I prefer guidelines to policies because a one-size-fits-all approach doesn’t work. It doesn’t work for students, and it doesn’t work for teachers.” Victoria expressed a similar view, but with the added piece that standards do play an important role: “I personally hate ‘all schools must do this’, but I do feel like having standards makes it so much clearer and easier to know where the finish line is. It probably helps to have a consistent message for all the schools. I don’t think high school is real life, but if we can help them figure out how to achieve things by breaking it down into chunks - that would be great!”

Three of the interviewees suggested clear consistency of grading policy changes. The theme of rubrics used for assessments and then translated to grades surfaced again, as a best practice which should be required of all teachers for summative assignments. The expectation of grading to a higher standard in rigorous courses was referenced by two of the teachers, as they advocated for firm guidance on not excusing work or

deadlines in those courses, and keeping the placement academic, not social. Johan also suggested that the teachers' formal evaluation tool (known as the SET) be used more actively by administrators, suggesting that "On the SET, we see what the district standard on grading is. Say the teachers all self assess on this, and then the administrator evaluates them also. That might work." Only one of the teachers suggested a major grading policy change, as Ben suggested "We use good rubrics for all the work, so that it is clear what the expectations are, and then the district should create a translation system for all these rubrics to be converted into a grade. That would get the kids more involved in knowing what they have to do, and if they are doing it."

### Table 17

#### Question #12

<p>Why do you think these changes will be effective and/or helpful?</p>	<ul style="list-style-type: none"> <li>● Students have to relearn school now, and asking them to carry the weight of their learning is key.</li> <li>● Sharing the power of the grade with the student shows them respect.</li> <li>● Help students to learn the value of productive struggle, not just submit for credit.</li> <li>● Grades are still arbitrary if we do not have reasons, like a rubric.</li> </ul>
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The follow up question, "*Why do you think these changes will be effective and/or helpful?*" elicited belief statements from all the interviewees (see Table 17). The interaction between students and teachers was referenced: "Sharing the power of the grade with the student shows them respect", and Anna called out how focusing on academic standards shifts the focus of the grade, "This would help students to learn the value of productive struggle, not just submit for credit". There were four responses about the legitimacy of grades, ranging from "Grades are still arbitrary if we do not have

reasons, like a rubric”, to “Rubrics give you a paper trail - something to back you up”. Ben offered the reasoning that norming grades would solidify the legitimacy also, “Teachers have to be able to explain their feedback, and doing it in a group first would help us grow that way”.

The theme of how student understanding of grades has changed during and since the COVID-19 pandemic surfaced in five of the responses, as Ben stated: “Students have to relearn school now, and asking them to carry the responsibility of their learning is key.” These beliefs, that the experience of distance learning and the grading practices changes during the pandemic has altered how the current high school students understand the grading system and what is expected of them, were present in all of the interviews, and are explored in chapter five.

### Table 18

#### *Question #13*

<p>Would you be willing to change your own grading practices?</p>	<ul style="list-style-type: none"> <li>● Yes, if it is not a further watering down of expectations.</li> <li>● Yes, if I believed in the new practices.</li> <li>● Yes, if it was not more pity on the students, but was respect for the students.</li> <li>● Only if I have a say in the how and why.</li> <li>● Yes, if it is not just letting the kids do retakes endlessly. There has to be structure.</li> <li>● Yes, if everyone has a say in it, and we can differentiate by content areas.</li> </ul>
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The question “*Would you be willing to change your own grading practices?*” was posed to discover what might hold teachers back from changing their own practices (see Table 18). All of the interviewees responded affirmatively, that they would be willing to change, with key conditions or requirements. Four of them said yes, if they were part of

the how and the why. “Yes, if everyone has a say in it, and we can differentiate by content areas.”, and “Yes, if I believed in the new practices.” were shared as conditional statements. The concern that changing grading practices would lower expectations was articulated by two respondents. Anna said “Yes, if it is not a further watering down of expectations. I already shifted to allowing for ‘fix it or finish it’ only if they have shown their practice work is ready.”, and Vivian pointed out that “I would be up for it if it is not just letting the kids do retakes endlessly. There has to be structure”. Ben made the point that “Yes, if it was not more pity on the students, but was respect for the students.” These responses were both definitive in the style of the responses and also were given in the shortest time frame, with very little elaboration or discussion. The teachers appeared to be able to state immediately what the conditions needed for them to change their practices would be.

### Table 19

#### *Question #14*

<p>Why do you think it is so difficult to impose change in grading practices?</p>	<ul style="list-style-type: none"> <li>● Grading is such a personal experience</li> <li>● The individual teacher needs to be able to make the grading system work.</li> <li>● Show me a grading reform which has worked somewhere first, and then ask me why it is so difficult.</li> <li>● It is slower and more exhausting for the teacher</li> </ul>
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The last question posed, “*Why do you think it is so difficult to impose change in grading practices?*” was constructed to discern how much the teachers had thought about why change is difficult outside their particular classrooms (see Table 19). The responses reflected perspectives on the logistics of grading, the personal autonomy of teachers in this realm, and the role that a teacher’s own experience as a learner plays in their

professional practices. Johan said “It is slower and more complicated for the teacher to spend so much time front loading the rubric in teaching, but it just becomes clear that proactive communication on the expectations is key, and it will just take that extra time.” Victoria pointed out that “The individual teacher needs to be able to make the grading system work. Saying do retakes without restructuring other timing does not work for real teachers in the classroom”. Beyond these time bound concerns, Anna expressed the individual experience “Grading is so personal - just you and that stack of essays. How can someone else know what that is like?”. Al brought up the teacher’s own history, “As teachers we all did well ourselves in traditional grading systems, so why would we think of changing that?”. Ben expressed some disbelief that grading reform is even possible by saying “Show me a grading reform which has worked somewhere first, and then ask me why it is so difficult.” The connection of the responses to the theoretical ideas around non linear change, perturbances, and coherence of change will be explored in chapter five.

### **Summary**

The impetus for this research study was my curiosity about whether teachers now think about the grading and assessment process differently post pandemic in 2022, in terms of their beliefs of purpose and value. The study was designed to gather data from a survey of 50+ teachers, and then follow up with two sets of qualitative interviews with a smaller group, to delve into their experiences and beliefs on grading, to discover if they had changed their beliefs and perceptions. The survey results showed that teachers have reacted to the changes in grading policies and pandemic era teaching conditions in various ways, and a plurality reported that this had made them think differently about grading. The interviews produced extensive and nuanced reflections by the teachers on

both their experiences and perceptions of teaching, assessing, and grading over the three years of the COVID-19 pandemic. The teachers expressed significant reflections on the changed conditions of teaching, student learning, and the shift in student behavior and understanding as the schools have reopened and some of the grading policies have reverted to pre pandemic rules. Each interviewee alone provided insights as to how they have adjusted their thinking and practices, but when seen as a whole, it is clear that their perception is that the teaching and learning conditions in high schools have shifted, and they continue to make adjustments as a result.

The themes and major learnings of the survey and interviews will be examined in chapter five, with confirmations and questions from the literature reviewed, including an analysis of the applicability of the theoretical frameworks introduced in chapter two. This is followed by a discussion of implications and suggestions for further research in this area of inquiry.

## CHAPTER FIVE

### Conclusion

#### Introduction

Teaching is a personally demanding profession, as public pressures and expectations of schooling are part of the daily experience of interacting with many students and colleagues daily, making myriad decisions on a minute by minute basis, and the underlying goal of creating engaging instruction and assessment which will improve the lives of one's students and society overall. Added to this perennial environment, the rapid and dramatic changes brought by the COVID-19 pandemic and resulting decisions on closing schools, moving to distance learning and changing grading practices, and there will clearly be significant changes in the teacher experience. It will be years before we have the historical perspective on how the COVID-19 pandemic affected this generation of students, teachers, and schools overall, but this study entered into the gap of understanding of whether teachers think about the grading and assessment process differently post pandemic in 2022, in terms of their beliefs of purpose and value.

My research used a grounded theory approach, to discern if any changes have occurred in teacher conceptions surrounding grading in the unique circumstances of the years 2020-2022. There has been much research on teachers' perceptions of grading and responses to grading reform efforts, but in the review of literature, I found little research on how and why teachers change these perceptions. The effect of changes in individual circumstances in teachers' lives is cited in some of the research, but the comprehensive and global circumstances of the COVID-19 disruption create a vastly distinctive scale of change which merits investigation and reflection as to how teachers have and are

adjusting their beliefs and practices. Interestingly, while writing this study, the COVID-19 pandemic was declared over by President Joe Biden, and the emergency processes and funding were declared to transition out by May 11, 2023 (Biden, 2/20/23). The experience of teachers, students, and schools has shifted throughout the pandemic, going from initial crisis and fear while learning how to teach and learn online, to gradual and often delayed return to in person schooling, and some reinstatement of traditional grading practices from pre-pandemic. The participants in this qualitative research study were still operating in a grading scale which had not been fully changed back to the one they used in that school district pre-pandemic, and their insights on the effects of three years of changes in the grading scale were significant. They overwhelmingly spoke to how students seem to be able to do less academically in 2022 compared to 2019, and how this necessitates a more individualized, or emotionally nuanced approach, to their grading practices.

This goal of discovering how the changed conditions might have affected teacher beliefs and openness to reforming their grading practices overall led me to this research question: *Have teachers changed their beliefs and perspectives on grading practices since the systemic shock of the COVID-19 pandemic? If so, why, and if not, why not?* Secondary questions addressed were: *How do high school teachers describe their pre-COVID-19 thinking regarding the role of grading as an indicator of learning? How do high school teachers describe their use of grading as an indicator of learning during the disruption to teaching and learning caused by COVID-19?* In this chapter the major learnings related to these research questions are discussed, followed by an analysis of the connection of the findings to the literature reviewed in chapter two.



## Key Learnings

The learnings from this research are organized into six distinct themes, one overall, and the others more specifically stated. A unifying theme which emerged from the study was that the teachers are aware of significant and underlying systemic disruptions which have still not been fully recognized. This was articulated by all the respondents in some form, and was usually brought up at the beginning and end of each interview. This perception that society has shifted, and that schools no longer have the same value by students was palpable throughout the study. As one interviewee said, “The students’ have had almost zero experience of normal during this crucial developmental period, and if we keep pretending that if we just keep going back to ‘normal’ all will be well, we are just erasing *their* identity and experiences.” The unknown and unpredictable dimensions to the experience of teaching and learning in 2020-2022 were referenced often, and seem to be connected to a lack of a sense of empowerment or efficacy by the teachers. The fact that all the changes were forced and outside the teachers’ realm of influence is significant, and connects back to their ability to choose future changes in grading and assessment policies.

The results from the research demonstrate that there was not a consensus on whether beliefs have changed, but there arose a unified theme on why some teachers have changed their beliefs and perceptions on grading. There was clear evidence that they have been challenged by the changing circumstances and as a result of the experience have made changes to their own practices. The teachers who affirmed or changed their beliefs during this time also described very similar reasons for doing so, albeit resulting in distinctive results of change or stasis.

### *Changed Understanding of Grades*

In both the survey and the interviews, the theme arose that students do not understand high school grades as they did prior to the COVID-19 pandemic. The fact that the grading policy and scale has changed every year for three years was cited as confusing for the students, as well as the experience of grading by giving credit for submission of work more than quality while in the 18 months of distance learning. The connection of class grades to a permanent record has also changed, according to the research, “They don’t get it (GPAs) because they have been judged by a different standard”. As described in chapter four, teachers consistently cited the need for a structured learning environment and predictable grading processes as more important now than prior to the COVID-19 pandemic. The perception expressed by the teachers that students returned to school with a sense of learned helplessness, evidenced by their reticence to speak in class or work in groups, or try to improve their work when given the chance, was cited as reason for changing their grading and assessment practices. When evidence of learning is unavailable due to lack of participation, other evidence of learning is necessary. The teachers responded by adjusting their practices, to more flexible timelines and individual differentiation of expectations, but this did not mean that they changed their beliefs on the nature and purpose of the grades.

The teachers have adjusted their practices to the transformed students, but do not necessarily agree with the changes which they have chosen to make, or have had to work with as the official grading scale policies have changed. This can be seen as an example of the effect of the systemic shock of the COVID-19 pandemic causing a disequilibrium which is still not resolved in the minds of the teachers. As discussed in chapter two,

Bonner et al. (2018) pointed out “teachers must reconcile their beliefs about their professional autonomy and expertise in teaching and assessment with external policy mandates” (p. 73). This is an example of the teachers attempting to reconcile their beliefs within a tumultuous environment, and also a confirmation of Green’s statement “while we express a certain belief, our current actions, as a situated reaction, might be driven by another belief or set of beliefs which remain unspoken in the background” (Green, as cited in Remesal, 2011, p. 474).

### ***Justification for a Grade is More Important***

There was consensus that how a grade is constructed and justified is more important in 2022 than it was in 2020, prior to the COVID-19 pandemic. In part, this is a result of the fact that as grading scales and policies changed yearly over three years there was a natural skepticism on the part of students, families and teachers of how and why grades were being earned, crafted, and reported. The respondents referred to grades as still being communication on learning, but that they have to be broken down into explainable components. The distinction between a grade for homework or participation and one for a test or project was referred to frequently. The use of rubrics as this justification was widely referenced, as was the belief that justifying a grade with rigorous evidence was a way of showing respect for the students, which is more beneficial to them than pity. The insight which Olsen and Buchanan (2019) presented on the power of a teacher’s “presumption of a shared-identity-bias” (p. 2017) is affirmed here, as the teachers revealed that they could no longer presume a shared understanding and therefore legitimacy, of the grades based on their own experiences. This is also supported by Fullan’s notion of teachers’ achieving clarity and coherence (1996). As stated in chapter

two, if a teacher cannot explain and agree with how and why a grade is constructed, they cannot 'know' that a grading system is accurate and fair.

A clear distinction of how students are perceived to value a higher grade compared to a passing grade was also articulated by the teachers, in terms of seeing grades as valued by students interested in post secondary education as opposed to students seeing a grade as valued only as a credit. This was referenced in the context of having justification for grading to a standard of academic achievement rather than grading as a standard of minimum effort. This theme merits further investigation, but reflects the research cited earlier that the student's goal for their education affects how they value a grade (Cross & Frary, 1999).

#### ***Increased Flexibility in Grading Practices Valued***

Interestingly, both the teachers who have changed their conceptions on grading practices and those who described having their conceptions affirmed, evidenced strong beliefs that teachers should have the ability to be flexible in how they assess and grade their students. This was cited as a learning from the COVID-19 pandemic by some, as they learned how their students' lives were being impacted by shifting circumstances, and also as they returned to in person school and realized how many students were struggling with the day to day of *doing school*. Teachers described learning how to be more flexible on timelines for work, allowing more students to communicate their needs individually via email or conversation, and expressing the wish to help their students through it all, while maintaining standards. This result showed up in the survey and in the interviews, and can be seen as a reaction to the forced changes of distance learning and grading scale changes, but also reflects the long standing finding that teachers generally protect their

grading practices as an important aspect of their classroom autonomy (Cross & Frary, 1999).

This theme also illustrates the non linear relationship between beliefs and behavior as discussed in the review of literature, as teachers' beliefs about high expectations and a strong structure were expressed in the same interview as their behaviors which included much flexibility in their grading practices on an individual basis for students, in examples of 'pulling for the students' on the part of the teacher. This paradox exposes the pull which a belief in the purpose of schooling explains in many cases, as encouraging and motivating the students to keep trying was recognized as a key in the grading practices.

### ***Willingness to Change***

The teachers overwhelmingly talked about being willing to change their grading practices if they believed in the changes and if they could be involved in the planning and implementation of the reforms. This learning is not surprising or new, in terms of how teachers experience change overall, and in grading in particular (Olsen & Buchanan, 2019). Fullan named this in 1996, "Overload and fragmentation combine to reduce educators' motivation for working on reform. Together they make the situation that the schools face seem hopeless, and they take their toll on the most committed, who find that will alone is not sufficient to achieve or sustain reform" (p. 420), and it is an amplified truth in the wake of the COVID-19 pandemic, as overload and fragmentation have been part of teachers' personal and professional lives for three years. The fact that teachers are making some choices to change their individual grading practices and beliefs does not translate easily into systemic change, but may provide opportunity for thoughtfully

planned implementations of grading reforms. As Remesal (2011) pointed out, the societal function of assessment however serves as accountability of students' achievement and teachers' professional labor (p. 473). Thus the willingness of the teachers to engage in future changes can be explained as a reflection of their awareness of this accountability for their own professional labor as a motivating factor.

### **Theoretical Framework**

Systems thinking and complex change theories are both strongly applicable to the research question of this study, as the intersection of changes within schooling and grading systems over the past three years is the focus. Senge's idea that a system changes only when people change how they think is clearly evidenced by the comment made by a teacher that they had all learned to adapt and accommodate over the past three years, and teaching and grading should change now also. What is unknowable still is whether the changes brought about by the COVID-19 pandemic, shift to distance learning and back, and the accompanying grading policies shifts, have had any unifying effects on how the people in the school systems think. Fullan's (2020b) conception of complex change theory centers the fact that "...we are all de-skilled in this prolonged period of non-linear ambiguity" (p. 26). This awareness of a dramatic transition being inevitable was expressed by him clearly, "This will be a period during which the new system will be formed" (Fullan, 2020b, p. 27). As stated in chapter two, it is possible that the theories of systems and complex change explain phenomena well in predictable conditions, but not in the situation of global systemic shocks such as the years 2020-2022 brought about.

Looking at the research from the lens of chaos theory brings some clear applications which seem to explain some of the results of this research. As Akamansoy

and Kartal postulated in 2014 (p. 511), this theoretical framework which originated in the physical sciences applies to educational systems powerfully, in the same vein which constructivism often relies on biological theories of growth and decay to explain learning. In particular, the theoretical components of perturbations, fractals, and strange attractors can explain significant findings of this study. The perturbation of the COVID-19 pandemic, the accompanying shifts to and from distance learning, and the changed grading policies which teachers have had to work with over the past three years have clearly caused disequilibrium on the systems of schools and grading. As teachers and students have adjusted to this disequilibrium, they have made accommodations and shifts in the processing of finding a new equilibrium, or to use Fullan's words, become skilled again after becoming de-skilled (2020b).

Taking the definition that a fractal is a pattern which recurs at many levels, which in education can be recognized as core ideas that characterize the system (Parra & Tan, 2021, p. 16300), one fractal is clearly identifiable. The first stage of the disruption, moving from in person school to distance learning within one month, produced the fractal of reacting to the crisis by allowing for submission of work to be counted as credit, as opposed to submission of work being a basis for feedback. This core idea then informed the following changes in teaching and grading practices, as students returned to in person schooling, but with changed expectations and understandings as the expectations and grading policies were still built on the assumption of the crisis created by the COVID-19 pandemic. This seemed to be accepted and supported by the teachers, as they saw the traumatic effects of the pandemic on their students, and agreed that in 2020, the circumstances were extraordinary and special accommodations to grading must be made.

The continuation of the pandemic era grading policies for three years do seem to demonstrate how that fractal became a strange attractor however, and teachers and students had a different understanding of what a grade means and how to best construct a grade by the end of 2022.

Thus the answer to the research question for this study can be explained in terms of chaos theory, by stating that some teachers changed their beliefs and perspectives on grading practices since the systemic shock of the COVID-19 pandemic in reaction to the disequilibrium created, by adjusting their own practices and understandings of the fractal of changed grading policies and understandings. Other teachers affirmed their beliefs and perspectives on grading practices, but also had to change their own practices and understandings of the fractal of changed grading policies and understandings.

The full arc of chaos theory points to an understanding that systems self-regulate, and that creativity and growth are the mechanisms by which equilibrium is achieved at some point. There is some evidence of this happening already, as teachers have adjusted their beliefs and practices on grading to the post-pandemic environment. The ideas and examples cited during the interviews in this study reflect an informal transition to understanding that the purpose and value of grading have shifted for students and families over the course of the three years of 2020 through 2022, and teachers are reacting to these changes in their own perceptions and actions. In applying the three criteria for evaluating the effectiveness of a grading system postulated by Guskey and Link (2022) to the teachers' responses, some clear convergence and gaps can be discerned. The finding that students and families have come to see a grade as representing submission of work, rather than feedback on evidence of learning, points to



a gap between the teacher's implicit value of a grade as communication of learning and a student's value of a grade as communication of compliance by means of submission. This is a significant gap, but the teachers addressed it by explicitly stating that they have worked to be able to justify their grading system more transparently to the students and families, to strengthen the communication of learning. The other criteria of using a limited number of performance categories and separating achievement grades from non-cognitive factors were also reflected in the teacher responses, as they spoke to limiting the amount of work which is now graded, and in making many more individual allowances in students producing the evidence for their learning. There is, however, a much more significant gap in these two criteria between teacher perceptions and the value of a grading system as established by Guskey and Link (2022). None of the teachers in this study referenced using fewer categories on a grading scale or offering an additional form of grade reporting just for non-cognitive indicators. In short, here is where it is seen that teacher grading perceptions and practices have not shifted to facilitate a clear communication of information on student learning to the students and families.

It is possible that Fullan's prediction that "the world will get better or worse - there is no middle ground" (Fullan, 2020b, p. 27), is already being manifested in more supportive grading practices being created by teachers, and a new understanding of the power of personal communication as a necessary tool in the classroom. But it is also possible that in the absence of deliberate study and reform, this shift has not evolved.

## Implications

The implications of this study for school district leaders and school leaders is that any grading reform efforts, and any changes to grading systems, have to involve teachers as part of the planning and implementation to be successful. As practitioners in the classroom, teachers have been adjusting to dramatic changes between 2020 and 2022, and have developed new understanding of how students and schools have changed also. The experimentation of grading practices which has been part of the response to the COVID-19 pandemic and distance learning has produced a loss of pre-existing understandings of how grades and schooling function for students, and the teachers who are making the adjustments in real time should be part of the process of determining further changes to the policies on grading.

A further implication is that grading is not a *one size fits all* construct, as classes which are electives or academic support classes do not function in the same way as those required for graduation. The components of participation and effort matter in constructing a grade for these courses in significant ways, and cannot be reduced to simply measuring towards an academic standard, according to the teachers interviewed. In the environment of all the changes forced on teachers by the COVID-19 pandemic and accompanying policy shifts, teachers are more resistant than ever to reforms imposed from outside, without their input. Thus, an incremental approach to grading change, with participation by teachers throughout the process, is merited.

An unexpected implication is how this research has affected my own professional work. When I embarked on it, the challenge of looking at assessment and grading practices was a limited aspect of my job, but in the past year it has become the main

focus of my work, and connected to most of the initiatives I am managing in my role in the school district. This research has impacted my work deeply, as the themes which emerged are now informing how we are planning and implementing grading policy and practices changes. In particular, the finding that while many teachers have discerned a significant shift in student understandings and abilities to navigate school, and are reacting by shifting some of their perceptions, beliefs, and practices has resonated with my work. I have come to understand that without an explicit and thorough effort to clarify how to respond and create a system wide engagement and initiative on grading reform, it will become another relic of a failed initiative. In response, I have continuously adjusted our work plans in the school district, and understand that the plan will always be less crucial than the flexible and recursive nature of responding to the practitioners as we move forward.

### **Limitations and Suggestions for Future Research**

This study was carried out according to the research design proposed and approved by both the school district and degree issuing institution, with no adjustments which had to be made to the protocol. As there are limitations to any study however, those which are important to consider here are the facts that I did not do direct observations of the teachers in their grading practices, nor did I do a document analysis of their grading system as they use is on the electronic student information system which is used in the school district. This was due to concerns on student data privacy and confidentiality, but it is well documented that practice is often different from stated beliefs and reported actions. Additionally, while the survey gathered the beliefs and perceptions of 50+ teachers, of the seven who were interviewed, a majority do not teach a

core class which is required for high school graduation. It is not clear that this made a difference in discerning how some were more open to changing their beliefs, but does point to an avenue for future research, on differing values of electives vs graduation required classes in grading practices in high schools. In addition, future research would be helpful in the distinctions that grades have for students who see themselves as college bound, and therefore motivated by a transcript, and those who do not see themselves as college bound, and are more likely to see grades as credits, and a key to graduation.

Revisiting the focus of this study over time, and also with a larger sample, would also be interesting, particularly as the grading policies in large public school districts either continue to change or revert to 2019 structures. Looking at the continued evolution of college admissions requirements, with either the inclusion or continuation of excluding standardized tests, would be another interesting avenue of research.

### **Communication of Results**

The research in this study was carried out in the context of ongoing changes taking place in high school education both regionally and nationally. In the local environment, I have learned much which also applies to the work in my school district where a multi year initiative of changing and reforming grading practices is being carried out. I will share the key findings with school district leaders that teachers need to be part of the decision making and planning process for the implementation of these changes, as well as the effects that the grading practices during the COVID-19 pandemic have had on the nature of the understanding and uses of grades in their classrooms. This crucial finding, that there is no *going back* to pre pandemic classrooms and grading, is important to communicate with district and school leaders, to best support the teachers and students

in the ongoing work. In addition, this work can support and inform the instructional coaches and content specialists who are working directly with teachers as part of this multi year project.

The findings will also be shared with academic leaders in other school districts, as part of the dynamic conversations on how to best understand how teaching and learning are structured, measured, and accounted for. The forums for professional discussions in regional and national networks brought deep insights to my research, and I hope to share in kind what was learned in this study.

### **Conclusion**

In answering the research question of if teachers have changed their beliefs and perspectives on grading practices since the systemic shock of the COVID-19 pandemic, I delved into how their experiences have affected how they value grades, and whether the frustrations they have experienced as a result of the changes from 2020 through 2022 have caused them to re-think their beliefs and conceptions on grading practices. The results are clear that the impacts on teaching and learning from those years are still being felt and are not fully recognized, but that the purpose of schooling matters more than ever in how teachers and students perceive and engage in grading as a measurement of learning. The systemic shock of COVID-19 created ripples of consequences and changes in student understanding of what is the value and purpose of school, with the result that teachers are making their own changes to accommodate these shifts in their own beliefs and practices.

As I stated in the opening of this work, the value of a grade is a construction of understanding between a teacher, student, and the system of schooling overall. Delving

into how that construct has shifted during the pandemic brings new understanding of how measuring learning happens and also how it can be improved from the perspective of teachers. This study affirmed that the value of grades have shifted from 2020 through 2022, and need to be reframed so that the teachers, students, and school leaders can all coherently express how learning is being measured and communicated. A grading system which addresses only academic achievement in the post pandemic environment will cause harm, because students and schools are different now, and need to be reconstituted with a shared goal and purpose. The questions of *why school*, and *why learn*, have a fresh significance for students in the post COVID-19 pandemic world. Effort, growth, attitude to learning, and even attendance all need to be relearned, or justified for the students. Social emotional learning is not just part of bringing students back from trauma, it is needed as part of this process of reconstituting schools.

Returning to Remesal's framework (2011), beliefs are defined as statements about reality held to be true by an individual, which may shift over time, and conceptions are the organized system of beliefs held by an individual. As the reality of the school environment and grading policies have shifted over the three years of the COVID-19 pandemic, teachers shifted their beliefs and conceptions to some extent, with the underlying purpose of schooling anchoring their cognitive work. This process of creating adjustments to the disequilibrium to find a new equilibrium is ongoing.

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## Appendix A

### *Survey Questions*

#### *Google survey*

- How long have you taught in this district? 0-6 years  
7-14 years  
15+ years
- Do you have teaching experience elsewhere? Yes/No  
If yes, how many years?
- What subjects have you taught? Drop down:  
Drop down: Arts, English, Math, Sciences, Social Studies, World  
Language, Special Education, English Second Language, CTE
- Did you receive instruction on grading practices while earning your  
teaching license? Yes/No
- Do you use any of the following practices in your grading?  
Drop down: Pass/Fail, Re-takes, No use of '0', Rubrics
- Did the pandemic make you think differently about grading?
- What do you think should be changed about grading practices in your  
school?  
Drop down: Unified system of grading, More choice for individual  
teachers' grading practices, Retakes, Pass/Fail, No use of '0', Different  
Summative/Formative percentage,

- Are you interested in participating in a follow up interview as part of a research project? If so, please enter your email here.

## Appendix B

### *Interview #1 Questions*

- What was the most significant learning you have had in terms of creating a grading structure for your classes?
- Describe a time when you were graded as a student and it motivated you to continue learning.
- Describe a time when you were graded as a student and it de-motivated you to continue learning.
- Do you remember receiving instruction on grading practices while earning your teaching license? If so, can you share what the method or philosophy on grading was?
- Can you tell me of a difficult case in your grading practices? Of a case which makes you proud in your grading practices?
- To what extent do you see your student grades as an assessment of your performance as a teacher?
- What enduring principles have you learned in your career? What in brief, do you “know for sure” about teaching, learning, and student achievement? (Reeves, 2011)
- How did grading change in your experience during the COVID-19 pandemic?
- Have any of your beliefs or practices changed as a result of the experience of the pandemic?
- If yes, why do you think differently about grading now? If no, what has been affirmed about your long standing beliefs?

*Interview #2 Questions*

Based on coding of Interview #1, ask teachers to reflect on themes as I share them, and also include questions:

- To follow up from the survey, what do you think should be changed about grading practices?
- Why do you think these changes will be effective and/or helpful?
- Would you be willing to change your own grading practices?
- Why do you think it is so difficult to impose change in grading practices?