Examining Classroom Grades As Complex Communication

A Polar Case Study Analysis

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Abstract

For the past one hundred years or more, educational specialists have been admonishing classroom teachers to standardize their grading practices but have met little success. Most research into classroom grading practices indicates that both teachers and students are comfortable with the current system of “hodge-podge” methods of grade construction. Many researchers view teachers as resistant to changes in grading construction due to a lack of assessment education. However, other studies of teacher attitudes toward grading suggest that teachers view grading as complex and relational. This polar case study research investigated the construction and interpretation of grades as a form of complex communication. The findings suggest that although assessment researchers often view grading as a simple process, the teacher in this study viewed grading as a highly subjective and complicated procedure, deeply connected to her view of herself as a teacher. The implications of the case study are for further mixed-methods studies that would quantitatively examine educational measurement specialists’ recommended practices alongside qualitative studies that examined how the communicative properties of grading were impacted by new grading practices.

Keywords: grading, communication, polar case study, rhetorical transaction theory, classroom grading practices
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Chapter 1: The Problem of Grades

The first step is to measure whatever can be easily measured. This is ok as far as it goes. The second step is to disregard that which can't be easily measured or to give it an arbitrary quantitative value. This is artificial and misleading. The third step is to presume that what can't be measured easily really isn't important. This is blindness. The fourth step is to say that what can't be easily measured really doesn't exist. This is suicide.


This description of the McNamara Fallacy, originally referencing foreign policy decisions in Vietnam, is eerily applicable to the current state of educational assessment in the United States today. As educational policy makers look for methods to evaluate and quantify student learning through high-stakes accountability measurements, many classroom teachers find themselves at odds with policy makers over the use of large-scale, standardized assessments to assess the complexities of student achievement in the classroom.

Classroom assessment, both formal and informal, is an ongoing process that permeates all aspects of teaching (Brookhart, 1997). Classroom assessment includes both formal assessments like tests, papers, and presentations, as well as informal observations like oral questioning during classroom instruction (Stiggins, 1993). The formal and informal assessments included in the classroom assessment environment are used by the teacher to construct student grades, which are the summative evaluation of a student’s achievement within a specific timeframe. As such, grading is influenced by the complexity of the classroom assessment environment. In other words, grades are not the result of an objective, linear or mathematical process, and the construction of grades may be idiosyncratic to a particular teacher at a particular time and with a particular student. Although research indicates that most classroom teachers, as well as students, are comfortable with these idiosyncratic grading practices (Brookhart, 2013;
Cox, 2011), educational measurement specialists have been admonishing classroom teachers to standardize their grading practices for over one hundred years.

**Overview of the Study**

This research study begins with an introduction to the current tensions between educational researchers and classroom teachers around the topic of classroom grades. This is followed by a discussion of the significance of the research problem as well as an overview of the deficiencies in the research around classroom grading practices. The positionality of the author is presented as it relates to classroom grading, followed by research questions for the study. The first chapter of this proposal ends with a discussion of the relevance of rhetorical transaction theory as a theoretical framework to explore the communicative properties of classroom grades. The second chapter of this proposal presents a review of literature related to the following themes: the tradition of grading in the United States K-12 school system, the construction of classroom grades, and the interpretation of grades by students and parents. The literature review also includes a focus on educational measurement specialists’ recommendations for classroom grading, as well as the actual grading practices of classroom teachers. The second chapter concludes with an analysis of why classroom grading should be studied as communication. Chapter three focuses on the methodology of the study, including the research design, recruitment of participants, and data collection and analysis process. The fourth chapter in the study examines the findings of the research study using thick description (Denzin, 2001) in order to utilize the voices of the participants in the presentation of the data. The fifth chapter discusses the findings of the study within the theoretical framework of rhetorical transaction theory. The final chapter also includes the implications of the study for research and practice as well as the limitations of the study.
Research Problem: Classroom Grades

Although there has been a shift toward constructivist theories of learning and teaching, there has not been as strong a shift toward a constructivist theory of assessment. Assessment is often seen as a logical process where values and beliefs play only a small role (Wiliam, 1994). However, the function of assessment is to evaluate a student’s achievement toward classroom or course goals. As such, evaluation is a social process, taking place within a specific social context and for specific purposes. Classroom assessments, and the grades based on those assessments, are constructed by the classroom teacher who chooses the topics to be assessed, the timing of the assessment, and the form of the assessment. According to Brookhart (1997), classroom assessments can be influenced by: 1) the teacher’s attitudes, philosophies and beliefs about teaching and learning; 2) the teacher’s training, knowledge, and skills in assessment; 3) the social and emotional climate of the classroom; and 4) the policies of the institution. Rather than a logical and straightforward mathematical process, classroom assessment is as complicated as the social processes of instruction and learning that precede it in the classroom cycle of education.

The interpretation of a grade is similarly vulnerable to individual attitudes, philosophies and beliefs about education by the stakeholders for the grade as it is in its construction. The grades constructed from classroom assessments are intended for communicating achievement to the student, parents, other teachers, guidance counselors, college admissions counselors, community, and other stakeholders. Those omnibus grades (Marzano, 2010) are used for varying purposes by various stakeholders, and have social purposes for the stakeholders and social consequences for the student. Grades on report cards and progress reports are the most recognizable communication about student achievement in a course, but grades can be opaque messages since they are constructed from many smaller evaluations, hidden within the
comprehensive omnibus grade (Marzano, 2010). Not only do students and parents often misunderstand how grades are constructed, they also bring their own experiences of assessments, grades, and school to their interpretation of grades and report cards (Brookhart, 1993; Tippin, Lafreniere, & Page, 2012; Tuten, 2007).

Classroom assessment and grading is a complex process set within complex social contexts. As such, widespread change in classroom assessment and grading practices has been difficult to sustain, despite the efforts of educational measurement specialists and educational policy-makers who tend to view assessment as an easily quantifiable practice. The problem may lie in how teachers view their purposes in the construction and communication of assessments and grades. Although many teachers would likely view student evaluation as part of their job, they would also identify themselves as advocates for those same students (Brookhart, 1994; 2004). In fact, most teachers would likely prefer the title of student advocate rather than student evaluators, as evidenced by the preference of teachers for including variables in student grades that intend to motivate or encourage students (Brookhart, 1994; Cox, 2011; Cross & Frary, 1999). In many respects, teachers play simultaneous roles of student judge as well as student advocate. One of the major tensions for assessment practice may be the fact that researchers view teachers as evaluators who simply report the facts, while teachers see themselves as student advocates who use assessment and grades for more than communication of a simple mathematical average.

**Justification for the research problem.** Research on grading practices was common in the 1980s and 1990s, and a common theme in assessment research was the difference between grading practices as recommended by educational researchers and the actual grading practices in the classroom (Brookhart, 1993; Cizek, Fitzgerald, & Rachor, 1996; Cross & Frary, 1999). For
example, the research literature on classroom grading practices indicates that classroom teachers tend to use hodgepodge grading practices (Black & William, 1998; Carifio & Carey, 2012; Cox, 2011; Stiggins, 1991; Zhang & Burry-Stock, 2003), or rather, grading practices that include a mix of academic and non-academic factors. It is important to note that such studies indicate that classroom teachers use nonacademic factors like effort and behavior to motivate students and improve students’ chances for success (Broadfoot & Pollard, 2000; Cox, 2011; Cross & Frary, 1999). However, although teachers may identify specific, student-centered purposes for the inclusion of non-academic factors in the construction of the grade, it is unclear if the grades are successfully communicating those messages to students.

Educational measurement researchers, on the other hand, view nonacademic factors such as effort are irrelevant to the reporting of meeting academic standards and focus instead on educational measurement with the purpose of grades as solely communicating academic achievement (Black & Wiliam, 1998; Carifio & Carey, 2012; Stiggins, 1991; Zhang & Burry-Stock, 2003). Consequently, the methodology most often employed to examine the ways in which teachers construct grades are quantitative survey studies. The majority of these studies are focused on classroom grading practices and teachers’ experience with assessment practices (Betts & Grogger, 2003; Bonner & Chen; 2009; Carifio & Carey, 2012; Cross & Frary, 1999; Iacus & Porro, 2011; Planel et al., 2000). Many of the researchers identified these studies as exploratory, and the research focus for most of the studies was on identifying patterns and trends in grading practices, rather than on in-depth explorations of grading practices. Research that explores classroom grading practice from within the classroom assessment environment itself could shed light on how teachers construct grades, what teachers intend to communicate, and for what purposes they construct those grades. Rather than collecting broad data on what teachers
identify as their grading practices, qualitative research into classroom grading practices within the context in which that grading takes place could give a clearer, perhaps more complex, picture of teacher grading practice. Understanding the complexities of grading practices could lead to the development of a more complex theory of classroom assessment and grading, an assessment theory that, like newer theories of teaching and learning, are grounded in a constructivist framework that honors the communicative purposes of grades for both the teacher and the student.

**Deficiencies in the evidence.** The exploration of teacher grading practices across many teachers in many districts requires quantitative data collection to uncover large trends or commonalities. However, an overview of teacher attitudes or trends in grading practices is not enough to explore the more complex aspects of grading. Studies that seek to explore how and why teachers construct grades are necessary to further understanding of the differences between classroom practices and the recommendations of educational researchers. The results of these mixed methods and qualitative studies expose a process that may be grounded in more complex social and cultural construction than a purely quantitative study could reveal. In fact, since grades are often used for multiple communicative purposes with multiple audiences, studies that employ qualitative methodology and constructivist paradigms could shed important light on this fundamental, but often secretive and sometimes idiosyncratic, aspect of education.

In the past ten years, little research attention has been paid to the social construction of assessment and grades, particularly at the high school level. The current policy emphasis is on the development of standards-based reporting (Filer, 2000; Ravitch, 2010). Rather than exploring the complexities of classroom assessment and grading, the national push for accountability has emphasized the need for research on standardizing and streamlining educational measurement.
Increasing pressures from state and federal policy makers, as well as accreditation agencies like the New England Association of Schools and Colleges (NEASC), are forcing school districts to reconsider long-standing grading procedures (Marzano, 2010; Stiggins, Arter, Chappuis & Chappuis, 2006). As high schools move to develop new grading procedures and practices, qualitative research into the communicative purposes of grades, as well as the attitudes of teachers’ toward assessment and grades, may improve the implementation of standards-based reporting systems.

By examining teachers’ attitudes and purposes for grading using qualitative approaches, and analyzing grading as a communicative process, we can better understand the complex nature of grading from the teachers’ perspective. In addition, this study seeks to describe the interpretation of the communication by the primary stakeholders — the student and his/her parents. To gain a fully developed description of the communication of grades, the interpretation of the message by the audience is vitally important. With this understanding, researchers may be able to bridge the gap between educational researchers’ best practices in classroom assessment and actual classroom grading procedures. In addition, administrators and teachers may be able to engage in the development of an assessment and grading system that meet the state’s requirements as well as the many needs of the educators who must implement new grading procedures.

The purpose of this study is to examine teachers’ attitudes toward and purposes for grading. If grading is a primary method of communication between teachers and stakeholders, then an examination of the methods of construction and the meanings of grades for teachers may lead to the development of a grading system that serves the purposes of teachers constructing the grades. Clarifying the teacher’s intention in the construction of the grade, as well as the
interpretation of that grade by students, parents, and other stakeholders could result in more transparent grading practices. Developing grading practices that serve the purposes of teachers as well as students and parents would also increase the likelihood of sustainable change by the change recipients (Szabla, 2007).

**Significance of the Research Problem**

The site for this research was a small, rural high school in northern Maine. In response to a state mandate for standards-based report cards, Northern Maine High School (a pseudonym) is undertaking a major organizational change. The Maine Department of Education issued a mandate for standards-based reporting to be in place by 2016. This mandate, in part, is in response to the large numbers of Maine high school students requiring remediation in English and/or math in post-secondary schools (Maine College Readiness Report, 2012). The push for a school-wide examination of current grading practices and a systemic change to those practices made this an appropriate site for research into the construction and communication of grades.

Currently, Northern Maine High School uses a traditional, norm-referenced grading system, with teachers using a variety of methods for calculating summative grades. The principal, responding to the high school’s latest NEASC accreditation report in 2011, has required teachers who teach the same courses to agree upon a single grading system. The principal expects teachers and departments to move toward a more standardized assessment and grading policy over the course of the school year. However, the faculty has made little progress in changing grading practices.

Several researchers (Cizek, Fitzgerald, & Rachor, 1996; Cox, 2011; Cross & Frary, 1999) note that although standards-based assessment and grading systems have been adapted at the elementary level, there has been little change in grading practices at the high school level. Filer
(2000) suggests that the difficulty in changing grading practices at the high school level may be due to the complex uses of grades by multiple stakeholders. Stakeholders in assessment and grading at the high school level include students, teachers, parents, administrators, and college admissions counselors. However, as demonstrated in Figure 1, there are many more stakeholders to consider in public education, and those stakeholders range from local taxpayers to the congressmen and senators who sit on the education committee in Congress.

Figure 1:

Social Contexts for Grades: One Message (Grade) with Multiple Audiences and Purposes
Three Levels of Social Contexts for High School Grades

In order to categorize the many stakeholders for high school grades, I identified three levels of stakeholders; each level is defined by the distance from the construction of the grade by a teacher about a student’s achievement in his/her course. Each stakeholder level also includes some repetition of the message to certain stakeholders from different messengers. For example, at the private level, both the teacher and the student are identified as messengers of the grade to the parents. The teacher constructs the grade and sends that message to the parents in a report card or progress report. However, the parents also may receive the message (the grade) from their child or they may ask their child to explain the grade to them, resulting in communication by the student about his/her grade in the course. There are many possibilities for reciprocal communication among the stakeholders, which may refine or confuse the possible interpretations of the grade.

The private stakeholders for grades are those closest to the production of the grade: the teacher, student, and the student’s parents. As the originator of the message, the teacher communicates achievement in the course to the student and the parents. However, the construction of the grade is made up of assessments over the course of time in the classroom and so there is some communication within the classroom assessment that is based on student communication to the teacher. The parents are close stakeholders for their child’s grades and may perceive grades as direct reflections of their parenting or their families. In that way, grades can be seen to have social consequences for the parents and family, as well as for the student.

Local stakeholders are stakeholders within the physical community of the school or district. These stakeholders include other teachers, guidance counselors, a student’s peers, and building and district administrators. One of the most direct consequences of student grades is the
ability of a student to participate in extracurricular activities. Many school districts have minimum grade requirements for students to participate in athletics, band, drama, or debate. Guidance counselors may use student grades to recommend students for scholarships, awards, and internships. It is not uncommon that faculty members compare a student’s grades between the disciplines to identify problem areas or to determine student effort and motivation.

The public level is the most distant stakeholder group, although some of these stakeholders can have a large influence on the future of the student. These stakeholders can be more directly involved with the student, as in college admissions officers or scholarship committees, or they may be a more distant stakeholder considering student grades as part of a larger data set. This stakeholder group can have more consequences for the school itself since some of the grades may be linked to drop out or failure rates, or to college acceptance rates, which can influence school funding and school ratings at the state and federal levels. Educational policy makers have been increasingly interested in assessment and grading practices, particularly as the federal and state education departments use high-stakes standardized assessments to increase schools’ accountability to the public. However, Filer (2000) and Broadfoot and Pollard (2000) note that the current policy and research emphasis on the scientific nature of assessments obscures the other, more subjective and social purposes of assessment and grades.

When considering the many stakeholders and purposes of grades within the many contexts in which grades are used, it is incredible to expect a single number to send such complex and critical information for so many purposes. Research into the purposes and meanings of grades for teachers, students, and other stakeholders may shed light on the complicated purposes and multiple messages of a single omnibus grade.
Positionality Statement

Author as teacher. As a high school English teacher, grading was always an important part of my work. However, grading in the Humanities can be more complicated due to the higher subjectivity of the discipline. Often, I struggled to develop criteria and rubrics that would identify the essential elements of a strong essay or formal presentation. Oftentimes, although I might identify the necessary criteria for an assignment, it was very difficult to explain how those elements interacted to develop the overall impact of a piece of writing or a presentation. In addition, reading comprehension at the high school level can be difficult to assess since we are no longer evaluating reading comprehension at the literal level of understanding. High school students must demonstrate an understanding of the complex nuances of language and structure that develop themes and levels of text complexity, and often this requires students to possess a strong vocabulary, broad cultural knowledge, and strong critical thinking skills.

As a high school teacher I believe my primary responsibility to my students is to support them in developing their academic skills and knowledge so they can, if they choose, continue to post-secondary education. Although I do not believe all students must enter post-secondary education to be successful, I do believe it is my responsibility to ensure that all of my students have the option to continue their education. I do not believe that students of differing academic abilities require different curriculum, but that they do require different instructional practices and scaffolding to ensure engagement and achievement in academic activities. I believe that students need sufficient cultural literacy in the traditional Western canon to be successful in college. After reading Bourdieu (1986), I recognize that I may be reproducing the dominant culture structures rather than challenging them; however, I also consider part of my responsibility as an educator is to support students in accessing the cultural capital required for them to succeed in our society.
Author as student. My belief in the importance of school started from my childhood when my parents instilled in me the importance of education. Although my parents were from blue-collar backgrounds, they were both college graduates and supported me in developing strong organizational skills and academic habits. My parents viewed school as our primary job, and we were expected to seriously engage in our school work. We were not allowed to hold part-time jobs during the school year, and only worked in the summers to make money for college. Time in front of the television and with friends was limited during the school week, and we typically sat together in the kitchen to complete homework while my mother made dinner. My parents provided me with an environment that allowed me to develop cultural literacy in the general knowledge areas considered important for success in school. We had a home set of *The Encyclopedia Britannica*, made weekly family trips to the town library, and visited museums each summer.

Given my parents’ support and structure, my experiences in school were very positive. I enjoyed school and academic challenges. I was lucky to possess strong skills in what Howard Gardner would identify as the logical and linguistic intelligences, which are often the intelligences valued most in school. Part of my success in school was influenced by my teachers and my grades. As a student, I was motivated by grades and my parents encouraged me to maintain high grades in courses that challenged me. There was an emphasis on learning in our home, and so my parents were less concerned about grades as they were about our grades reflecting our effort and ability in our courses. School was never very difficult for me, and I enjoyed working on my academics, so my grades were not something I thought much about. My parents expected good grades, I enjoyed academic work, my teachers gave me good grades, and so I had good grades.
Educational philosophy. Today, I bring my beliefs about grading into the classroom with me. I believe that the purpose of grades is to reflect the academic performance of a student in a course. Students who are concerned about their grades more than they are about learning occasionally frustrate me. I believe that grades should reflect a student’s growth in a course rather than be a raw average of all of the evaluations given over a grading period. Students should be encouraged to take risks and struggle with new learning. An important part of that encouragement is when teachers use grades to support a focus on learning and growth, rather than to expect perfect performance regardless of the level of exposure students have had to the concepts or skills under evaluation.

The learning in my master’s degree program in assessment influenced my beliefs about grades, particularly about grades as communicating more than a simple raw average of scores. One of the primary reasons that I chose to study assessment in my master’s program was because I felt so unprepared for evaluating students in my classroom. The preparation I had for my secondary education certification included very little education about assessment. The focus of my research for my master’s degree was on the importance of establishing a standards-based grading system at the high school level in order to improve the clarity of the report card’s communication of student’s academic achievement.

Personal beliefs and teacher education are important components of teachers’ grading practices, but another major influence on teacher grading practices is the educational policy changes at the state and federal levels. The current educational policy environment is one of reform. This includes reform all almost all stages of education, including curricular, instructional, structural, and evaluative. For teachers of English and Mathematics, this has resulted in frequent changes in educational standards, curriculum aligned to those standards, and
the measurements of student achievement toward the standards. Since the disciplines of English and Mathematics are considered foundational to academics and are the basis for national and state standardized tests, the focus for reform often starts with these two disciplines. As an English teacher, I can express my frustration with the frequent changes and reform efforts, not because I always disagree with the purposes or educational philosophy behind the changes, as much as I struggle to fully implement one reform before another comes along. As several people have noted in the media, implementing education reform is often like attempting to fix a plane while it is in flight. My full-time job is instructing the one hundred students I have in the course of a day. To implement any deep curricular, instructional, and assessment change requires time that our English department and district simply do not have. Currently, the educational reform relevant to this study is the Maine Department of Education’s mandate for standards-based report cards at all Maine high schools by 2016. For our highly traditional high school in a highly traditional community, this change will require a major rethinking of the purposes and construction of grades and report cards.

In my high school, teachers continue to use their own personal preferences to construct course grades. Although there has been a push from the current principal for more common grading practices within departments, the majority of teachers continue to construct grades based on individual beliefs and practices. Therefore, I examined the construction of grades by individual teachers in order to explore what a teacher intends to communicate with a grade, their methods of grade construction, and their beliefs and values about evaluation and assessment. In addition, I hoped to understand whether or not the message the teacher constructed was interpreted by the stakeholders in the way the message was intended. Ultimately, I was interested
in what a teacher really wants to say with that grade and whether or not that message was being interpreted correctly.

**Research Questions**

Although there are many potential audiences and purposes for grades, this research focused on the central situation in the communication for grades, the private context between the teacher and student, and his or her parents. The primary question of my research was: *How do teachers in a rural high school use grades as communication during a grading period?* To guide the research process, the larger research question was broken into three sub-questions: (1) *How does a science teacher construct grades?* (2) *How do various audiences interpret grades?* (3) *How does the level of course (e.g., Honors, AP, general) impact the construction and interpretation of grades?*

**Theoretical Framework: Rhetorical Communication Theory**

In a qualitative research project, theory is used as lens through which to explore the phenomena under study (Anfara and Mertz, 2006). The choice of theory is a key aspect of the research design since the theoretical framework influences how the researcher develops his/her research goals, questions, and methodology (Maxwell, 2013). Since the focus on the research was on the use of grades a form of communication, this study framed the investigation of classroom grading through the lens of rhetorical communication theory. Many of the communication theories (i.e., transmission and semiotic) seem relevant to the discipline of education and the topic of classroom grading (Craig, 1999). However, the theory that appeared most viable in the exploration of classroom grading is based in the classical Greek tradition of rhetoric, that is, rhetorical communication theory.
Rhetorical communication theory views communication as the practical art of discourse, and although many people believe that rhetoric is discourse designed to persuade a public audience, rhetoric is any development of a message to a particular audience in a particular context or situation (Craig, 1999). At the center of rhetorical theory is what Bitzer (1968) called the rhetorical situation. The rhetorical situation is made up of the exigence, or reason for the rhetorical message, the audience for the message, and the purpose of the message. The rhetorical situation is also influenced by the rhetor and his or her credibility and power in the situation, the audience and their power in the situation, the construction of the discourse or message itself, and the larger contexts (historical, cultural, social) in which the situation is set (Bitzer, 1968). Some communication scholars view the setting, or context, in which people communicate as playing a vital role in how they communicate and how the communication influences the rhetorical situation (Borchers, 2006; Hymes, 1964).

In addition to the rhetorical situation, there are three primary strategies used in rhetorical communication theory. These strategies are based in Aristotle’s *Rhetoric* on the structures used in argumentation: logos, ethos, and pathos appeals (Aristotle, trans.1984). Logos appeals are based in fact, common sense, or research. Ethos appeals are appeals that attempt to develop the credibility of the rhetor or the message. Finally, pathos appeals are appeals to the audience’s emotions, sympathies, or imagination. In classic rhetorical structures, these appeals can work separately or in tandem to persuade an audience. In rhetorical communication theory, the definition of these classic rhetorical terms is dependent on the rhetorical situation under study. For example, figure 2 attempts to apply rhetorical communication theory to the process of classroom grading:
Figure 2:

**Grades as Rhetorical Communication**

Rhetorical communication theorists generally agree that rhetorical communication has four characteristics: rhetoric relies on symbols, rhetoric involves an audience, rhetoric communicates ideas, and rhetorical theory is analytic and inventive (Craig, 1999). However, there are also areas of disagreement among rhetorical theorists, and these include whether or not rhetoric is limited to persuasion or if it includes informational discourse, and if rhetoric must be intentional (Craig, 1999). For the purposes of this research study, rhetorical communication included intentional rhetorical communication and any communication that is perceived by the intended audience as persuasive, as well as informational discourse.

In applying rhetorical communication theory to classroom grading practices, the construction of the grade by the classroom teacher is the construction of a message about classroom achievement through a symbol — the grade. However, as Borchers (2006) notes,
symbols, by their natures, are arbitrary and subjective. The meaning of the symbol (the grade) is assembled by the audience (the student and parents) and can be influenced by both intentional and unintentional communication by the creator of the communication (Borchers, 2006). In fact, when grading is viewed from a rhetorical perspective, the teacher’s intention in the construction of the message (the grade) is not necessarily as important as the influence of the grade on the student (Borchers, 2006).

**Grading as rhetorical transaction.** An omnibus grade is the summation of course achievement. Typically these grades are given at the end of a grading period and are made up of the many assessments given over the course of that grading period. In order to examine the omnibus grade as communication, the many variables within the communicative situation of grading needed to be examined. Since it was important to explore both the intention and the interpretation of the grade, a rhetorical communication theory was chosen as a theoretical framework. This section of the study will develop the connections between grading and rhetorical communication in order to support the discussion of methodology that follows in the third chapter.

In the classic rhetorical tradition, rhetoric is formed by the interaction of three elements: the rhetor or speaker, the purpose of the rhetoric, and the audience for the rhetoric. According to Aristotle, these three elements must be taken into account by the rhetor in order to shape his/her rhetoric or persuasion. Often, the interaction of these elements is depicted as the rhetorical triangle (Fig. 3):
Modern rhetoricians expand the constructs of the rhetorical triangle for use in communications theory, and focus on the communicative processes active between the three points of the triangle (Black, 1978). The rhetorical transaction identified by Black (1978) is also made up of the interaction of three elements: rhetorical strategies, rhetorical situations, and audience effects. Rhetorical strategies are the characteristics of the communication developed by the rhetor, or creator, of the message. The rhetorical situations are the extra-linguistic aspects of the communication, and are made up of variables like the relationship between the rhetor and the audience, past experiences with the issue at hand, or the influence of organizational norms on the communication (Black, 1978). Finally, the interpretation of the message as well as the influence on the audience — the responses in the communicative situation — are the audience effects (Black, 1978). The synthesis of these three elements make up the rhetorical transaction (Fig. 4).
The communicative process of grading can be viewed as a rhetorical transaction. The purpose for the message is to sum up course achievement. The teacher is the creator, or inventor, of the message. The teacher constructs the grade as a message to the audience, the student and parents in this case. The audience, students and parents, interpret and respond to the grade, and may or may not interpret the grade in the manner in which it was intended. Finally, there are a number of variables that make up the rhetorical situations in any classroom grade. The teacher’s history with grading, the student’s history with grading, the parent’s experiences of school, the credibility of the teacher to the student, and the credibility of the student to the teacher can all influence the rhetorical transaction. In the case of classroom grading, the vital areas for examination are the teacher as inventor of the grade, the interpretation of the grade by the audience, and the relationships that make up the rhetorical situations.

The teacher as inventor. The teacher constructs, or invents, the omnibus grade at the end of each grading period. The grade is intended to reflect student achievement in a course. Research has found that teachers often use “hodgepodge” methods of inventing grades (Brookhart, 1998/2004; Cox, 2011; Cross & Frary, 1999). In fact, although the term
*construction* is often used to discuss how grades are determined, perhaps the rhetorical communication term *invention* is more appropriate here. Teachers use a variety of methods to determine a course grade, and those subjective choices of what elements to include in the omnibus grade (academic and non-academic) and in what percentages are idiosyncratic to each teacher. Teachers invent the message to communicate student achievement in a course, and that invention may hold multiple meanings.

In addition to communicating information on the student’s academic achievement in a course, teachers often admit to communicating other messages within a grade (Cox, 2011; Cross & Frary, 1999). Most often, teachers identify a desire to motivate students through grades (Brookhart, 1997; Cox, 2011; Cross & Frary, 1999). Therefore, the invention of a classroom grade is a more complicated message than it may appear to be on the surface.

**The student and parent as audience.** There are many stakeholders for a classroom grade, but for the purposes of this research the audience for the grade is the student and his/her parents. The interpretation of the grade is a vital aspect of the rhetorical transaction. Although classic rhetorical theory focused on the creation of the rhetoric rather than on the interpretation of the rhetoric, in modern rhetorical theory, the interpretation of the message is as important as the invention of the message (Black, 1978; Borchers, 2007). The invention of the message is guided by intention on the part of the teacher, in the case of grading. The interpretation of the message, regardless of intention, lies solely with the audience — the student and parents.

Although there are many variables that can influence the interpretation of a message, the most important variable in terms of rhetorical theory is the credibility of the rhetor. The credibility of the rhetor is also known as ethos. Ethos is often translated as an individual’s character, but that definition could be refined to include the individual’s history and moral character (Black, 1978).
Ethos, then, “belongs” to the audience since the credibility of the rhetor is decided by the audience. Therefore, the credibility of the grade and the teacher is determined by the student and his/her parents. In order to understand the rhetorical transaction, the interpretation of the grade is just as important as the invention of the grade.

**The rhetorical situations.** The rhetorical transaction between the rhetor and the audience is influenced by the many rhetorical situations that surround the linguistic aspects of the communication (Black, 1978). These rhetorical situations are variables that are part of any communication, and include variables such as personal history with the subject, the relationship between the rhetor and the audience, and the norms and values of the community in which the communication is taking place. Although the majority of the theoretical framing for this research study uses Black’s (1978) theory of the rhetorical transaction, the seminal work of Bitzer (1968) on the rhetorical situation is more explicit than Black’s.

The rhetorical situation is made up of the interaction of the many social contexts between and around the rhetor and the audience (Bitzer, 1968; Black, 1978). In his explanation of the theory of the rhetorical situation, Bitzer (1968) lists a series of questions for consideration in defining the many contexts and variables in the rhetorical situation. Those questions are relevant to the exploration of the rhetorical situation of grading: 1) Who are the individuals involved in the communication?; 2) What are the relationships between those individuals?; 3) What are the differences in power between the individuals in the communicative situation?; 4) Where is the communication taking place?; 5) What is the method of communication?; 6) What are the norms and expectations surrounding the communication? (Bitzer, 1968). The rhetorical situations of a classroom grade influence the communication between the teacher and the student and parents. The personal history of each individual as well as the relationships between the individuals,
influence the invention as well as the interpretation of the grade. The classroom environment, the organizational environment of the school and district, and the norms and values of the local community can all influence the rhetorical transaction.

The three constituents of the rhetorical transaction do not operate independently, and so any examination of the rhetorical transaction must apply to the whole transaction rather than to its separate parts (Black, 1978). Rhetorical transactions are not stable entities that are easily defined and they occur within particular contexts (classrooms, schools, communities). The construction of the grade is influenced by the individual teacher’s values and beliefs, as well as by the classroom, school, and community contexts. The assessment of truth in the rhetorical message is determined by the community involved in the rhetorical situation (Borchers, 2006), so the assessment of truth in a course grade is determined by the communities formed in the intersections between teacher, student, parent, and school.

**Summation**

Grades are a form of communication between teachers and students, as well as a form of communication to a variety of other stakeholders. Grades are constructed by teachers with specific purposes in mind and for a variety of audiences for a variety of purposes. This research study examined how grades communicate; therefore, the best theoretical framework for this research study was a communication theory that supported the examination of the complex variables and constructs in classroom grading.

The use of rhetorical communication theory as a lens through which to view classroom grading allowed for analysis of the construction of the message as well as the intention and interpretation of those messages. Since classroom grading is also influenced by the power and credibility of the teacher, as well as the larger social contexts in which the communication takes
place, rhetorical communication theory allowed for an analysis of the many variables studied in this research project.
Chapter 2: Literature Review

The literature on classroom grading practices covers a wide range of topics, from the specific uses of formative assessments to guide instruction to the use of high-stakes standardized tests for school accountability. This review of literature will focus on four major topics related to the use of classroom grades as communication: traditions and purposes for classroom grades; the methods teachers use to construct grades; the differences between the grading practices recommended by educational researchers and the actual practices of classroom teachers; and the interpretation of the grades by various stakeholders (audiences). Although the literature presents these topics in a variety of contexts, this literature review will primarily focus on grading practices in the United States at the high school level. However, several research studies from Canada, Great Britain, France, and Australia were included due to the relevance of the study to the topic or the scale of the research (Brown & Hirschfeld, 2008; Tierney, Simon, & Charland, 2011; Firestone, Fitz, & Broadfoot, 1999).

The first section of the literature review will include the traditions of grading in the United States and some current theories of classroom assessment and grading. The section on teachers’ construction of grades will begin with a review of the literature on teachers’ current grading practices, followed by a review of literature on teachers’ beliefs and values around grading, and end with a comparison between actual classroom practice and the practices recommended by educational researchers. Next, the literature review will explore the topic of the interpretation of grades, with a focus on how students interpret and can be influenced by classroom grades. Finally, a review of the methodology used in many of these research studies will conclude with an advocacy for qualitative research placing the communication of classroom grades into a specific context that allows for the exploration of the complex
interactions between the teacher, the message (the grade), and the audience (the student and other stakeholders).

Assessment and Grading

The process of evaluating students is complex, requiring human judgments characterized by various levels of subjectivity and having potentially important consequences for the stakeholders (Barnes, 1985). In addition, the summative evaluation of a classroom grade is created through a series of smaller evaluations of student achievement that are then summarized in the final grade. Although often used interchangeably, assessment and grading are not the same, rather they are related. For this paper, the term assessment will refer to any process in which the teacher (or the student if it is a self-evaluation or peer evaluation) is evaluating a student's performance on a given classroom task. Brookhart (1997) identifies classroom assessment as relying on three phases: (a) goals, (b) instructional activities, and (c) assessment. Although assessment is often seen as the last stage in teaching practice, current educational theory emphasizes the importance of assessment in the development of instructional activities as well as the evaluation of those activities (Ames, 1992; Brookhart, 1997; Stiggins, Arter, Chappuis, & Chappuis, 2006). Therefore, the importance of assessment can also be understood by its function in the feedback loop of teaching; assessments for learning, which are formative assessments and are used to guide further instruction or identify needs, or of learning, which are summative assessments and are typically to evaluate the learning achievement at the end of a unit or lesson (Black & Wiliam, 1998; Stiggins, et al., 2006).

Grading or grade reporting is the summation of the achievement in a course over a specified period of time, usually quarters or semesters. This summative grade is also called an omnibus grade (Marzano, 2010). The construction of grades by teachers is made up of any
number of classroom assessments and assessment types (pencil and paper exams, essays, presentations, etc.); and the construction of the grade can be made in any number of ways. In fact, since each teacher may have a different philosophy of assessment and combination of elements for a grade, an individual teacher’s grade can truly only be interpreted within the specific grading rules constructed by that individual teacher (Marzano, 2010). This difficulty in the interpretation of classroom grades has led to a call by some educational reformers for the elimination of grades in order to allow schools to focus on teaching and learning rather than evaluation (Kohn, 1999). However, grades are still the primary method of communication about student achievement to the many stakeholders involved, including students, parents, colleges, and employers (Marzano, 2010). The American public education system has a long tradition of grades as the primary communication about student achievement, and changes to that system have been slow to take hold.

**Grading as tradition.** The current construct of classroom grades is based on the historical evaluation of students by their instructors to determine academic or scholarly achievement. In the past these evaluations were local, and were intended primarily for the student in order to verify that he reached a level of knowledge in his field that granted him certain social privileges or certifications. In European colleges and universities, these evaluations were oral examinations, often given in a public space, and administered by the instructor at the end of a year or course of study. The standards for evaluating students were in the purview of the instructor and the headmaster or dean of the school. Early documents indicate that instructors used a mix of knowledge and behavior standards, including moral standards (Durum, 1993; Schneider & Hutt, 2013).
Over time, these evaluations also were used to rank students for scholarly positions or for other purposes. At Cambridge, students were given lengthy oral examinations that took the form of scholarly tournaments, with the winner being given a lifetime stipend from Cambridge and a teaching position. This ranking of students became the second major purpose of evaluation in education. Ranking students would indicate their level of achievement against each other in order to sort students by their knowledge and expertise in a particular field or discipline. This would, most likely, be for the purposes of work, however, this also had a purpose for the student in that he would evaluate his own standing in reference to the others in his class, perhaps motivating him to work harder. The uses for these evaluations would still be considered local, since these evaluations were made within the colleges and schools that the students attended. Students were evaluated against their local classmates.

In the United States, the grading practices of colleges typically followed those of the European colleges, particularly the colleges in England. The most widely practiced evaluations were oral examinations used to rank students within the college system. Not all colleges were using the same methods of ranking and evaluating students. In the 1830s, Harvard College used a marking scale of 20, while the philosophy and mathematics professors at the College of William and Mary were using a marking scale of 100 (Durm, 1993). In 1851, the University of Michigan was using a pass/fail system, but by 1860 the university adopted a 100 point scale. Harvard College appears to be the first college to use letter grades, although at the time those letter grades were linked to a five-level scale of achievement based on numbers. The college used Class I to designate a high level of academic achievement, while a Class V indicated the student failed to pass (Durm, 1993). Notes on the pages of a Harvard Dean’s gradebook identifies the use of a B for Class II students (Durm, 1993). In 1897, Mt. Holyoke College formally adopts a letter grade
system, which most students and teachers would recognize today, although a failing grade at Mt. Holyoke was anything below a 75 average (Durm, 1993).

Public grammar schools, or common schools, tended to use the grading systems of local colleges as models, since many students who moved on to colleges remained within local areas, so there were regional differences in the grading systems of American public schools (Schneider & Hutt, 2013). In the mid-nineteenth century, Horace Mann implemented monthly written exams and report cards in Massachusetts Common Schools, in part to organize information for the schools’ outside stakeholders (Schneider & Hutt, 2013). Although many schools throughout the United States implemented report cards, most schools continued to use a local system of grading, which may include letter grades, numerical grades, or descriptive narrative reports that were given either monthly or yearly (Schneider & Hutt, 2013).

At the turn of the twentieth century, with increasing enrollment in American public schools, schools became large institutions that required more efficient management and organization (Schneider & Hutt, 2013). In addition, more students were moving from public schools to colleges, and those colleges were not always local. The needs for greater organization and efficiency, as well as clear communication between schools and colleges, drove standardization efforts in the American public schools (Schneider & Hutt, 2013). Standardizing grading procedures became one of the mechanisms intended to ensure clear communication of student achievement. Rather than being primarily concerned with ranking students within a particular school, grades were seen as vital for communicating individual student achievement across schools and regions. However, as early as 1917, one commentator noted that although reports cards were standardized, the larger problem was now to “…establish a method whereby
grades assigned by one teacher can be intelligently compared with those by another, and all brought to a common standard” (Weld as cited in Scheider & Hutt, 2013).

Finally, one of the most important influences on the development of grading policy in American public schools was the development of tests to measure IQ (Schneider & Hutt, 2013). Educational reformers of the 1930s and 1940s believed that if intelligence could be measured and reported by a test, then a student’s academic achievement could be similarly measured and reported (Schneider & Hutt, 2013). This objective system led to the use of the statistical Bell Curve in student grading, where student scores are compared to each other (normative grading) and the statistical majority, making up the center of the bell curve, receive the average grade of C. Student scores that were on either end of the statistical majority, received grades that were compared to the average scores; so that students who performed above the average were given grades of A or B, while students who performed below average received grades of D or F. This normative, statistical system was viewed by educational reformers as more accurate and reliable since it was grounded in scientific measurements (Schneider & Hutt, 2013). Although many teachers disliked the new scientific system of grading, many teachers implemented the methods in order to be seen as more professional and objective (Schneider & Hutt, 2013). Until the 1970s, standardized testing was used to evaluate institutions, while teachers’ grades were used to evaluate individual students (Brookhart, 2011). The standards reform movement that developed out of the report, “A Nation at Risk,” increased the use of standardized testing for certifying educational attainment, but each state developed its own education standards and levels for achievement (Brookhart, 2011). Many states instituted high school exit examinations rather than relying on teachers’ grades to certify that a student earned a high school diploma.
In the later twentieth century, there were several educational reforms designed to increase the authentic nature of classroom assessments (Tierney, 2013). Assessment reforms encouraged classroom teachers to use student portfolios or other assessment products to determine students’ academic achievement. The purpose of these reforms for authentic assessment was to allow teachers and students to engage in more complex and interconnected learning activities that would then be reflected in more complex and authentic assessments (Tierney, 2013; Wiggins, 1998). In addition, there was a movement to change grading practices in order to reflect the more complex nature of the performance-based assessments. These more narrative report cards included detailed descriptions written by classroom teachers on students’ grade level or course achievement (Wiggins, 1998). Rather than attempt to contain the large amount of assessment information for a grading period in a single score or letter grade, these narrative report cards attempted to give students and parents a more holistic evaluation of academic achievement (Francis, 2000).

Interestingly, teachers were more willing to accept new assessment practices, but have not embraced changes in grading practices (Cizek, 2000). Education researchers continue to call for authentic assessment and grading practices (Brookhart, 2004; Marzano, 2010; Stiggins et al., 2006; Wiggins & McTighe, 2005), but acknowledge that the traditions of grading practices and the current educational policy of accountability makes changing school grading practices difficult. As one researcher notes, reform in education “is stronger on political vision than on practical propositions” (Gore as cited in Reynolds and Trehan, 2000).

Construction of a Classroom Grade

Although the United States has centuries of tradition and change in its educational system, teacher grades are still the most important summative assessments for students
(Brookhart, 2013). The use of the term assessment in education comes from the usage of the same term in medicine, where a doctor would gather information — observations, tests, patient report — in order to interpret that information and determine treatment (Cizek, 2000). Following the assessment, the process of evaluation determines the worth or quality of the assessment, and the process of evaluation, as well as the denotation of the term, has a quality of judgment or decision (Cizek, 2000). Grades, therefore, are evaluations of student performance through assessments. Those assessments are compared — judged — against some standards about what is expected performance in the course or class (Cizek, 2000). Each teacher in each classroom must determine the data s/he will use to assess student performance, as well as determining what standards will be used to evaluate that performance. In a high school eight-week grading period, there may be as many as twenty-five or thirty formal assessments that must be evaluated and then summarized into a single omnibus grade at the end of the quarter. This section of the literature review will examine the construction of classroom grades.

A Hodge-Podge. Research on teacher grading practices was common in the 1980s and 1990s, and a common theme in assessment research was the difference between grading practices as recommended by educational researchers and the actual grading practices in the classroom (Brookhart, 1993; Cizek, Fitzgerald, & Rachor, 1996; Cross & Frary, 1999). Although the majority of the research on classroom grading practices is now three decades old, recent research (Cox, 2011; Randall & Engelhard, 2010) supports earlier research that identified a lack of consistent grading practices within school districts, as well as within academic departments. Despite the current educational reforms for standards-based grading and the recommendation to remove non-academic factors from classroom grades, many teachers continue to have differences in grading philosophies and used a mix of academic achievement as
well as nonacademic factors to create a grade (Cox, 2011; Randall & Engelhard, 2010). The description for these idiosyncratic grading practices was coined by Brookhart (1991) as a “hodgepodge grade of attitude, effort, and achievement” (p. 54).

**Academic and Non-Academic Factors.** Typically, the most contentious issue in grading practices is the use of non-academic factors in constructing student grades. Non-academic factors such as effort, homework completion, and class participation are frequently factored into elementary school grades, but are also often included in high school grades (Brookhart, 2004; Cox, 2011). At the high school level, tests are often the major factor used in the construction of grades, but effort and ability are also commonly considered (Brookhart, 2004; Cox, 2011; Stiggins et al, 1989). Research also indicates differences in assessments and grading across content areas. For example, science and math teachers use more objective tests, writing teachers use structured performance assessments, and speech teachers used spontaneous performance assessments (Brookhart, 2004).

In addition to differences in grading practices among teachers and content areas, research also indicates that student ability can play a role in how effort is factored into a grade. Teachers are more likely to give high ability students lower grades if the teacher believes the student is not working up to his/her potential or had poor work habits (Brookhart, 1994; 1997). Conversely, if a lower ability student is perceived as working hard, teachers were more likely to factor that in to his/her grade in order to give the student a “boost” and bring a borderline grade up to passing (Brookhart, 1994, 2004; Cizek et al, 2000; Randall & Engelhard, 2010).

Even though there have been reforms in classroom assessment methods, there has been little change in classroom grading. This is despite an increase in the implementation of standards-based grading methods in American school districts (Cox, 2011; Stiggins et al., 2006).
There are few research studies that examine the topic of grading rather than the topic of assessment in organizational change. One of the few research studies on teacher collaboration during a major change in grading practices found that teacher teams struggled to engage in productive, collaborative discourse around grading practices (Kain, 1997). The researchers noted over the course of the study that the most powerful forces influencing teachers’ conception and construction of grades were school culture and traditional grading practices (Kain, 1997). Although other school-wide decisions were made over the course of the year, teacher teams were unable to productively collaborate on a new grading system. The research findings suggest that a lack of structural support and time for collaboration, as well as teachers’ resistance to changing their traditional conceptions of grading, contributed to the lack of progress in developing a site-based grading system (Kain, 1997). A more recent case study (Cox, 2011) had similar findings, indicating that although teachers were willing to engage in dialog about grading practices, they also wanted to retain professional discretion. Teachers viewed standardization of grading practices with ambivalence, since they view the standardization as interfering in the individual decisions they make in the classroom (Cox, 2011; McMillan & Nash, 2000). Consistent with the other literature on teacher grading practices, these studies also referenced data from teacher interviews on the importance of non-academic factors to teachers, despite the standards-based reform to remove non-academic factors from the construction of grades.

The lack of collaboration and communication within teacher communities seems to be a consistent theme within the literature on teacher construction of grades. Several studies examining teacher attitudes towards grades and grading indicate that teachers view grading as largely private, and are reluctant to discuss grading practices with other teachers (Cizek et al., 1996; Cox, 2011; Henstrand, 2006; Kain, 1997; McMillan & Nash, 2000). This tendency for
privacy may make classroom grading reform more difficult since there is little communication between teachers about the important beliefs and values that underlie grading decisions.

**Believing in Fairness and Valuing Relationships**

While grading practices are influenced by institutional norms and policies, the literature reviewed on teachers’ grading practices found that individual teacher beliefs and values have a substantial influence on grade construction (Brookhart, 1997, 2004; McMillan & Nash, 2000; Zoeckler, 2007). Through both quantitative and qualitative research studies, teachers indicate that they view the purpose of grading as more complex than the simple reporting of academic information (Brookhart, 2013; Cox, 2011; Tichenor & Tichenor, 2005). Overall, teachers try to use grades to communicate the quality of each student’s performance as a student in the course (Manke & Loyd, 1991).

Teachers are concerned about issues of fairness and about using grades to communicate about the overall quality of a student’s performance in the classroom (Brookhart, 1994, 2004, 2013; Stiggins et al., 1989; Tierney et al., 2011). The literature reviewed for this study indicates that teachers tend to value relationships with individual students and have a “success orientation” for students when constructing grades (Brookhart, 2013; Cizek et al., 1996; Kalthoff, 2013). In fact, although many educational researchers describe teacher grading practices as “hodge-podge” (Brookhart, 1993; Cox, 2011), it may be that teachers are attempting to shape information about the entirety of a student’s performance through a thoughtful process (Zoeckler, 2007). Teachers may view their use of idiosyncratic grade construction to construct communication that is about idiosyncratic individuals.


**Teacher Conceptions of the Purposes of Grading**

Teachers’ views of the purposes of assessment are varied. The literature on how teachers conceive or conceptualize assessment indicates that there are four purposes for assessment: (a) assessment improves teaching and learning; (b) assessments makes students accountable, (c) assessment makes schools and teachers accountable, and (d) assessment is irrelevant to education (Brown & Hirschfeld, 2008). The belief that assessment makes students accountable would connect to literature that indicates that teachers, as well as students, view grades as a form of “payment” for academic work (Brookhart, 1993, 2004), and teachers often express the concept of grades as what students “earn” (Brookhart, 1993; Cizek et al., 1996; Cross & Frary, 1999). This would also be relevant when teachers express a belief that nonacademic factors like effort are important to grading since student effort deserves some sort of reward so that the student continues to put forth effort in the classroom.

Overall, teachers try to use grades to communicate the quality of each student’s performance as a student in the course, and that concept of student performance includes non-academic factors like effort (Manke & Loyd, 1991). This idea of the importance of effort and engaging fully in the learning environment would be supported by constructivist theories of learning that suggest that involved, engaged students are more likely to learn (McMillan, 2001). Although assessing effort is difficult, most teachers note that they do attempt to reward what effort they can quantify — completed homework, attention in class, improvement over the school year (Howley, Kusimo, & Parrott, 2001). Some research supports teachers’ belief that work ethic and good academic habits can be a factor in academic success in college since high school grades use multiple sources of information about student achievement in the classroom (Geirser, 2007; Honken & Ralson, 2013).
Grades can also function as motivators and for classroom management (Brookhart, 2004; Cox, 2011). Teachers view grading as complex and context bound (Brookhart, 1994; Cizek et al., 1996; Howley et al., 2001). Teachers tend to see grades as being connected to individual students and therefore the information that a teacher has on the individual student that is connected to the student’s family or home situation, the student’s ability, and the student’s effort to improve himself/her self — all of these variables combine into the context in which that student is graded. For some students, teachers intend to use grades for motivation since the student tends to respond to grades as motivational. For example, students who are struggling and working below grade level, effort and improvement may be important as motivators (Brookhart, 2004; Howley et al., 2001). Teachers identify the underlying philosophy of their construction of grades as being based in a desire to be fair to each individual student — and teachers view fairness as not necessarily being the same for all students (Briscoe, 1991; Brookhart, 1993, 2004, 2013; Manke & Loyd, 1991; Stiggins et al., 1989; Tierney et al., 2011).

A primary element of the concept of fairness for teachers, then, are expectations that students will put forth effort to learn and perform to the best of their ability since that is the foundation of the grade (Zoeckler, 2007). Overall, teachers tend to see grades as multifaceted and having multiple purposes, therefore, they may be resistant to view grades as merely communicating academic achievement — they want the grade to communicate a more rounded view of the student as an individual with individual strengths and weaknesses, motivations and work ethic (Brookhart, 1997/2004; Cizek, 2000; Cizek et al., 1996; Tuten, 2007). Ultimately, teachers want students to learn and view assessment and grading as part of the learning process, not just simple reporting of student achievement (McMillan & Nash, 2000).
Valuing relationships. Teachers tend to see their interactions with individual students as vital to teaching and learning, and one of the most consistent messages from teachers about tensions surrounding assessment and grading is that some educational reforms may harm students (Gordon & Fay, 2010; Tierney et al, 2011; Zoeckler, 2007). As educators, teachers view a vital aspect of their relationship with students as protecting their students from harm (Pope et al., 2009). Multiple research studies indicate that teachers have a “success orientation” (Cizek et al., 1996) toward student grades, and will frequently make decisions during grade construction to boost student grades (Brookhart, 2013; Cizek et al., 1996; Gordon & Fay, 2010; Kalthoff, 2013). For example, teachers are likely to drop a student’s lowest score before final grade calculations are made, since they view these low scores as outliers that do not reflect a student’s ability (Cizek et al., 1996). By this logic, a high score would also be an outlier that would not reflect a student’s stable understanding or skill, however, the literature on grading construction indicates that teachers are very unlikely to drop a high score (Cizek et al., 1996; Gordon & Fay, 2010; Tierney et al., 2011). One study indicated that teachers tended to read and re-read student essays, looking for reasons to pass the student, and for high-stakes assessments would go so far as to re-adjust scoring rubrics in order to pass students (Kalthoff, 2013).

Teachers view some reforms, including those related to grading, as potentially undermining the close relationships and joint negotiations between teacher and student that are ongoing in the classroom (Day, 2002; Pope et al., 2009). Therefore, they do not see standardization of practices as positive, since they view this standardization as interfering in the individual decisions that they make in the classroom (McMillan & Nash, 2000). Current recommendations by measurement researchers do not take into account the teacher’s need to motivate students and manage the classroom environment (Brookhart, 2013; Cizek, 2000). Even
for teachers who understand and base their grading on standard grading procedures, these teachers also want to include individual exceptions when warranted (Gordon & Fay, 2010).

**Teacher Tensions: Judge and Advocate**

One of the consistent themes in the literature on teachers’ attitudes toward grading is that teachers identify powerful tensions around grades, the process of grading, and the construction of the omnibus grade (Allen, 2005; Barnes, 1985; Brookhart, 2004; Kain, 1997; Tichenor & Tichenor, 2005; Tierney et al., 2011). Teachers view the processes of grading as a major source of anxiety, frustration, and difficulty (Kain, 1997). Some researchers hypothesize that the tensions that teachers experience around grading are because grading interferes with what teachers believe to be their primary job -- to support students' growth and understanding (Brookhart, 2004; Zoeckler, 2007). However, another possible source of teacher tension may be the due to the conflicts between the needs of the institution (the school) and the individual needs of the students (Pope et al., 2009; Tichenor & Tichenor, 2005).

The educational policies of institutions can contribute to teachers' tensions and ethical dilemmas around grading when the teacher perceives that the policies are harmful or damaging to individual students (Pope et al., 2009). Differences in grade construction may be due to a teacher who is trying to do what is best for a student (Pope et al., 2009). For example, several studies indicated teachers’ concern over the use of standardized tests or criteria that they believed were too difficult for students (Brookhart, 2013; Pope et al., 2009; Tierney et al., 2011). In particular, teachers identified struggling with institutional policies that conflicted with students’ needs for affirmation (Barnes, 1985; Pope et al., 2009). Overall, teachers tend to put student needs above institutional requirements. However, the institutional requirements are meant to meet the needs of stakeholders other than students — parents, administrators, educational
researchers, legislators, etc. (Pope et al, 2009) In addition, teachers view a vital aspect of their professionalism as grounded in their patience and caring for students (Tichenor & Tichenor, 2005). Institutional reforms that do not allow teachers to meet the needs of individual students may challenge teachers’ commitment to put the needs of students before the needs of the institution (Tichenor & Tichenor, 2005).

As the literature indicates, teachers have a success orientation for students that tends to demonstrate itself in grading practices that support student success and obtaining good grades. These grading practices tend to utilize non-academic factors in grades, as well as influencing other aspects of the construction of grades or evaluation of assessments (Brookhart, 2013; Cizek et al., 1996; Gordon & Fay, 2010; Kalthoff, 2013). These practices reflect one of the primary tensions that teachers experience around the subject of grading, the tension between the simultaneous professional roles of the teacher as both judge and advocate (Brookhart, 1993, 2013; Zoeckler, 2007). When teachers consider the consequences of grades for students, they will tend to construct grades which value their role as advocate rather than that of judge (Brookhart, 1993, 2013; McMillan & Nash, 2000). It is this tension, and the resulting tendency for teachers to construct grades that honor their roles as student advocates, that may lead to what educational researchers identify as the unreliability of classroom grades (Cross & Frary, 1999; Cizek et al., 1996; Truog & Friedman, 1996; Stiggins et al, 2006).

**Best Practices vs. Actual Practices**

The research on teacher grading practices consistently reveals that individual teachers use individual methods of construction for student grades, and that the construction methods can change based on the individual student or the level or course taught (Brookhart, 2004; Cross & Frary, 1999; Cizek et al., 1996; Cox, 2011; Stiggins et al., 1989). Therefore, an individual
teacher’s grade is only truly interpretable within the context of the scheme constructed by that
teacher (Marzano, 2010). This difficulty in interpreting teacher grades outside of the classroom
context and construction scheme created by the teacher has been an ongoing tension between
educational researchers and classroom teachers for over a hundred years. The tone set by
educational researchers was firmly established in 1913 when a study of teacher grades by
Finkelstein labeled inconsistent grading practices by teachers a pernicious “injustice” perpetrated
on students and parents (Tierney, 2013). This section of the literature review will explore some
of the recommendations by researchers on classroom grading practices, as well as the hypotheses
by educational measurement researchers on why there has been so little change in classroom
assessment and grading practices despite one hundred years of research and calls for reform.

**Recommendations.** Educational researchers who specialize in measurement
overwhelmingly recommend that grades in academic subjects should be based exclusively on
Cross & Frary, 1999; Marzano, 2010; Stiggins et al., 2006). They identify factors like growth,
ability, effort, behavior, and other non-academic factors as polluting, or confounding the
interpretation of the message of the grade (Allen, 2005; Cox, 2011; Cizek et al., 1996; Cross &
Frary, 1999; Marzano, 2010; Stiggins et al., 2006). Grades very so widely within and among
school districts, that they are “almost meaningless” (Marzano, 2000). Due to the variability in the
method of grade construction, educational researchers view grades as of limited value to
stakeholders (Allen, 2005). Since the single omnibus grade does not reveal the construction
method used by the teacher — the elements of the hodgepodge of academic and non-academic
factors — researchers indicate that this makes the grades biased, unreliable and therefore invalid
(Allen, 2005).
Educational measurement specialists note that the lack of validity and reliability in classroom grades reduces the communicative information of the grade (Cizek et al., 1996; Marzano, 2010; Stiggins et al., 2006). In addition, the hodgepodge methods used by individual teachers also reduces the generalizability of classroom grades for institutional and external stakeholders since the grades themselves are constructed with varying methods within and among each classroom (Allen, 2005). If a grade has to communicate information to multiple stakeholders, then the grade has to have shared and accurate meaning, (Allen 2005). Interested stakeholders, particularly those stakeholders distant from the classroom context, may have difficulty confidently interpreting a student’s true academic achievement from this grading method (Cizek et al., 1996). With hodgepodge construction methods, grades may measure how well as student measures up to an individual teacher’s expectations rather than measuring academic achievement in the subject (Allen, 2005).

Interestingly, there are controversies in how researchers view teacher judgment of student achievement. First, that teachers make more reliable, global judgments of student achievement since grades are constructed over time with multiple pieces of assessment information; or that teachers cannot judge student achievement accurately since they do not separate academic achievement from non-academic factors like effort and ability (Brookhart, 2013). However, the majority of research reflects the latter view rather than the former. Educational measurement specialists have been exhorting teachers to make changes in their grading practices for over one hundred years, and if the tones they use to discuss teacher resistance to these recommendations are any indication, they are very frustrated by the lack of change in the classroom (Allen, 2005; Barnes, 1985; Cizek et al., 1996; Cross & Frary, 1999;
Pope et al., 2009; Randall & Engelhard, 2010). Classroom teachers have been more willing to embrace changes in assessment methods, but not evaluation and grading practices (Cizek 2000).

**Teacher Resistance: Some Hypotheses**

One of the leading researchers into classroom assessment and grading practices, Susan Brookhart, describes the tone of many of the research studies on teacher grading as “what’s wrong with teachers” (Brookhart, 2011). The hypotheses most often put forward about teacher resistance to changing grading practices tend to focus on teacher flaws or lack of knowledge. The primary hypotheses are: 1) a lack of assessment training (Brookhart, 1993, 1994; Cizek et al., 1996; Cross & Frary, 1999; Pope et al, 2009; Randall & Engelhard, 2010; Stiggins et al., 1989); 2) Lack of understanding of assessment purposes (Allen, 2005; Cizek et al., 1996; Cross & Frary, 1999; Black & Wiliam, 1998; Marzano, 2010; Stiggins et al., 2006); and tradition or resistance to change (Brookhart, 1993; Cross & Frary, 1999; Cox, 2011; Stiggins et al., 2006). In addition to these hypotheses, researchers also note that teachers express awareness of social pressures to include non-academic factors in grades in order to boost student achievement (Brookhart, 2011; Cross & Frary, 1999; Troug & Friedman, 1996; Weis & Fine, 2012).

Initially, the slow pace of grading reform was most often explained by a lack of teacher education in assessment (Brookhart, 1993, 1994; Cizek et al., 1996; Cross & Frary, 1999; Pope et al, 2009; Randall & Engelhard, 2010; Stiggins et al., 1989); however, more recent research suggests that even when teachers are aware of best practices in grading, they often don't adhere to them (Brookhart, 2004; Cizek et al., 1996; Tierney et al., 2011). Some researchers noted that teachers viewed best practices in grading as a matter of opinion, and that often recommended best practices did not take some of the practical aspects of teaching into account (Brookhart, 2004, 2013; Stiggins et al., 1989). Overall, teachers expressed the belief that the theoretical work
of educational researchers did not take into account the complex contexts of the classroom (Brookhart, 2004, 2013; Cox, 2011; Tichenor & Tichenor, 2005). The classroom teacher views the context of the classroom as equally important to the consideration of grade construction (Allen, 2005; Brookhart, 1994, 2004, 2013; Cizek, 2000). Potentially, the difference of opinion between educational researchers and practicing teachers may be grounded in the view that measurement theory is the sole perspective to take when making recommendations about assessment. For measurement specialists, grading is considered a place for score pollution, which one researcher termed unethical, but teachers would say that many things they do are intended for protecting students (Pope et al, 2009).

Interestingly, the literature on the reliability of teacher grades as related to standardized tests indicates that teacher judgments of student academic achievement were generally accurate, although the studies indicated that teachers’ grades were less accurate in judging the academic achievement of lower ability students (Brookhart, 2011). Teacher judgment was strongest when grading was primarily on academic performance standards and including the full range of the academic standard rather than choosing among the indicators for the standard (Brookhart, 2011). Recently, the language used in relation to teachers’ grading practices are not as persistently negative, and most researchers admit that teachers do use academic achievement as the major factor in student grades, even if it is not the only factor (McMillan & Nash, 2000; Randall & Engelhard, 2010).

An additional reason for the tension between educational researchers and classroom teachers is the importance of grading and grades to the professional identity of teachers. Grading practices are often considered sacred to teachers, and are seen as private, professional decisions (Henstrnad, 2006; Kain, 1997; McMillan & Nash, 2000). If professionalism is defined by an
individual’s knowledge, autonomy, and responsibility, then the educational practice of grading is a vital aspect of a teacher’s sense of professionalism (Day, 2002). The reform movement for the standardization of grades, therefore, may threaten teachers’ sense of professionalism since the standards, the criteria, and the shape of the communication (grade) are being set outside their classrooms and outside their districts (Day, 2002).

The differences between the recommendations by educational researchers and classroom practice, despite decades of research and recommendations would suggest that classroom grading practices are difficult to change given the current methods of enacting change (Brookhart, 2013). Some researchers are now calling for educational measurement research to take a more practical view of grading that includes an acknowledgement of the tensions that teachers experience around grading (Brookhart, 2013; Cizek, 2000; Randall & Engelhard, 2010). For instance, rather than focusing on the development of new assessments, educational measurement specialists could study new reporting strategies that support classroom teachers in developing reliable communication about student achievement that also takes into consideration the complexity of the information currently held in a single omnibus score (Cizek, 2000).

Although the intention and the construction of the message are important for reliable communication, the reception and interpretation of the message by the intended audience are equally important. As noted earlier, modern communication theory places equal emphasis on the interpretation of the message as on the intention of the message (Craig, 1999). Therefore, an examination on the literature related to the interpretation of grades by students and parents is relevant to this study.
Interpretation of a Grade

Students use grades to assess their academic achievement, but studies also indicate that students use grades as they develop an understanding of themselves in relation to peers, school, and society (Pryor & Torrance, 2000). Parents use grades to evaluate how well their child is succeeding in school, as well as how well the school is meeting their child’s needs (Pryor & Torrance, 2000). Grades are an important method of communication between the school and the community, and it is taken for granted that the communication reflects truthfulness (Zoekler, 2007). If grades are constructed by teachers to communicate information about students’ achievement in the classroom, the audience, or stakeholders, for the message, must interpret those grades. The interpretation of the grade can be impacted by many variables, including the student’s past history with assessment and grading (Brookhart, 1997), the family’s socioeconomic status (Weis & Fine, 2012; Panofsky, 2003), or the interpretation of the personality of the teacher (Zoekler, 2007). Although there are many stakeholders for classroom grades, the focus of this literature review is on the most immediate stakeholders for classroom grades, the student and his/her parents.

Students: "That's my grade. That's me." Grades are the summation of a student’s achievement in the classroom. Assessments, both formative and summative, are the mechanisms by which achievement is measured. Students’ concepts of the purposes of assessment may have an impact on their academic achievement, particularly at the high school level where students are more aware of the impact of assessments and grades on their long-term goals (Brown & Hirschfeld, 2008; Cross & Frary, 1999: Thomas & Oldfather, 1997). As one student commented, "I am the grade. I did that. That's my grade. That's me" (Thomas & Oldfather, 1997, p. 108). Given the importance of classroom grades to students’ perception of themselves, as well as for
their future plans and careers, the literature reviewed for this section will focus on how students’
interpretation of grades and the grading process.

Students with different motivational approaches understand grades differently so even in
same class, the same grade might draw very different responses/be interpreted in different ways
by different students (Ames, 1992; Brookhart, 1993, 1994; Meyer, McClure, Walkey, Weir, and
McKenzie, 2009). There is a strong connection between academic achievement and self-reported
motivational beliefs and values (Ames, 1992; Brookhart, 1993; Meyer et al. 2009). Students who
identified their motivational orientation as **doing my best** completed a greater number of
secondary school credits and achieved higher grades, while students who identified their
motivational orientation as **doing just enough** successfully completed fewer secondary school
credits and had lower grades (Meyer et al., 2009). Rather than viewing assessments as a method
of evaluating their learning or areas for improvement, high school students tend to view the
importance of grades in terms of protecting their reputation, self-worth, and self-efficacy as
much as possible (Brookhart & Bronowicz, 2003).

Students’ experience with previous classroom assessment events in a class, and in other
classes, can influence their perception of the classroom assessment environment (Brookhart,
1997). As students interact with the instruction and the classroom assessment events, they
become aware of meeting or not meeting expectations and the consequences of those assessment
events. The regularity of these experiences develops into the pattern that is the classroom
assessment environment (Brookhart, 1997). The impact of the classroom environment and
classroom assessment event have a “group” nature, while individual students have differences in
their perceptions, beliefs in self-efficacy, willingness to put forth effort, and finally in
achievement levels (Bonesronning, 2004; Brookhart, 1997). Additionally, some research
indicates that student avoidance strategies in high school are partially due to teacher expectations based on success rather than attempts at success (Zoeckler, 2007). Students viewed effort as an important aspect of their learning process, and any classroom practices that discouraged effort tended to encourage self-defeating behaviors (Zoeckler, 2007). Research on the importance of student individual motivational approaches, and on the importance of the classroom environment, support the view of the complex contexts for classroom grading.

Students tend to have a positive view of the use of nonacademic factors in the construction of grades (Baron, 2000; Cross & Frary, 1999; Gordon & Fay, 2010). When asked if achievement, effort, and conduct should be taken into account when determining grades, seventy-one percent of students endorsed this practice (Cross & Frary, 1999). High school and college students perceive that effort should be weighted almost comparable to academic achievement in the construction of a grade (Tippin, Lafreniere, & Page, 2012). Students believe papers factor in more heavily to grades, perhaps because papers represent more perceived work on the part of the student, therefore they believe it is weighted more heavily (Brookhart, 1993; Tippin et al., 2012). Although students admit it is difficult for teachers to determine effort, they believe effort should still be factored into grades (Tippin et al., 2012). In fact, college students held a strong belief that even if their achievement on an assessment failed to meet performance standards, that they should receive a grade of “C” for completing the assessment (Tippin et al., 2012). This would lend some support to the theory that teachers and students perceive grades as analogous to payment for work performed by students (Brookhart, 1993; Barnes, 1985; Baron, 2000).

Overall, students prefer to be graded in ways that benefitted them the most (Brookhart, 1994; Baron, 2000; Tippin et al., 2012). High achievers preferred achievement only grades,
while others prefer achievement and effort (Brookhart 1994; Tippin et al., 2012). Students perceptions of fairness in grading practices seemed more closely related to instructional practices -- preparing them adequately for assessments -- then for the construction of the score itself (Gordon & Fay, 2010). Students did indicate that clear communication about teacher expectations and grading practices increased their trust in the teachers’ creation of a fair grading system (Brookhart, 1993; Gordon & Fay, 2010; Tippin et al., 2012).

**Parents.** For parents, the primary purpose of assessment and grades is to evaluate their child’s achievement. Parental interest in assessment is primarily in the omnibus grades that sum up weeks of academic work (Filer and Pollard, 2000). Report cards are the vehicle that communicates information between the school and parents (Tuten, 2007). Both assessments and grades communicate academic achievement, and as parents are increasingly seen as “clients” of the educational system, assessments and grades are viewed by administrators, teachers, and parents as a primary method of communication of between school and home (Filer & Pollard, 2000). However, the uses and interpretations of assessment and grades by parents can vary widely. Parents bring their own experiences of school as well as their beliefs about education to the reading of report cards (Tuten, 2007). One of the most commonly studied aspects of how parents communicate with schools is through the critical lens of socioeconomic status. There are differences in how parents view school based on their socioeconomic status (Lareau, 2003; Panofsky, 2003; Weis & Fine, 2012) and these differences influence the interpretation of the grade.

The current economic situation increases the need for post-secondary education, so there may be an increasingly vital role of grades as clear communication of students’ academic achievement. However, this increasingly vital role of grades may also add to the pressures on
teachers for higher grades. In a theoretical article on the importance of examining the influences of global and national dynamics on local communities, Lois Weis and Michelle Fine (2012) suggest that the current global economic pressures are influencing the interaction of American middle-class parents with the educational system. Weis and Fine (2012) argue that middle-class parents are increasingly concerned about their children’s futures in the current economy. The authors note that as class anxieties within the middle-class have grown, those anxieties have, in a large part, focused on the how secondary schools and experiences within the schools will support their children in gaining admittance to prestigious colleges and universities so they can compete in the current economy. Middle-class parents are placing increasing pressure on secondary schools to ensure that the grades reported for their children are high enough to cement admission to competitive colleges (Weis & Fine, 2012). In communities where parents have choices among public, charter, and private schools, middle-class parents are increasingly seeking curriculum and grading practices that give their children an advantage in college admissions processes (Ravitch, 2010). However, although Weis’s research suggests that middle-class parents are increasingly involved in their child’s education and schools’ grading practices, this is not true of all parents.

Where middle class parents may be increasingly involved in their child’s education, working class and poor families may feel increasingly distanced from school (Lareau, 2003). There are wide differences in how parents of differing socio-economic status relate and communicate to the school, and grades are a common part of that communication. Unlike middle class parents, working class and poor families tend to view a different approach to child rearing, viewing education as the responsibility of the school experts (Lareau, 2003; Weis & Fine, 2012). Where students of middle class parents are more involved in advocating for their children in school and around grades, parents of lower socioeconomic backgrounds are more likely to view
their child’s education as firmly in the purview of the student and the school (Lareau, 2003). Some parents of lower socioeconomic backgrounds are more likely to take a stance against education or the value of academic work (Panofsky, 2003; Weis & Fine, 2012). These parents are much less likely to attend parent-teacher conferences or to feel confident in advocating for their child within the school system (Lareau, 2003; Weis & Fine, 2012). Regarding the interpretation of grades, students and parents of low socio-economic status may misinterpret the meaning of grades, believing that passing grades indicate academic success, even when those grades are barely passing (Panofsky, 2003).

The implementation of a standards-based, or criterion-referenced, grading system may strengthen the communication of students’ academic achievement from the school to parents. However, as Brookhart (1997) and Cross and Frary (1999) note, most parents prefer the addition of non-academic factors like effort and behavior into grades. Educational researchers urge schools to remove non-academic factors from assessment and grading systems (Black & Wiliam, 1998; Cizek et al, 1996; Stiggins et al, 2004). Interestingly, Filer and Pollard (2000) note that in a study of a British elementary school that changed its report cards to reflect a standards-based grading system, the change in reporting did not result in any change in parental interaction with the school. Parents in the study indicated a preference for the clearer communication in the standards-based report cards, but these changes in the reporting system did not impact their responses to the school system or their interaction with the classroom teachers (Filer & Pollard, 2000).
Argument of Advocacy

Grades are an important element of how schools communicate the “truth” about student achievement (Zoeckler, 2007). However, there are differences in how educational researchers and classroom teachers view the construction of that truth. After one hundred years of attempts at grading reform, little has changed. Messick’s theory of consequential validity would suggest that the validity of a grade must be based on the uses and users of the grades (Baron, 2000). Therefore, validity for grades and grading may lie in the clarity of communication between the teacher and the stakeholders for the grade. Further study into how and why teachers incorporate achievement and non-achievement factors into grades would allow an exploration of what teachers actually do and why. Although the construction of the grade is a vital aspect of understanding how and what grades communicate, the interpretation of the message by the stakeholders is of equal importance. Messages are constructed with audiences in mind, and the interpretation of the message by the audience completes the communicative interaction that started with the need to construct the grade. Ultimately, if teachers view the primary stakeholder for classroom grades as the student, then the communication of grades between the student and the teacher must take primacy in the advice/best practices suggested by researchers.

Methodological Review

Although the researchers studying assessment and grading practices utilized varied research designs, methodologies, and theoretical frameworks, the overwhelming majority of the articles reviewed for this paper identified the need for further research into the examination of teachers’ attitudes toward assessment and grading, and the meaning of grades for both teachers and students. Quantitative studies that examined the differences between classroom grading
practices and the practices considered best by educational researchers, recommended further examination into why teachers continued the use of “hodgepodge grading” methods (Carey & Carifio, 2012; Cross & Frary, 1999; Senk et al., 1997; Tierney et al., 2011). When recommendations about methodology were made, researchers encouraged mixed-methods or qualitative studies to further explore the complex nature of grades and grading in the classroom (Bonner & Chen, 2009; Brookhart, 1993, 1994; Iacus & Porro, 2011; Senk et al., 1997; Tierney et al., 2011).

Based on the recommendations by the researchers in the field of classroom assessment included in this analysis, it is clear that further exploration of the construction of grades and the interpretation of grades is needed. Although many educational researchers view assessment and grading as mechanical and linear processes, the literature examined for this study identifies many complex variables in grading and the need for deeper exploration into the construction, interpretation, and purposes of grades and grading.

**Conclusion to the Literature Review**

The research on teacher grading practices indicates a strong need for further qualitative investigation into the construction of grades as well as the interpretation of grades. Further research could support the development of an evaluation system that meets the needs of classroom teachers for flexibility for individual students, as well as meet the validity and reliability requirements of educational researchers.

This research study examined classroom grading using the theoretical framework of rhetorical transaction theory. The qualitative design allowed for an in-depth exploration of the construction of the grade, the interpretation of the grade by the primary stakeholders, and the particular contexts surrounding the communication process of the grade over the course of a high
school grading period. The following chapter on methodology will discuss how the study’s
design supported the research goals.
Chapter 3: Research Design

The research questions developed for this study attempted to explore the complicated nature of classroom grading as communication. Although the construction of grades is often seen as a linear process, I hoped to explore how teachers construct grades as purposeful messages and how various audiences interpret those messages. There are many variables involved in communication, including individual beliefs and values, as well as the social context of the communication. Since these variables are interrelated and not well understood, a qualitative research design was the best approach for answering my research questions (Creswell, 2012). Qualitative research also allows researchers to examine the phenomenon holistically, and to understand how teachers, students, and parents understand it (Miles & Huberman, 1994).

This research study was guided by several questions. First, how do teachers construct grades? Second, how do various audiences interpret grades? And finally, how does the level of course (Honors, General, etc.) impact the construction and interpretation of grades? The research questions were designed to explore the construction of grades and the interpretation of grades as communication between stakeholders. The questions were also intended to move beyond the quantitative elements of the topic and into the details of grading as a process of communication. Ultimately, this research sought to examine the process of grading as complicated communication, and a qualitative design was necessary to accomplish that goal.

Since I planned to explore how teachers and students (as well as other stakeholders) communicate about academic achievement through grades, the theoretical paradigm from which I worked was constructivist. The constructivist paradigm assumes that reality is constructed in the mind of the individual, and so there are multiple valid realities rather than a single universal
truth (Rubin & Rubin, 2012). The constructivist paradigm supports the potential of differing realities or truths in the communicative situation. In a qualitative research study, the position of the researcher is as an active participant in the dialog and interaction necessary for the collection and interpretation of the data within the context of the phenomena (Ponterotto, 2005; Rubin & Rubin, 2012). Since qualitative researchers are so actively involved in the collection and analysis of data, they must acknowledge, rather than seek to eliminate, their own biases in relation to the topic under study.

**Case Study Design**

There are many variables involved in communication, including individual beliefs and values, as well as the social context of the communication. Since these variables are interrelated and not well understood, this research study used a case study approach. A case study approach is indicated in any research in which the boundaries between the phenomenon and the context are not clearly evident (Yin, 2009). The process and communication of grading is an interactive, complex process that is influenced by multiple contexts. The collective or multiple case study approach made the most sense for my research since I was interested in an in-depth examination of the communication of grades by describing the stakeholders' activities and interactions within a bounded system. Evidence from multiple cases is often considered more robust, particularly if a comparison between the two cases is used to support or develop theory (Yin, 2009). I examined two cases (teacher-student-parent) within a single site during one grading term.

**Multiple case study design**. The collection of data from two classrooms at one school site made this a multiple case study (Creswell, 2012). The case study design allows for the exploration of the process under study, in this case the communication process during grading. The multiple case design allows for the comparison of two different cases to explore patterns
between cases and to discover how context does or does not play a role in the phenomenon (Yin, 2009). This is an important aspect of this study since it highlighted similarities and differences in how course level influenced the discourse of grading. In addition, the information from multiple perspectives on grading as communication could better inform the development of new grading and reporting systems for all students.

The multiple-case study approach allows for within-case and cross-case analysis (Yin, 2009). Cross-case analysis allows a researcher to compare multiple cases of the same phenomenon to determine what key elements or themes are present in all cases (Miles & Huberman, 2001). For this research study, the within-case analysis allowed the researcher to examine the intricate aspects of communication within a bounded case — a specific teacher grading a specific student over the course of a single grading period, and how that grade was interpreted by the student and the student’s parent. The cross-case analysis allowed for the exploration of how the context of a bounded case (in this study the level of course) influenced the communicative situation and the construction of the grade.

The Setting

The Northern Maine school district is a rural school district that serves five communities and encompasses the largest city in the northern half of the state. This district is a mix of socioeconomic and educational backgrounds with some students who are the children of the doctors, lawyers, and professors of the local hospital, business center and college, as well as students whose parents work in the lumber industry or own small farms. The majority of the students served by the school district are from blue-collar families, and the median family income for the district was $38,600 in 2010. The 2010 median family income for Maine was $45,734. There is little racial diversity in the district with approximately 2 percent of the student
population identifying as Native American, 0.5 percent identifying as Asian, 1.5 percent identifying as Hispanic, and 0.2 percent as African American (NEASC Report, 2012). Approximately sixty-eight percent of the graduating students pursue secondary education.

The district serves approximately 1900 students in three elementary schools, one middle school and one high school. The high school population is approximately 650 students. The district has a strongly hierarchical organizational system that was described by researchers from the University of Southern Maine as corporate in nature. The district calendar and the structure of the school day is traditional, with the day starting at 8:30 and ending at 2:45 pm. The commitment of the district to the traditional agrarian calendar is exemplified by the continuation of the Harvest Break in Sept/October. School starts early, in mid-August, so that three weeks can be taken for the potato harvest, which is a huge undertaking in the area. The community, as well as the district, takes pride in long standing traditions. This has made the changes in educational policy at the federal and state level, slow to take hold in the district. For the past thirty-three years, the district has been led by the same superintendent. Since he is retiring this year, there is some anxiety in the district staff regarding the changes that might ensue from the hiring of a new superintendent.

Sitting on one end of the city proper, the high school was built in 1952, and although additions have been made to the building in the 1970s and 80s, the original building still houses approximately one third of the classroom and administrative space. Although it is an older building, the district administration takes great pride in the consistently high marks given during NEASC evaluations to the maintenance of the building (NEASC Report, 2012).

The high school houses the traditional academic school as well as the vocational school. There are forty full time members of the high school faculty and the average ratio of students to
teachers is 13:1. The average class size is fifteen. There are seven forty-five minute periods a day. The current principal, the first female principal at the high school, is retiring. In fact, there have been a large number of faculty changes within the past five years due to retirement.

Currently, the State mandate for Standards-Based reporting has caused some friction within the faculty, particularly between long-term faculty members and younger faculty, as well as between the administration and the faculty.

Although the specifics of participant selection will be detailed in the next section, the teacher participant for the study works in the science department at the high school. The science department has five full time and one half time faculty members. All but one of the teachers in the department has less than eight years of high school teaching experience. Within the past three years, the department has undergone a major shift from an older, experienced faculty to a younger faculty. Additionally, there have also been some interpersonal conflicts within the department that has reduced the positive, collegial atmosphere that the department enjoyed in the past.

Population and Sampling

This case study examined classroom grading practices and the many purposes and audiences for classroom grades. Due to the importance of grades at the high school level, as well as the multiple purposes and audiences for those grades, the sample for this study was taken from a high school population over the course of one grading period. The use of a single site for this study allows me to explore classroom grading within a single organizational context.

**Population.** The high school population for the research study was a convenience population. Due to the isolated, rural area in which I live, this high school population is the largest population for study within a three-hour drive. At the time of the study, the high school
had 650 students, with over forty-five percent of the student population eligible for the federal Free or Reduced Lunch Program. There is little ethnic diversity in the population; less than 1% of the students identify themselves as African American or Asian, and approximately 5% identify themselves as Native American. The local economy is based in the agricultural and forestry industries; however, there is also a population of white collar and professional workers due to the city’s two small colleges, area hospital, and medical services.

**Sampling strategy.** The research study explored one level of analysis from the three levels (private, local, public) contexts identified earlier in this paper. The private context, which is made up of a teacher, a student, and his/her parents, is the unit of analysis for this research study. Since this is a single site, collective case study using qualitative methods, my sample size was small (Creswell, 2012). Since each case had three participants, I used two cases to develop enough data to compare and provide insight into the topic of classroom grading.

For a research study of two cases, the sampling strategy was a theoretical sampling strategy that attempted to choose cases based on how those cases would contribute to the development of theory in the study (Eisenhardt & Graebner, 2007). Eisenhardt and Graebner (2007) suggest the use of a sampling approach they call “polar types.” In this strategy, cases are chosen based on being at polar ends — extreme examples — of the possible cases available in the population. This polar sampling strategy allows for identification of clear patterns and relationships in the research data, allowing for comparisons between two cases of differing course levels (Eisenhardt & Graebner, 2007). In an academically tracked system, the two possible polar types are an Advanced Placement/Honors course and a general level course. In order to reduce the number of variables for the cross-case comparison, one teacher was chosen based on the level of courses she taught. For the case study sample, one teacher taught the same
subject at each of the polar ends; for example, the teacher taught the advanced course of biology as well as the general course.

After the teacher was identified for the research study, one student from each of the polar courses was chosen in a form of snowball sampling. Finally, the parent, the final stakeholder in the private context for grades, was chosen based on the inclusion of his/her child as the student. This sampling strategy was also dependent on the willingness of all three members of the identified teacher-student parent triads to participate in the study.

Figure 5: Cross-case Analysis

Recruitment and access. The district office for the high school gave permission for me to access the site for research (Appendix E). As a member of the faculty at this site, I belong to the community in which I conducted the study, and therefore have insider status in the organization (Creswell, 2013). The advantages to insider status as a researcher, is that as a
member, I was accepted within this highly traditional, insular organizational culture. Since the study participants and I have a shared culture, this expedited the early stages of the research process where the researcher must become familiar with the organizational culture and the participants. However, due to my insider status, it was vital that I identified and understood my biases as a researcher, bracketed my assumptions, and engaged in continual reflection throughout the process (Creswell, 2013; Miles & Huberman, 1994). Recruitment letters were sent to the faculty, and then to the relevant student and parent populations once the teacher for the study was determined. (Appendix B).

Protection of Human Subjects

The qualitative design for this research study into classroom grading practices was to collect data through interviews, observations, and document analysis. Although the data collection posed minimal risk to participants in the study, it is the responsibility of the researcher to ensure that participants were protected from any possible negative consequences due to their participation in the study. As Rubin and Rubin (2012) note, participants should, ideally, benefit from taking part in the research study, but at the very least, participants should suffer no negative effects.

In order to ensure the welfare and autonomy of the participants, pseudonyms were used for the study participants as well as for the school name in order to ensure confidentiality. The pseudonym list was password protected in a file in a local database on a secure computer. Since this qualitative research design relied upon the use of quotations in the analysis of the data, quotations were used only if multiple sources could have given the information in the quotation (Rubin & Rubin, 2012). I also conducted member-checking interviews with participants in order to validate the data taken from their interviews (Creswell, 2013; Rubin & Rubin, 2012).
Informed consent was necessary for all study participants (Appendix C). Participants were informed of the purpose of the research, of the type of information that would collected, and of any potential risks involved in the research study. As part of the consent process, research participants were advised that they could drop out of the study or refuse to answer questions at any time with no negative ramifications (Rubin & Rubin, 2012). All of the study participants were capable of giving informed consent since they were at least sixteen years of age or older. Prior to the collection of any data, a consent form was signed by each participant (see Appendix C for consent forms). Consent forms were collected, scanned into digital files, and stored in a password protected, local database on a secure computer.

Research data for this project was collected through interviews, observations, and documents. Interviews were digitally recorded on an iPad using the iRecorder Pro app. A backup audio file was taken using an iPhone running the Smart Voice Recorder app. All audio files were downloaded to the researcher’s home computer and any audio files left on the iPad or iPhone were deleted once the download was complete. In order to ensure anonymity, no person other than the researcher had access to the research data or the list of pseudonyms created to label the data during collection, analysis, and discussion.

The Independent Review Board at Northeastern University requires all researchers gain board approval prior to the collection of data for any research study involving human subjects. This research study was approved by the IRB at Northeastern University through a formal review process that ensured the protection of study participants as well as the training of the researcher into ethical research practices.
Participants

Recruitment for the participants in this case study research started in March of 2014, following IRB approval. Since the case study was bound by time, in this case by a grading quarter, I was anxious to ensure that my participants were chosen before the start of the final grading quarter of the school year. Otherwise, I would need to wait until the 2014-2015 school year to begin data collection. The sampling strategy for this polar case study was a sort of snowball sampling, with the choice of teacher participant determining the student participants, and the student participants determining the parent participants. The teacher participant was chosen first. Since the teacher had to teach the two polar ends of the same course, the population of the faculty at Northern Maine High School yielded only one person who fit the criteria. This teacher was a science teacher and taught two sophomore Life Science courses, one pre-Advanced Placement Biology and one Applied Biology. The teacher, Mrs. Green, was very willing to participate in the study and indicated that she would be willing to help recruit the two student participants.

The population for the student participants was limited to the students in the two polar courses of sophomore Biology. I gave students in both courses were given recruitment handouts (see Appendix B) prior to a short my visit to each classroom to review the purposes of the research study and to answer any questions about the study. These students were reminded that they needed to discuss the research study with their parents, since one requirement for the student participants would be that one of their parents or guardians would also need to participate in the study.

In early April, the pre-AP Biology course had five students who indicated a willingness to participate. The five students were a mix of three females and two males with some similarity
in socioeconomic backgrounds. Since I hoped to reduce as many variables between the two case studies as possible, I did not want to make a final decision on the pre-AP Biology participant until I had possible participants from the Applied Biology course. However, securing a student participant to represent the Applied Biology class was a much more difficult and lengthy process than I, or Mrs. Green, anticipated.

The student demographics in the Applied Biology course skewed heavily male. Of the fourteen students in the course, only four of them were female. During a classroom observation in April, I noticed that these four girls sat at the lab tables at the front of the room with one male. So the majority of the class were male who, I noted in my classroom observations, required frequent redirection and refocusing by Mrs. Green during class time. The typical student in the Applied Biology course was a male who tended to be disengaged, and, according to Mrs. Green, struggled to maintain a passing grade in the class. For the two weeks, both Mrs. Green and I encouraged the students in the course to consider participating in the research study. I made two appeals to the class as a whole to consider participating in the study, but none of the students indicated any interest. Although I did work at the school, none of the students knew me, and Mrs. Green believed that perhaps she could encourage participation if she talked to several of the student individually. Mrs. Green talked to several of the males in the course but none of them would agree to participate. Finally, one of the young women in the class indicated some interest in talking to me and after a short talk with me she agreed to discuss the research study with her guardian.

Since the only possible participant for the Applied Biology class was female, I decided to choose a female student from the pre-AP Biology course to participate in the study. After talking to Mrs. Green about the possible participants, she suggested that Karen (a pseudonym) would be
a good choice since she was very interested in participating in the research study and her
demographics, ability, achievement, and behavior was a good representation of the pre-AP class
as a whole. After talking to Karen briefly about the study, she assured me that her parents were
willing to participate, so I obtained signed consent from her parents for her to participate in the
study and to schedule an interview. After several reminders in person as well as by email, Nancy
(a pseudonym), the student in the Applied Biology class stated that her guardian, her
grandmother, agreed to participate in the research study and she completed the signed consent so
that I could schedule the first interview.

Data Collection

In order to collect data that reflects the complexity of the research topic, it is vital that
multiple types of data are collected for a case study (Yin, 2009). Although interviews are the
primary tool to gather data on classroom grades as communication, other forms of data are
needed to develop the case study. Rubin and Rubin (2012) note that participant observations or
document analysis can improve the quality of interviews, giving the researcher additional data
about the context of the case under examination, as well as educating the researcher on the
phenomenon under study. Research data for this proposed study into classroom grading practices
was collected through interviews, observations, and document review. The data was collected
during one high school grading period, eight weeks in the Spring of 2014. The following section
will detail each of the data collection methods used for this research study.

Documents. Although this case study examined the communication of grades, part of
that communication is made through documents. These documents were district-level documents
that reflected the norms and values of the organization, or be teacher-generated documents that
outlined grading policies and practices for the course. The documents collected for this study
included course syllabi, course assessments, the department grading policy, the student handbook, and the school district’s website. These documents provided context for the teacher-student-parent discourse of grades.

**Observations.** One important aspect to case study research is the examination of the natural setting in which the case study is set (Yin, 2009). Rubin and Rubin (2012) state that participant observations can familiarize the researcher with the contexts in which the phenomena under study occur. Prior to interviewing the case study participants, classroom observations allowed me to examine the classroom environment and social interactions between the teacher and student participants. For each teacher-student pair, three observations were made during the course of the research study. One observation was made prior to the participant interviews, while the other two observations were taken during an assessment event. Each observation lasted one class period, or forty-five minutes. During classroom observations, field notes were taken on an iPad using the Notability application; this application allowed the integration of handwritten or typed notes as well as audio from the observation environment. These notes and audio files were downloaded to my home computer and any files left on the iPad were deleted. The analysis of these field notes started early in the data collection process so the information could be used to refine codes during the iterative analysis process (Miles & Huberman, 1994).

**Semi-structured interviews.** The most important tool for the examination of grades as complex communication was participant interviews. Topical interviews allow a researcher to answer research questions by piecing together information from different stakeholders who have different perspectives (Rubin & Rubin, 2012). These interviews were semi-structured in order to allow the participants to discuss their past and current experiences and understanding of grading. Although the interview protocols included some guiding questions in order to develop some
consistency in data collection, the use of a semi-structured interview format allowed for participants to give examples, personal histories, and experiences that were relevant to the research study (Appendix D).

The teacher for the study was interviewed three times, for thirty to forty minutes each. The first interview explored the teacher’s values and beliefs around grading and the construction of grades. Two more interviews, one for each polar course in the study, examined grading as related to the course and the student participant. Each student was interviewed twice, once early in the grading period and then again at the end of the grading period. Each interview lasted for thirty to forty-five minutes. Students were asked to discuss their past experiences with grades and how they interpreted the grade in the course at the end of the grading period under study. Finally, each parent in the two case studies was interviewed separately for forty to forty-five minutes at the end of the grading period in order to examine their interpretation of the course grade. These interviews were held in a small conference room at the high school, which allows for privacy and quiet. Interviews were scheduled at the convenience of the participants. Student interviews included another adult in the conference room to maintain researcher and student safety within the interview setting.

The interviews were digitally recorded on an iPad using the iRecorder Pro application. A backup audio file was taken using an iPhone running the Smart Voice Recorder app. All audio files were downloaded to the researcher’s home computer and any audio files left on the iPad or Android phone were deleted once the download was completed. Once the audio files were moved into the researcher’s home computer, they were given numerical tags and all identifying information was removed from the audio file. Transcriptions were completed by the researcher using HyperResearch’s Transcribe software and no other person had access to the audio files.
Guiding the data collection. In order to ensure that the data collected for the research study was relevant to the research questions, I created a list of case study questions (Appendix A) designed to guide my data collection protocols (Yin, 2009). These questions were not intended for the research study participants, but are a guideline for the development of questions for the interview protocols, the collection of documents, and the observations and field notes.

Data storage. All data collected for this research project was stored on the researcher’s home computer. The files for this research were password protected, and no one other than the researcher had access to the interviews, field notes, or documents collected for the study. Documents connected to the grading cycle were collected for this research and scanned into the researcher’s home computer for storage. All identifying information on data collected for this research project was removed during the transcription and coding process. No person other than the researcher had access to the list of pseudonyms, and this written list of pseudonyms was locked in a drawer in the researcher’s home.

Data Analysis

Since each case study research is unique, the data analysis process for each case study is unique (Miles & Huberman, 1994). In case study research, the data analysis process uses coding strategies to develop categories from the general case data, aggregate the categories, and then develop themes from those categories (Creswell, 2012). Using a multiple-case study approach for this study required two distinct stages in the data analysis process, within-case analysis and cross-case analysis. Each case was analyzed individually for themes that were grounded in the theoretical framework, then a cross-case comparison of themes was made which explored and described the communicative process of grading for the case studies under examination (Creswell, 2013). This section will detail the data analysis process starting with the organization
of the data into computer databases, the process for the within-case analysis, and finally the cross-case analysis procedure.

**Organizing the data.** The data collection, data analysis, and report writing often occur as overlapping processes in case study research (Creswell, 2012). The analysis of the data for this study began as soon as the collection of data began. The amount of data collected for this study required the use of a computer for storage, organization, and analysis. The databases for each case study were in a software program DevonThink Pro. This program supported many different file types, allowed for quick searches within and among databases, and integrated easily with the other software used for this research study. The data was analyzed with the web-based program, Dedoose. Dedoose is designed for mixed-methods and qualitative research. It supports multiple files types for data uploads, allows the researcher to code and re-code data easily, supports memoing during the analytical process, and creates multiple types of visual displays of data to help researchers in building theory.

Each case study had a separate database. All data was digitally tagged with the specific case identifier and the date of collection. All interviews was transcribed using HyperResearch’s HyperTranscribe program within twenty-four hours of the interview. Completing interview transcriptions quickly supported the development of details and context in the data and the memoing that could be lost if too much time passes prior to transcription (Miles & Huberman, 1994). Field notes during classroom observations, supported by observation protocols, were scanned into the case study database and all relevant textual evidence was entered into Dedoose. Finally, all documents collected for the research study were scanned into the case study database, and optical character recognition software was run in order to support more robust text searches within the documents. Any relevant textual evidence was entered into Dedoose. Entering all data
in text form into Dedoose supported the analysis of all evidence across data types. It also facilitated the cross-case analysis of data once the two databases were merged.

**Within case analysis.** The goal of this research study was to use a communication theory, rhetorical transaction, to explore and describe the process of classroom grading. The first step in data analysis for the research study was the within-case analysis process. The within-case analysis followed several cycles of coding using both inductive and deductive approaches. Along with coding strategies, data matrix displays were developed in order to assist with the identification of causal links among the evidence (Miles & Huberman, 1994; Yin, 2013). These data matrix displays supported the cross-case analysis. Finally, throughout the data analysis process, analytic memos were used to document and develop the coding process (Saldana, 2009).

The within-case analysis process began with reading data several times to look for emerging themes (Creswell, 2013). The initial readings took place within a few days of the data collection to support the researcher in recalling the details and contexts for the data under analysis. However, this initial reading was simply to orient the researcher to the data. Coding data is an ongoing, and often organic, process, so in order to maintain focus a defined procedure for analysis is needed (Saldaña, 2009). To develop categories from the multiple sources of data, two clearly defined stages of coding made sense of the data and identify themes that helped answer the research questions. The model for this analytical process was suggested by Fereday and Muir-Cochrane (2006), and it uses both inductive and deductive approaches to examine case study phenomena.

The first stage of coding was inductive and sought to identify themes through careful and repeated readings of the data for emerging themes (Fereday et al., 2006). The coding procedure that was used is In Vivo coding, which uses the words of the participants to develop codes
(Saldaña, 2009). The perspectives of the participants are vital to understanding the communicative process of grading, so the use of In vivo coding seemed appropriate. The data analysis process is iterative and reflexive, and so several cycles of In vivo coding were completed in order to identify initial themes across the raw data (Saldaña, 2009).

The second stage of coding was a deductive approach using a priori codes constructed from the theoretical framework (Fereday et al., 2006). The template for the codes used for the second stage of coding were developed from the theory of rhetorical transaction as well as from the research questions guiding the study. The codes from the template were applied to the text to identify meaningful units of text (Fereday et al., 2006). Any data that did not fit into the codes in the template indicated the need for modification or addition to the original template. The code template was revised and compared against the details in the data for confirmation (Yin, 2013). This second stage of coding was intended to further develop and refine the themes and connections within the data. In addition, this second stage of coding bridged the participants’ perspectives and voices with the communication theory that was the framework for examining the process of grading.

To support the data analysis process, visual data displays were utilized. The use of data matrices was useful in both the within-case analysis and the cross-case analysis (Miles & Huberman, 1994). The use of a case dynamics matrix helped build the description of the case by creating a preliminary display that links data to possible processes and outcomes (Miles & Huberman, 1994). Since rhetorical transaction emphasizes the processes at play within the communication, the use of these matrices as analytical tools are vital to understanding the action within the communication of grading.
**Cross case analysis.** Cross-case analysis requires a carefully implemented process to ensure that the comparison is valid and lacks superficiality (Miles & Huberman, 1994). The purpose of the multiple-case study design for this research was to compare the communicative process of grading between two cases of polar types. In this study, the two polar case studies are drawn from two high school courses of different tracks. One case is from a course at an advanced or honors level, while the second case is a general level course. Both of the courses are taught by the same instructor and are of the same subject matter. The analysis of the two cases is to deepen understanding and explanation of the phenomena of grading in these case studies (Miles & Huberman, 1994). To be specific, the purpose of this cross-case analysis is to predict contrasting results between the two cases based on the course level; this is also known as theoretical replication (Yin, 2013). In order to examine the variables at play while maintaining some of the holistic approach of the case study method, Miles & Huberman (1994) suggest the use of a mixed analysis strategy in order to synthesize the data from the two cases. The cross-case analysis used two stages of analysis through the creation of data displays. The first stage of analysis used a partially-ordered matrix display to start the cross-case analysis. The second stage of analysis used a case-ordered descriptive matrix (Miles & Huberman, 1994).

The development of a partially-ordered matrix displays are similar to the initial stages of coding in data analysis. Similar to the early stages of developing codes from large chunks of raw data, the partially ordered matrix display is initially developed through the creation of a meta-matrix of all relevant data (Miles & Huberman, 1994). This unordered meta-matrix brings together all of the data from both cases into one “stacked style” chart (Miles & Huberman, 1994). In a series of iterative analytical steps, the researcher moves from the unordered meta-matrix display into partitions and clusters that contrast the cases on specific variables (Miles &
Huberman, 1994). Those initial decisions on partitioning the data for analysis then lead to decisions on how to best proceed with further partitions or displays. The intention of the unordered and partially-ordered matrices is to allow a more open display of the data that could lead to interesting comparisons that cannot be seen without the inclusive display of data from both cases (Miles & Huberman, 1994). Over this first stage of analysis, the partitions and clusters become more refined and, hopefully, the contrasts between variables becomes more clear (Miles & Huberman, 1994).

The second stage of cross-case analysis is the development of case-ordered displays. Case-ordered displays are for understanding how variables and processes work (Miles & Huberman, 1994). The first matrix display needed is a descriptive case-ordered matrix. It is, according to Miles and Huberman (1994) “the fundamental next step in understanding what is going on across cases…far more powerful than a partially ordered matrix”(p. 193). The matrix contains descriptive data from both cases, and the cases are ordered around the main variable under examination (Miles & Huberman, 1994). For this research study, the primary variable under examination would be the invention of the grade for each course level. Since this research study examines two cases, the final matrix ordered around the primary variable will result in a contrast table. Contrast tables can point toward important variables that may be predictors of specific outcomes (Miles & Huberman, 1994).

**Trustworthiness**

**Validity.** According to Maxwell (2013), the greatest threats to validity in a qualitative study are researcher bias and reactivity. These validity threats are present throughout the research process and must be carefully taken into consideration to increase the credibility of the research study.
Reactivity is the influence of the researcher on the participants (Maxwell, 2013). To deal with reactivity, I emphasized throughout the data collection process that I supported these individuals as teachers, students, and parents and that I was interested in learning more about their views and experiences of the grading process. During interviews, I avoided asking leading questions and encouraged participants to be honest. All aspects of the interviews were transcribed, including my own questions and phrasings, to ensure that I recognized any potential participant reaction that may be due to my phrasing of a question or response. In order to reduce teacher and student reactivity during classroom observations, I tried to maintain as low a profile as possible in the classroom, and conducted frequent, short observations to allow the participants to become accustomed to my presence in the classroom.

To ensure that participants could be honest with me during interviews, I assured the participants of anonymity in the transcription, storage, and coding of the data, and I interviewed participants away from the classrooms in order to give them a neutral environment for our discussion. For quotations used in the reporting of the data, I used pseudonyms and removed, as much as possible, any identifying information. The written account of the research was completed after the final grades for the courses were posted to reduce any chances that the research study could influence a participant’s final grade.

The internal validity of a study was also supported through triangulation of multiple data sources (Creswell, 2012). To develop multiple perspectives and to confirm research findings, I used data from multiple cases within the single site and collected data from multiple sources (interviews, observations, documents). The comparison of data across data types helped me to develop a detailed picture of classroom grading, and the use of multiple data sources supports the validity of themes that emerged in the study.
The amount of time spent immersed in the research site also supported the collection of rich data that developed a clear and revealing picture of the construction and interpretation of grades. To support the collection and storage of this rich data, I used digital audio recording of interviews and observations, detailed note-taking strategies, and verbatim transcription of interviews. This rich detail in data collection supported me in initial analysis and revision during the inductive process of data analysis.

Participant validation, or member checking, is another important way of addressing concerns about validity in a qualitative study (Creswell, 2012; Maxwell, 2013). Member checking is the gathering of feedback from participants about the data collected and my conclusions about the data. This ensured that I did not misinterpret the meaning or perceptions of the participants (Maxwell, 2013). Member checking also supported me in identifying my own biases.

As a qualitative researcher, I collected and analyzed the data for this study. In addition, I am also a member of the site under study. It was important for the validity of this study that I clearly identified my assumptions and biases throughout the research process. To deal with bias, I used reflection and reflexivity throughout the data collection and analysis process, ensuring that I was aware of my own biases and reactions to the research process.

**Reliability.** In quantitative research, reliability is measured by the consistency of the research findings if the study is run again. However, since qualitative research is interested in human behaviors, contexts, and perspectives, the definition of reliability is grounded in the methods used to validate the research study (Maxwell, 2013). Miles and Huberman (1994) suggest that researchers carefully detail how s/he links the meaning and interpretations of the participants to his/her own interpretations through theory-connected operations. The researcher
should carefully detail how s/he developed codes and themes, and engaged in the data analysis process. I took detailed field-notes and frequent memos during the data analysis process in order to develop a clear, detailed description of the research process.

For this research study, I was working as a lone researcher rather than a member of a research team where I could establish inter-coder reliability during the data analysis. However, Miles and Huberman (1994) suggest that lone researchers can also increase the reliability of their coding by using check coding. In check coding, a lone researcher codes the same transcript to get a code-recode consistency rate of over 90% (Miles & Huberman, 1994). To ensure coding reliability, I performed check coding several times over the course of study’s data analysis process.

**Summation**

This chapter outlined the methodology designed to answer the research questions posed in this study. A multiple-case study design was the best way to accomplish the research task, and through the collection of various types of data, it was possible to explore and describe the communicative process of classroom grading. The data analysis strategies outlined in this chapter supported me in drawing conclusions from the data to answer the research questions. This methodology provided a framework for conducting research at the case study site during the second semester of the 2013/2014 school year.
Chapter 4: Report of Research Findings

The intention of this research study was to examine the communicative properties of grades. The use of a case study design was intended to allow the researcher to gain a detailed understanding of how grades were constructed by teachers and interpreted by students and parents. Data on two students, two polar cases, was collected in order to examine the perspectives of two students from two different courses in order to describe how course level might influence the construction and interpretation of grades. The majority of the data collected was in individual interviews over the period of one grading quarter. Additionally, data was collected through document analysis and field notes on classroom observations during the same time period.

The Northern Maine School District (a pseudonym) is the largest school district in the northern half of the state of Maine. There are approximately 590 students at the high school, which serves students from grades nine through twelve. This school was chosen as the site for research for two pragmatic reasons: the first is that as a member of the school community, I have a positive relationship with the administration and the faculty, and was granted permission for the study; and secondly, it is the largest school district within a three hour drive, giving the study a larger population from which to sample, as well as making the data collection for the study feasible for a single researcher.

At the time of the study, only one teacher in the high school fit the criteria for the polar case research design, teaching two courses at two levels of the same subject matter. The high school has tracked levels of courses, honors/AP, college-preparatory, and general or applied level. The ideal candidate for the polar case research study was a teacher who taught both the honors/AP level and the general or applied level of the same course. The teacher, Ms. Green (a
pseudonym) teaches both pre-AP Biology as well as Applied Biology. Both of these courses are sophomore-level courses. Ms. Green was very willing to participate in the study. Once the choice of teacher was made, the choice of student participants narrowed to the populations of the two polar-level Life Science courses.

The purpose of this polar case study was to explore with a single teacher who taught the polar ends of the same course how grades are constructed, and with a student-parent pair for each of the course levels, how those grades are interpreted. I believe that a better understanding of grades as a complex, communicative transaction among teachers, students, and parents will allow teachers and educational researchers to view grades as more than a mechanistic reporting of a simple number. This chapter presents the key findings from the data collected for the two case studies. The discussion of the research findings will use “thick description” (Denzin, 2001) to help the reader to enter the experiences of the case study participants, and to use details from the participant interviews and observations to support and explain each of the findings. The emphasis in this chapter is to use the words of the participants to support the researcher’s interpretations of the data.

The first section will answer research question one and will focus on the research data on the teacher as inventor of the grade. Since the teacher participant is common to both case studies, this first section will describe the data collected on Mrs. Green’s general grading practices and beliefs, as well as explore her place as an individual within the larger contexts of the Science department, the high school, and the district. The next section of chapter four will describe the data collected for each of the case studies, which relates to the second research question on how audiences interpret grades. The final section of chapter four will describe the data related to the third research question on the comparison between the two polar case studies.
Research Question 1: How does a science teacher construct grades?

The first research question focuses on the construction of the message, the grade, by the teacher. The majority of the data related to the first research question was collected during interviews that focused on Mrs. Green’s beliefs and thoughts about classroom grading. These questions were not specifically tied to either of the two case study student participants, but rather were on her history as a teacher with grading and her general outlook on teaching and students. My goal in our interviews, as well as in the general classroom observations that I completed, was to obtain data on her perceptions, beliefs, and history around grading itself, as well as on the audience for the grade.

The data is organized in the following general categories: Teacher as Individual in the School Context; Teacher and the Audience (students and parents); and Teacher and Grades. The themes that emerged from the data were Relationships as Priority, Audience (Mis-) Interpretations of Grades, Antipathy for Constructing Grades, and Fairness in Grading. The themes for each category are expressed using the words of the teacher participant in order to emphasize the voice of the participant in the narrative presentation of the data. At the end of the section, the key themes from the data on the teacher are summarized.

Teacher as individual. Mrs. Green has been teaching for eight years, and has been teaching at Northern Maine High School for four years. She was a former student of the school, and has positive memories of her high school years. When we talked about her personal history with grades, she remembers that she was concerned about doing well in school and that her parents expected her to do her best. She does not remember her parents putting unreasonably high expectations on her. She said, “They wanted me to do well, but they didn’t push. I was expected to work at school but they just wanted me to do my best.” Although initially Mrs.
Green did not plan to go into teaching, starting with plans for a business degree, she realized how much she enjoyed the life sciences and changed her career choice to secondary education.

The science department at Northern Maine High School has undergone a large number of personnel changes in the last four years, and Mrs. Green has moved from the newest member of the department to department head within those four years. Two experienced science teachers, each with over thirty years of teaching experience and each considered leaders in their disciplines in the state educational community, retired within the past five years. Mrs. Green identified these retirements as difficult for the department since the stability of the department, grounded in the experience of these two people, was lost. The new head of the science department, an eight-year teaching veteran with an impressive engineering background from Tufts University, took a new position in the southern part of the state after one year as department head. Now considered a veteran in her department after four years, Mrs. Green was asked by the administration to be the head of the department, now primarily populated by young teachers. “All of a sudden, they [the senior teachers] were gone and somehow I was asked to take over. I wasn’t happy about it, but I did it. Who else would?” she asked. Mrs. Green identifies herself as a reluctant leader, and identifies many internal tensions within her department. Of primary importance to this research study, is the exacerbation of these tensions by the state mandate for a new assessment system that requires major changes in grading practices and policies in the department.

The push for Standards Based Grading (SBG) from the state Department of Education has caused a scramble for this traditional school district to revise its assessments, grading practices, and report cards. Since the state has not mandated a single format for the reporting of grades by standards rather than by the traditional grade average (the omnibus grade), each school
district in the state has the flexibility, as well as the responsibility, to create a new assessment and grading system. Mrs. Green, as the head of the department during these major changes, is frustrated by the time commitment required to develop this new system, as well as by the lack of guidance from the state and district administration. She said, “There’s no time. We don’t have time to make all these changes and teach.” Several times during our interviews, Mrs. Green expressed her frustration with the process of this change in grading. “If they would just tell me what they want, I would do it, but I have no idea. All of a sudden, I don’t know what they expect from me.” Additionally, the difficulty in putting these changes into practice has been difficult in the department due to the resistance by faculty members to change from the traditional grading model to the SBG model. As the leader in the department, Mrs. Green is struggling to find common ground within her department for these changes and finds herself often needing to reprimand department members for refusing to make the changes mandated by the department and the district.

**Teacher and audience (students and parents).** During the interviews, when we talked about her classroom and teaching rather than the on-going difficulties with the changes in the district and the department, Mrs. Green became increasingly animated and energetic. In my observations, I noted that she is a lively and engaging presence in the classroom, with a wry sense of humor and an obvious passion for her subject matter. For example, during an observation of her preAP Biology class, Mrs. Green suddenly interrupted her own lecture on photosynthesis to exclaim, “See! See how important this is?! See how important science is? It is about breathing and life! Ah! I love it!” Her students laughed and joined in her praise of oxygen and breathing. Both in her words and actions, Mrs. Green expresses a joy in interacting with her students. In sharp contrast to her tone and demeanor when we discussed the district changes and
internal struggles of her department, she appeared energized by talking about teaching. For example, she became animated and excited when she discussed her future plans for changing the curriculum in Applied Biology. “I need to do a better job of engaging them so I am going to do more hands on activities. I am going to try something new,” she said.

Even though in my design for the study, I grouped students and parents together as part of the audience, Mrs. Green views them as separate and disparate, audiences for the grade. The primary themes that emerged from this data were on student classroom interactions and are listed in her words: “Sometimes it is great, and sometimes it is awful;” on her relationships with her students around achievement and learning: “I care more.” There was also a theme about the parents as a satellite audience, connected but distant, also in her words “They just care what that number is.”

“Sometimes it is great, and sometimes it is awful”: The classroom. Throughout our interviews, Mrs. Green identified relationships with her students as a priority. Her philosophy is that relationships are a necessary foundation for teaching. She enjoys getting to know her students both inside and outside of the classroom and makes efforts to connect with every student that she teaches. “Relationships with the kids are very important. It is important to build rapport with students as a whole and then if you build good relationships with the ones who really love the subject matter, they are easy to build relationships with since they care and they are the ones who pop in to see you randomly...they feel like they have a connection.” In classroom observations, I noted that Mrs. Green’s demeanor is one that encourages students to ask questions and interact with each other, but also with her. She frequently made comments to students that indicated that she was interested in their extracurricular activities, hobbies, or other classes. “Usually I try to find a way to make a connection. I can make a connection pretty easily
with...I like to joke and be spontaneous and sarcastic and laugh at myself and show a silly video clip...I like to do those things so it helps to keep the atmosphere light... I like to think they are comfortable in here.”

When discussing students who may be more difficult to reach or who may initially be uninterested in forming a relationship with her in the classroom, she insisted that persistence was the key. For example, she referenced a current student in one of her classes that she painstakingly built a relationship with: “He and I built a relationship throughout the year, to the point that he was showing me the painting that he did in Art and talking to me about different classes and what he was doing outside of school...it is funny because when you think of everything you do in the course of a year and the relationships you build and that was probably one of the best ones. Not because it was spectacular or lots of great conversation but just very difficult...he is a very difficult kid to get to and I was really happy to get to know him better.” In each of the three interviews, Mrs. Green made at least two comments about the importance of being connected to her students, and that she believed that these interactions were the best part of her job as a teacher. Additionally, she stated twice that she believed that it was the responsibility of the teacher to forge these connections with her students, and as the above excerpt indicates, it is something that she practices in her classroom. In response to a statement that I made on how rewarding it was to make connections with students, she responded: “And it is the ones that you didn't think you made a connection with that somehow you did. I got a thank you card from one of my students today that I thought really couldn't stand me, so...and because I thought that I worked really hard at building a relationship so they didn't think I was out to get her. Well dear God, I think it worked.”
Her obvious excitement and joy in these positive anecdotes about students with whom she feels connected, was occasionally contrasted with her frustration over students who she did not feel connected to, and she described these students as either disengaged in the classroom or dismissive of her or the subject that she taught. Following an observation of her Applied Biology class, Mrs. Green apologized for her impatience with the six young men who sat at the back of her classroom. They had been slow to engage in the day’s lab experiment, and were often off-task if her attention was turned to the other students in the class. “They frustrate me so much. I don’t know what to do with them. Throwing them out of class doesn’t help. Talking to them doesn’t help. I just don’t know what to do. I hate this part of it. I can’t make them do anything much less make them learn anything. What am I supposed to do?”

As we talked about what frustrated her about her relationships with her students, Mrs. Green noted that one source of communication, social media, occasionally ended up leaving her feeling angry and betrayed by students. Mrs. Green uses Twitter and Facebook, and through the accounts of former students, she occasionally comes across a message about her class that was most likely not intended for her: “‘So and so [insert any teacher’s name] is out to get me…’ I have seen tweets about my classes "Biology is bullshit. Photosynthesis is bullshit!" Well, do you like breathing? It would be good to know why and how it happens? So don't tweet about my class.”

These unintentional communications are an interesting element of modern teaching and Mrs. Green finds them more likely to be sent by students who are in her college-preparatory or Advanced Placement courses. She suspects that these students would never say these things to her face since they tend to be what she calls “pleasers” — students who want to make the teachers happy or at least do what the teacher asks them to do. “I hate that I feel so hurt and
angry about it, but what else don’t I know about them? What else do they say that I don’t see? I hate feeling like that. It is the worst.”

Overall, Mrs. Green views the building of relationships with her students as one of the most important parts, and potentially greatest joys, of being a teacher; however, she also finds that some of her greatest frustrations come from difficulties in building those relationships.

“I care more”: Students and grades. Overall Mrs. Green identifies herself as caring more about students’ growth and learning than they do. Although she states that students are concerned about their grades, overall she perceives that they care more about the number, either how high the grade is or whether or not it is passing, than they do about their learning. For example, she said, “Some students just want to know the number, how high it is. They don’t care about biology, just about the number.” She experiences frustration with students who check their grades too frequently, students she refers to as “grade grubbers,” and, in contrast, with students who rarely, if ever, check their grades.

Mrs. Green demonstrates that she “care(s) more” in her grading practice, which in some ways leads to a success bias for her students. For example, she tends to remove homework grades during the construction of final grades if the homework grade hurts the student, relying on the assessment grades to demonstrate student understanding of the material. “I just don’t see that it is ok to fail a student when they don’t have to do the daily work to pass the test, so I drop the homework grade if it hurts them,” she said. However, when asked about the reverse situation, that she would remove homework grades if they were boosting a student’s grade too much, she admits that she does not remove homework grades if they raise a final grade. “Ah, well, I guess that I don’t. I guess I never thought about it that way. Likely I should but I won’t. If it helps them, I want to keep it.” Mrs. Green chooses to remove homework grades, or evidence of effort,
if they negatively impact a student’s grade, but leave those effort grades if they raise a student’s final grade.

Although she enjoys her time with her students, Mrs. Green does express frustration with student attitudes toward grades. She notes that she views grades as a reflection of what students understand about science, but that her students often view grades differently. The students in her preAP Biology course are sometimes “grade grinders” who are more concerned about their standing in the class or as payment for their perceived effort in the course. For instance, she said that “The preAP kids care about how high, or not high, their grade is. How will this affect my standing in the class? Which seems to be a real epidemic now and it never seemed to be as much of a big deal before.” There is a tension between Mrs. Green and her students that is specific to the course and what is being communicated by grades. For example, when I asked her what she thought grades communicated to students, her response was, “What it says to the kids in preAP is ‘Did I make the honor roll or high honor roll?’ That is all it says to them. Honestly, from their perspective, I don’t think they care. I think some of them care….but most of them just want a high grade. I don’t think a single one of them looks at a grade and says, ‘Wow! I really get Biology!’ I don’t think a single one of them does that.” Mrs. Green expresses her frustration with her intention for the grade, which is to express a student’s understanding of biology, and the student’s interpretation of the grade, which she believes is based on how the grade impacts their GPA.

In contrast, she notes the opposite problem with many of her Applied Biology students, who simply care if the grade is passing. Unlike the students in her preAP class, the students in her Applied class tend to be unconcerned with how high their grades are as long as they are passing. She said, “They just want to pass and get through it. Not all of them. A couple of them
want to do well but most of them just want to make it through.” In fact, occasionally Mrs Green noted that she felt responsible for supporting the students in order to “get them through.” She notes that she sometimes gives struggling students multiple chances to hand in work or to re-do work, or she accepts poorly completed work if it will make the difference between a passing and failing grade. However, she also notes that these efforts on her students’ behalves does not always pay off. “I shoved him through the first semester to the point where, alright, we have enough to make this happen, and what happened was…[his parents] were dangling the carrot of drivers ed and once he did it, that was the end of it. Once he got to go to drivers ed he just did nothing,” Mrs. Green said.

Overall, Mrs. Green indicates that she experiences a frustration around her intentions for grades and how those grades are interpreted by her students. She finds building relationships with students to be one of the most important elements of her job, and yet also finds that constructing and reporting grades can often cause problems in the relationships that she builds with her students. If Mrs. Green experienced friction or problems with her students, it was often around the topic of grades rather than any other topic. This was true for both of her courses, although she appeared to experience more frustration with the attitudes of her preAP students toward their grades.

“They just care what the number is”: Parents and grades. In contrast to her attitude about the importance of developing relationships with her students, Mrs. Green did not view creating relationships with the parents of her students as a vital part of her job. “I feel like this makes me a horrible teacher, but I am going to say it out loud, I don't care what the parents think about what their grade means. I don't care. I don't feel like it is a teacher's responsibility to build
a relationship with the parent.” The data around the parent as audience for the grade suggests that Mrs. Green views parents as a distant and minor audience for the classroom grade.

She indicated that grades were the primary purpose of parental communication and that the communication between herself and a parent was easier if the parent had a positive concept or feeling toward her. For example, she said, “If they know me or I have had their other kids, they [parents] tend to trust me more.” However, she noted that often her relationship with the parent would be informed by the relationship she had with the student/child. If the child enjoyed her class or liked her, then it was more likely that the parent communication/interaction would be positive or neutral. However, if the child disliked her class or had a negative concept of Mrs. Green, it was more likely that the parent interaction would be negative. “I think it impacts how they view the grade...if they don't feel positive towards me then they will never really have a positive feeling toward their child's grade. They will always scrutinize it.”

The primary avenues for communication with parents were through email or during parent-teacher conferences. Her experiences with parents mirrored her experiences with their students; if the student was in a preAP course, the parents would be primarily concerned with the grade as a reflection of student excellence in relation to other students. “These parents, all they care about is what the grade is, the number. We got such and such in Biology, perfect....” However, if the student was in the Applied Biology course, the parent was primarily concerned about the student passing the course and avoiding the requirement of a credit recovery. “I have had so many parents just want to know if the kid was passing...not if he was doing well, not if he understood stuff, but is he going to pass. They are fine with the 65.”

On the topic of social media, the teacher data on parents again paralleled the data on student communication. Mrs. Green noted that she occasionally viewed Facebook posts or
Twitter feeds by parents of her students making negative comments about the school, her class, or her classroom practices. As a lifelong member of the community, Mrs. Green finds it difficult to avoid any accidental contact with messages about her or her classroom that might end up on social media through the myriad friend and family networks of which she is a part. However, she also finds these sudden, unexpected (and likely not intended for her viewing) messages amusing as well as hurtful. “You guys know that rolls up on mine too, right? Sometimes I think they hope that I do see it. You never know what is going to roll up on your Twitter feed.”

The majority of parent-teacher interaction for Mrs. Green was around the topic of grades. She noted that it was rare that a parent initiated communication, or was very interested in, how much a student understood about the course content. “I think I understand the dynamic of grades and parents right now. Although you will always hear backlash, ‘Well my kid didn't learn anything from them’— did you ever ask them what they were learning when it was happening? Could they tell you anything? Because if they couldn't then maybe that is the email that I should see -- ‘we tried to talk about it and they don't really understand it’ -- That is a better email than ‘Why is my kid's grade this?’ She noted her frustration when parents communicated with her so that their child did not need to. “I see the kid every day, why isn’t he talking to me? But he needs to have his mother email me about his grade?” she asked. Similar to the data collected on students and grades, the data collected on parents and grades reflects a greater likelihood for conflict or tension between Mrs. Green and the parents of preAP students around the subject of grades.

**Summary of the Teacher on the Audience.** Throughout the data on the teacher and the audience for grades, there was a consistent message from Mrs. Green that the relationships with her students were a vital part of her experience as a teacher. She identified building relationships
with students as a rewarding part of her job, and she made a particular effort to develop relationships with students throughout the school year. Interestingly, it is this emphasis on relationships that can also be one of the most frustrating elements of teaching for Mrs. Green.

Mrs. Green has a success bias for students and her interview data emphasizes that she believes that does what she can to support students in being successful in her class. She seems to experience some frustration and annoyance with her students’ attitudes toward their grades. She notes that many of her preAP students worry too much about their grades and she identifies them as “grade grubbers” while her Applied students don’t worry enough about their grades and are often in danger of not earning a science credit. She states that the topic of grades are the most common cause of tension between her students and herself. Given Mrs. Green’s emphasis on relationships and her success bias for her students, she may believe her students’ attitudes toward their grades reflect a different understanding of the teacher/student relationship.

Finally, she identifies the parent audience for the grade as a secondary, rather than as a primary audience. Mrs. Green states that she typically only hears from parents when there is a problem with a student’s grades, and she finds it frustrating that often she hears from parents before she hears from students. This comment may indicate that she views parents as occasionally interfering with the relationship that she is trying to build with her students.

Teacher and grades. Over the course of the three interviews, when asked about grades and grading, Mrs. Green would often discuss assessments rather than grades. In fact, the majority of raw data collected during these interviews was on the subject of assessments. Assessment and grading are interconnected in the process of teaching. The efficacy of instruction is evaluated through assessments and the scores on those assessments are used to construct the grade. It is understandable that a teacher who is asked questions about grades will talk about assessments.
Interestingly, a pattern in the data emerged as all three interviews were combined into a single data set. There appeared to be a reluctance on the part of Mrs. Green to talk about the process of constructing a grade. When I tried to redirect the interviews from assessment to grading, the shift was brief, often for only one to three minutes, before moving again to assessment.

Once this pattern was identified, I conducted a short interview with Mrs. Green to check (member checking) my interpretation of the data. I played several short sections of audio from our interviews and said that I wondered why she seemed to deflect questions or talk about grading and preferred to talk about assessments. After a few seconds of silence, Mrs. Green suddenly stated, “I hate it. I hate it. There. I know it makes me a bad teacher, but I hate it. I shouldn’t say that but I do.” Her body language and tone suggested that she was relieved to admit that she disliked thinking about grades or grading, and so she was reluctant to talk about it.

“It is an important part of my job. And I do it. But I hate it. And if there is anything that I hate about my job, that is it.”

“I hate it”: Constructing grades. The construction of the grade is made up of a number of scores on course assessments. These assessments include quizzes and homework, labs, and tests and projects. As noted earlier, daily work or homework is typically included in the grade if the inclusion of those scores increases the final grade. The science department has an agreed upon formula for constructing grades from these categories of scores; thirty percent for quizzes and daily work, thirty percent for labs, and forty percent for tests and projects. Grades are reported at the end of each eight week grading period, and grades are combined with midterm and final exams to construct the semester grade.

Mrs. Green dislikes the process of constructing a grade, and although she also states that it is part of her job, she wishes that she did not have to do it. However, when asked if she
would prefer for an outside evaluator (like periodic standardized testing or state tests or similar external measurements of student learning) to take over her grading process, she indicated that she did not believe that an outside evaluator would understand the complexities of the learning environment and interaction. “How would anyone else understand that for some kids, kids who work for hours after school or have to take care of their brothers and sisters, or who have absent parents….how would they be able to understand that for that kid on that test that a 70 was a miracle, a huge step forward? I know that. Someone else wouldn’t.” Although Mrs. Green hates the process of grading, she also does not trust anyone else to do it for her. “I don’t want a grade to hurt a kid. If they didn’t do the work or they really don’t understand it, that is one thing. But if a kid is trying and is making progress, then I don’t want the grade to hurt him.”

“I want to be fair, but maybe I am not”: Fairness in grading. Although it was not an initial focus of the data collection, all of the participants referenced the idea of fairness as an important element of grades. Mrs. Green indicated that she wanted to be fair in her grading practices, and this was something that she worried about when she considered the process of grading. She noted tensions within the process of grading since on the one hand, she wanted to be fair to her students as a whole, but that sometimes fairness could mean different construction practices for different classes or students. Mrs. Green identified that taking a purely objective stance on grading did not seem fair, particularly to students who were putting in effort and making progress but who were not perhaps achieving high grades. However, she also worried that her grading practices were sometimes too subjective. The issue of effort seemed to be a primary area of confusion around grading since she often indicated that grades should reflect what students learned or understood about course concepts, but she also admitted that she
believed effort was an important element of success in the classroom and so that a student who was making an effort to learn should be rewarded for that effort.

As she talked and thought about the issue of fairness in grading, Mrs. Green appeared to be less certain of how fairness should be achieved through the construction of grades. She affirmed that she wanted to be fair and that she didn’t believe that fair was necessarily going to look the same for each student, but then admitted, “I want to do the right thing but I am not sure what that is.”

**Summary Research Question 1.** The data collected on the construction of the grade by the teacher reflects the tensions that the teacher experiences around both the process of grading as well as the communicative aspect of the grade itself. In fact, many of the major themes that emerged from the data were expressed in dichotomies. The teacher hated grading, but recognized that she had to do it. She was an unwilling creator of the message that is the focus of this study. Mrs. Green enjoys the instruction and interaction of teaching, and does not mind developing the assessments that help her to, as she states, “understand what they have learned and what they haven’t.” However, the construction of the grade or the need to create a single, omnibus grade at the end of the grading period is the source of tension for her. Interestingly, her hatred of grading was something that she was reluctant to admit.

Mrs. Green also expressed a desire to be fair in her grading but admitted that she wasn’t sure how to accomplish that when she constructed grades. She wanted grades to reflect a student’s learning in the class, but also (when it helped him or her) to reflect the student’s efforts. Mrs. Green notes the complexity in a single method of construction working for every student, but also is not sure how to be fair in every individual case without making clear guidelines that apply to all students.
As department head and as classroom teacher, Mrs. Green experiences pressures from the administration to change the construction and the message of grades but also experiences pressures from other teachers, parents and students to maintain the traditions of grades. In addition, she reflects on the frustrations she experiences from the push to change grading practices but with little support of clear guidelines on how that is supposed to be accomplished.

Finally, one of the most consistent themes to emerge from the teacher data was the important influence that teacher/student relationships had on Mrs. Green and her experience of teaching and grading. The pattern in the data around the classroom and student-teacher interactions was an interesting mix of powerfully positive comments on her relationships with students in the classroom, and the equally powerful disappointment she experiences when the student interactions are difficult or negative. One of the most important findings as related to this study is that Mrs. Green identified that it was most likely that difficult or negative experiences would be connected to students’ grades. Mrs. Green loves being a teacher and enjoys her work in the classroom, but finds that her greatest frustrations and worst moments are often connected to the intersection of relationships and grades.

Research Question 2: How do audiences interpret grades?: Two Cases

The second research question focuses on the interpretation of the message, the grade, by the audience. There are many audiences for classroom grades, but for this research study the audience for the grade is limited to the private audience — the student and the parents. Two students were chosen for the polar case studies, and their parent or guardian also agreed to participate. The majority of the data related to the second research question was collected during individual, semi-structured interviews with each of the student participants and with each of the parent/guardians. In addition to interview data, I also conducted several classroom observations
to develop an understanding of the situational environment for the case studies. The data for the student participants was collected at the start and at the end of the grading quarter, which formed the time boundary of the case studies. The interview data for the parent/guardian participants was collected at the end of the grading quarter. The goal for the interviews was to explore students’ and parents’ beliefs and perceptions around the construction of a grade as well as their interpretation of the grade.

The data on the audience interpretation of the grade is organized by case study; one student and one parent/guardian participant for each of the two polar course-levels, preAP Biology and Applied Biology. The data for each case study is organized in the following categories: Classroom Situational Contexts; The Teacher and the Class; the Student and the Grade; and the Parent and the Grade. At the end of each case study, the key themes that emerged from the data for that case study are summarized.

**Case Study: preAP Biology.** All students at Northern Maine High School must take at least one biological science course for graduation. The course under examination for this first case study is a pre-Advanced Placement biology course. This is a sophomore level course and the curriculum is designed to support students in gaining the foundational skills and knowledge required to advance to the AP Biology course in the junior year. Mrs. Green teaches two sections of this course. This is a year-long course of forty-five minute class periods.

The classroom is in the older part of the school building, and is a part of the original science department. It is a traditional high school lab classroom, with four rows of lab tables, two tables per row, with three student chairs at each table. The narrow room is dominated by long rows of large wooden cabinets with glass doors. The cabinets house a number of two- and three-dimensional biological models, lab equipment, and past lab experiments. Long black countertops
toward the back of the room hold current lab experiments, terrariums, aquariums and incubators. There are lab sinks toward the back of the room, as well as a storage closet for lab materials and chemicals. Although the room was clearly built for a much earlier generation of biology students, the Smartboard and projector at the front of the room reflects the pedagogical shift toward technology in the modern classroom.

The classroom is where the majority of the interactions between the teacher and the student participants take place. Although this research study is primarily focused on the communicative properties of grades, the environment in which the communication takes place is relevant to the study and the communicative element of situational context. From a communicative standpoint, the room reflects the traditional power structure of teacher as the front of the room, in charge of the learning environment, with students sitting in rows in front of her. The wooden cabinets and drawers throughout the room are reminiscent of a science classroom of the 1950s, which is when this wing of the high school was built. This reinforces the traditional environment of the classroom. However, the teacher has added many student-centered elements to the classroom space, primarily in the form of student work and a Whiteboard where student messages are displayed in colorful marker. The use of technology to engage students with short video clips is a student-centered instructional technique. Additionally, the teacher-student interactions that take place in this classroom space also suggest a less formal and traditional element at play within the classroom context.

During two classroom observations early in the grading period, I noted that the students in this course entered the classroom with eagerness. The class meets during the second period of the day, and the fourteen students who entered the room were talkative amongst themselves and with the teacher. Most students entered the room with a greeting to Mrs. Green, and there
appeared to be a friendly atmosphere of student to teacher communication about a variety of topics. Class time was structured with specific lab tasks for students to complete. During both observations, students were eager to get the lab packets with the directions and questions and to begin the work. The teacher used short videos about the unit topic, fungi, to engage students in the subject at the start of the period. Following the short videos and some teacher questions that checked for understanding, the students worked in pairs or small groups on the lab packet questions. During the group work, communication topics veered from science to the weather to math, with the teacher appearing to enjoy the communication, often trying to pull the questions and talk back to science and the lab at hand. Although the classroom could be noisy at times, the majority of the student talk was about science and seemed to reflect a genuine interest in the topic and the coursework.

The teacher and the class. Mrs. Green has taught this course for two years and will be teaching it again next year. One aspect of the course that she enjoys is that she gets clear feedback about curricular successes and failures from the junior Advanced Placement Biology teacher. “Because this class [preAP Biology] leads into another class and the exam, I can get an idea of how I am doing. And when she [the AP Biology instructor] tells me that the kids really got something that I did, that feels great.” Mrs. Green does identify this course as being a heavier workload for her since she often has to “teach myself to do it before I can teach them.”

“The kids everyone wants to have”: Pre-AP students. Overall, Mrs. Green identified the students in her pre-AP classes as “pretty active learners and very talkative” and “engaged and interested in the course material”; several times she identified these students as “the kids everyone wants to have.” However, she also stated that some students were taking the course for other reasons. “Some kids are here because of the name of the course, they don’t care about
biology but about their transcript.” Later on, Mrs. Green identified this as a sort of “resume building” and that those students weren’t there to learn but rather to gather prestigious sounding course titles on their transcript. She also identified some students as being pressured by parents to take the highest course level offered. “Some kids are here because Mom or Dad told them to be. They don’t really want to be here, but they are.” Mrs. Green notes a tension that she experiences with the students in these courses, “They care. And that is great, it really is. But then sometimes they care too much. And what they care about is the grade. Just the grade, the number.” She wishes that they “cared more about learning the material, understanding it.” Of her preAP Biology students, she states that if “a student was going to complain about a test or a grade or whatever, it is going to be one of these kids.” Additionally, if there were going to be emails from parents questioning or complaining about a student’s grade, “It will be from one of these kids. If I am going to get emails, it is from their parents.”

“Grade grubbers”: Students and grades. When talking about how her students felt about grades or grading, Mrs. Green identified some of her preAP students as “grade grubbers.” Several times during interviews, Mrs. Green identified frustration with what she believed was misplaced emphasis on the numeric grade rather than learning. “What do they think grades mean? Grades mean they are on the high honor roll or not. That is what they care about. Honor roll and their class standing.” To emphasize her point, she related that this year was the first year in her career that “This sophomore class knows exactly what the class standings are…who is where and when grades come out at the end of the quarter, they are all down there in guidance, checking on their number on the list.”

Mrs. Green revamped the curriculum and assessments for this year and she feels relatively happy with the changes that she has made in moving toward a more standards-based
system. “I feel pretty confident in my assessments. I made changes and I still need to make more but I think what I am doing now, it gives me a better picture of what they know and don’t know.” However, her students do not always like the new assessments, particularly since many of the assessments require that the test question or task be a novel one. In the past, Mrs. Green states that test questions were often repetitions of questions from homework packets, but the new assessments “ask them to show me what they actually know. They haven’t seen it [the task or question] quite like this before so they have to think.” However, the pre-AP students often struggle with these assessments, and according to Mrs. Green “They freak out if there is anything on the test they haven’t seen before. They think it is unfair, but either they know it or they don’t.” Additionally, Mrs. Green states that many students in her courses want a high grade but “don’t want to do too much to get it.”

“A great kid”: The PreAP Biology student participant. Mrs. Green appears to have a very positive relationship with the student participant for this case study. The teacher interviews were conducted after school, and several times the student participant in this case study, Karen, came in to ask a quick question or to just talk to Mrs. Green. Mrs. Green identified Karen as being eager to participate in the study and as a good representative of her preAP Biology students. “She [Karen] loves science and works really hard. She comes in for help when she needs it, she asks questions and participates in class…she is just a great kid. She is fun to have in class.” When asked about Karen’s attitudes toward her grades, Mrs. Green responded, “Well, she is very concerned about her grades. She checks on her grade a lot and wants to make sure that she is ready for tests and whatever. She is like most of the students….always wanting to make sure she has as many points as she can get.”
The student and the grade. The student participant in this case study is a fifteen year-old female. As noted earlier, Karen (a pseudonym) was very eager to participate in the research study and was one of the first students to express interest in the study. She responded quickly to requests to schedule interviews, and was always on time and eager to talk. Karen plans on a career in optometry or pharmacy. She is taking all preAP or college-preparatory courses. She identifies herself as being a strong student in mathematics and the sciences. Karen indicates that she enjoys her preAP Biology course and that she finds Mrs. Green “…really helpful and nice. She makes it fun. I like science so it is a good class for me anyway, but I really like her [Mrs. Green] and how she teaches. My grades are good.”

“I stress About grades”: Student and grading. When I asked about her current GPA, Karen was immediately able to tell me that it was 94.6. She admits to checking PowerSchool, the district’s online reporting system, multiple times a day. One of the most frequent themes present in her interviews was her anxiety about her grades. “I stress about grades so I check [PowerSchool] several times a day.” She identifies as a perfectionist; “I do the typical student thing and try to figure out how low a grade I can get [on an assessment] and still keep my grade.” When I asked what she considered to be a good grade, she responded, “Well, anything above a 95. But sometimes in English I have a lower grade, like a 92.” In response to a question about why she checked her grades so frequently, she stated, “Then I know if it is a bad grade and it helps me gauge if I need to go in and get help.”

The interview data suggests that grades play multiple roles in Karen’s life. Primarily she views grades as a passport to a successful future. “If you don’t have good grades, you can’t get into college, or if you get in, you might not do well and drop the ball. It sets me up for the future.” She stated that she was worried about the future, “I mean, I worry about it and whether
or not my grades will get me into college or even get me ready.” The second most frequent theme in her responses about grades and grading is that grades should be a reward for her effort, “Well if I try hard and spend a lot of time on it [a project or assessment] then I want to get a good grade.” Karen expressed some frustration with the fact that sometimes “I spend a lot of time on something, like I might spend three hours a night doing homework, and a lot of times teachers don’t even collect it, or if they do, it is just for a small grade.” When discussing how some of her classmates view grades, she comments, “If they don’t do their homework and they don’t try, then they shouldn’t expect a good grade.” When I asked Karen a direct question on whether or not effort should be part of a grade, she responded, “I am a big fan of it. I always get annoyed when people don’t do their homework. I mean, it is the simplest of tasks. And then they complain if they fail a test, well, put some effort in and you won’t fail.” Karen believes that students see effort as more important than teachers do, “Well, I think they [teachers] take it into account but not as much as students do. When I spend a lot of time on something, then it should count a lot in the grade. But to be fair, if a teacher gives us a month to do a project, then we should use that time and it should be almost perfect.” Several times during the interview, Karen does state that grades should reflect her understanding or her learning, “A good grade can show that I know the material” but frequently she includes a reference to effort, “It shows I know the main ideas and that I did the work and came in if I didn’t get something.”

Finally, Karen occasionally referenced grades as a reflection of her self, “Knowing you are doing well, it boosts your confidence” and “When I get a good grade it makes me want to get more, it means that I am doing well.” Additionally, Karen reflected that her parents encouraged her to do her best in school, and so her grades were a reflection of her efforts to make her parents
proud; “My parents just want us to do our best. And so they expect me to try hard and I want to do well.”

“If I try, my grade should show that”: Fairness in grading. The process of grading, or the construction of the grade, was another focus of the interview questions. Karen indicated a preference for assessments in math and science since “it is more straight-forward, whether you got it right or wrong.” She indicated some frustration with the grading in humanities classes, particularly in English, where “it is harder to know and it is usually an essay and you can elaborate or try to explain, but if you go off on a different topic you get points off or you get it wrong. Or the teacher might not like your elaboration.” Karen notes that she likes to have “study guides or outlines on what I need to know for a test. If a teacher goes over it a couple times, I know it is going to be on a test. But if she just mentions it, it shouldn’t be on the test.” She likes getting rubrics for projects early so that she can “make sure that I know exactly what I need to do to get a good grade.” If she isn’t clear about the rubric or a teacher hasn’t given her a rubric she goes in for help to make sure that she knows what to do. “I go in a couple of times for any big project, that way I know what I am doing.”

If Karen does not get a grade that she is happy with, she asks her teachers if she can take the assessment over. “Some teachers are really nice and will let you re-take it, and I see if that is possible.” If a teacher does not allow students to re-take assessments, Karen indicates that she tries not to worry too much, and goes in for extra help before the next test. “I just tell myself that I am going to do better next time, and not to worry. And then I go in a couple times before the next quiz or test to make sure that I know what to do.”

The issue of fairness in grading came up in the first interview with this student. Karen indicated that teachers were fair when they were clear in communicating what the expectations
or standards were for an assessment. On further inquiry, Karen indicated that fairness in grading was connected not only to a student’s ability to prepare for an assessment, but also connected to the student’s efforts. “Fairness in grades means that if you gave it your best effort and your answer isn't completely off the board, then you should get some credit and you shouldn't get it completely wrong.” Overall, Karen does view her teachers as fair, particularly if they give her a chance to bring up a grade that she is not happy with; “I think they are pretty fair. Especially anything I can do to bring my English grade up is a good thing, but we just had an assignment and I knew it wasn't my best work so I was happy with the grade I got.”

When asked if students should have more of a voice in the construction of the grade, Karen did not believe that giving students input into grades or grading was an appropriate idea. Her answer may reflect the complexity of grades from a student’s point of view: “I don’t think students should have a say. It is not really for us to say. We are the ones who need to be graded fairly and who are we to decide what is fair? Because whatever we can get to better our grade, we will do. Our averages won’t show what we actually know compared to what we think we know.”

“They show I am ready”: Grades as communication. When I asked Karen what her grades in preAP Biology communicated to her and to her parents, she replied that “they show that I am ready to go to college and that I worked hard in class…that I am ready to go on to college.” As we continued to talk about what her grades communicated to a college, she did state that her grades indicated that she learned the material, but she circled back to the theme of effort, “My grades show that I am organized and that I can work hard, that I take it seriously.”

The parent and the grade. The parent participant in the preAP Biology case study is a forty-six year old male, who works as an electrician. He and his wife have two children, an older
daughter who already graduated from Northern Maine High School and the younger daughter, Karen. On the afternoon of the interview, Karen accompanied her father and chose to sit in the corner of the conference room, reading a book. He seemed very willing to be interviewed for the research study and indicated that he was happy to help out.

Mr. Smith (a pseudonym) described his attitude toward his own high school career as unconcerned. “I didn’t stress about it and didn’t take school seriously. I took vocational courses and didn’t take anything too hard.” He notes that thirty years ago, there was not as much emphasis on college and so he never felt pushed to continue his education. Mr. Smith states that his grades were fine, although he didn’t worry much about them. “Mostly As and Bs, but I took basic level classes and didn’t have to work too hard.”

“Her grades are important”: The parent and grades. Overall, Mr. Smith identifies Karen’s grades as important, mostly because he hopes that she can get into a good college and have a successful career. Throughout the interview, it was clear that Mr. Smith viewed grades as a gateway to Karen’s future and career. He consistently referenced how Karen’s grades would look to colleges. “Her grades are important and she knows that we expect her to take advantage of her education because later on, that will pay off. She does extracurricular things and has friends, but we expect her grades to stay good. If her grades go down, well then something has to go, and it is going to be the extra-curriculars. Nowadays, you have to put in extra effort.”

When asked about Karen’s attitude toward her grades, he noted several times that she worried a lot about her grades; “She is harder on herself than I would be, and her grades are never good enough. She is always looking to do better, so I mean, that is not a bad thing.” However, as Mr. Smith talked about Karen’s attitudes toward her grades he appeared to be mystified by her responses; “When she is getting a ninety-four and she is complaining, ‘Well I
should have had that right’...well, you know when I was in school, a ninety-four, YES! So, it is kind of frustrating for me sometimes, actually.” Mr. Smith corroborated Karen’s earlier comment that she and her parents rarely experienced any friction around her grades. “The only time there is friction is when she thinks she got slighted on a grade and she is upset. But she takes care of her grades and so we never have to get after her.”

During the interview, Mr. Smith did note that he believed that there is too much emphasis on grades today. “Grades, a lot of emphasis goes on grades, but I don’t know that at the end of the day that one person is just understanding it a different way than another person. It is hard to put a single number on things.”

“There is a lot going on with that number”: Grades as communication. Several times during the interview, Mr. Smith noted that grades, as a single number, often did not always communicate much. Although he noted that his daughter’s grade average indicated that “She understands, on the whole that ninety-four shows that she understands,” he also noted that “There is a lot going on with that number, there might be understanding but there might be stressors. Kids from broken homes and other stuff...a kid might be smart as a whip but there is a lot going on.” He states that one of the jobs of the school is to create a grade, “…you have to put a number on something, to have a compass on how well that person is doing.” However, he again refers to the possible limitations of the single number; “…but without knowing what is going on in that person’s situation, it is hard. There might be a divorce or a death in the family…it doesn’t make them any less smart but how can they concentrate?”

The interview data related to grades as communication indicated that Mr. Smith viewed the primary communicative purpose of grades as indicators of readiness for college. One of the most consistent themes throughout the interview was that he viewed grades as the way forward
for his daughter “into a good job for her future…a stable income.” When considering grades as messages to colleges, Mr. Smith noted the complexity of the communicative properties of grades, rather than their limitations. He believes that grades can communicate ability as well as effort and time management skills; “Somebody with a good grade, the colleges look at them and think well, this person has put themselves out there and have done the extracurricular things and still managed. I think she could probably manage whatever we give her. And then, when she has a job, they will think they could give her extra, over and above, and she could handle it.”

From his perspective as a parent, Mr. Smith viewed a grade as a sort of communicative balance sheet between teacher and student. He indicated that a grade told him that “the person teaching is getting across to the student and they are both on the same page. If they are communicating and everything is working fine, then that grade should work, it should come out.”

**Summary of themes from preAP Biology case study.** According to Mrs. Green, this case study of the preAP interaction on grades and grading is typical of many students in upper level courses. The teacher has high expectations of the class and their investment in the course. She expects them to be equally invested since she is highly invested in the development of the coursework. According to Mrs. Green, these students tend to be active in the classroom, proactive about areas of confusion, and concerned about their grades. Based on the interview data, this student exemplifies many of those qualities. She loves the topic in the course, enjoys participating in the classroom, and is very aware of her grades and her current GPA. In fact, Mrs. Green indicated that often the students in this class could be described as “grade grubbers” who were constantly concerned about every point on their omnibus grade. Mrs. Green did not identify
Karen as a “grade grubber” but did indicate in the interview data that Karen was very aware of her grade.

As the primary audience for the grade, Karen does tend to fit the class stereotype of mostly concerned with the grade as a number. Although she states that the learning is important, the majority of her statements during the interview identify grades as payment for her work or as a ticket to the future. She only occasionally connects the grade to the learning or understanding in a course. To support the theme of grades as payment for work, Karen states that she is a fan of effort grades since she tends to apply a lot of effort to her academic work and takes it seriously. She enjoys science but even in a class that she enjoys, her emphasis is on the grade and the effort that she puts into her work rather than the understanding. Karen seems linear in her thinking about grades as a communicative tool. She expects the teacher clearly identifies the learning or skills that she needs to develop. She puts effort toward that learning and should, if everything is in alignment, do well on that test or project since she will put effort into it, and her grade will reflect that effort.

The other audience member in this case study, Karen’s father, seems more aware of the complexity of the grade as a single number that may, or may not, accurately reflect a student’s ability or understanding. Mr. Smith noted that external factors could get in the way of a student’s ability for focus and effort and that grades might not reflect all students accurately. Similar to the responses given by his daughter, Mr. Smith views grades as a ticket to the future and his responses indicate that he expects her to take her academic work seriously since it will form the foundation for her financial future.

**Case Study: Applied Biology.** The course under examination for the second case study is an Applied Biology course. This is a sophomore level course and the curriculum is designed to
give students a foundation in the biological sciences. At Northern Maine High School, applied courses have a lower reading and homework expectation than the college-preparatory or pre-AP courses. Mrs. Green teaches one section of this course. It is a year-long course of forty-five minute class periods.

I completed a classroom observation early in the grading period, taking field notes on general classroom atmosphere and interactions between the instructor and the students. The class is an early afternoon class, and on both days there are ten students in attendance. The class includes two female students and eight males. The two female students sit in the front row of the classroom at lab tables with two male students. One student sits in the second row of the classroom, at the extreme left end of the row, while the other three male students sit across three seats in the fourth row of the room. As the students enter the room, there is little conversation with Mrs. Green as they take their seats. Mrs. Green asks the three students in the back of the room to separate so they are not sitting together. She makes this request twice and they are slow to move, but do move to other seats.

At the start of the class, the four students at the front of the room are answering homework questions on genetics before today’s lab. The remainder of the students in the room have no materials out and are not participating in the review. Mrs. Green targets her questions at the students at the front of the room and moves toward them as she asks questions and responds to them. There is little cross-talk in the classroom. The majority of the classroom talk is from Mrs. Green. When the lab on genetics begins, the class becomes a bit more talkative as Mrs. Green hands out instructions and materials for the lab. The students in the front row get their lab instructions and start to move around the room to the various stations required to complete the lab. Mrs. Green moves to the tables at the back of the room and encourages the students to start
their work, reviewing the lab instructions. For example, Mrs. Green attempted to get the students focused on their task, “Alright guys, once you have the tape on, you need to label and start shaking and taking notes on the results.” The students responded with questions or by starting the task.

As the period went on, Mrs. Green needed to re-focus the attention of most of the members of the class on the lab task, often reminding them that they had the instructions for the lab in their materials and should be referring to that when they needed guidance on a next step. The majority of the teacher’s speech during the lab was directive and intended to focus the students on their task; “coins down,” “eyes up and looking at me,” “quiet,” “get going,” “stop talking, and “pay attention up here.” Mrs. Green’s voice is firm and occasionally sharp as the period goes on and students have only completed one or two of the ten steps of the lab. The students appear to be comfortable with Mrs. Green and as they respond to her attempts to re-focus them, they are calm and undisturbed. For example, one student responded to her reminder to stop talking and starting working with “Well, I haven’t seen him in a week since he was suspended so I just wanted to be friendly.” The student was smiling as he said this, and Mrs. Green smiled back, although her response was, once again, directive, “Ok Stall-Guy, just get to work.”

The overall atmosphere in the classroom was positive and the students appeared comfortable with Mrs. Green. Their body language and their responses to her instructions or questions were relaxed and did not indicate any tension or anxiety about the classroom or the teacher. Although Mrs. Green needed to be task-oriented and directive to keep the students on task, her voice was calm. Even as the period went on and her voice and words indicated some frustration with needing to re-direct student attention to the lab (e.g., “Ok, will you please stay
focused on class? Get going,”) her smile and body language indicated weariness rather than annoyance or anger.

**The teacher and the class.** Mrs. Green has taught the Applied Biology course for two years and she will be teaching it again next year. Both biology courses, preAP and Applied, have similar curricula, but there is a difference in the number of learning goals to be met over the course of the year as well as differences in how those learning goals are assessed. According to Mrs. Green, “I want them [the Applied Biology students] to learn the same principles, they will not learn it as in depth but that is why it is an applied level class. The assessments are different. Same material is assessed just on a basic, knowledge level. I tend to give shorter tests on more concrete material. They don’t do well with a lot of writing. They may be able to tell me verbally, with some coaching and questions, but they can’t write very well.”

**“This class is my greatest struggle”: Applied Biology students.** One of the first descriptors of this class that Mrs. Green gave in the interviews is that “This class is my greatest struggle. It is so hard to reach them and I am constantly trying to keep them moving forward.” Several times she noted during the interviews that one of the elements that makes the class difficult for her is the mixed ability levels within the single classroom. Mrs. Green stated, “Some of the kids could have been in college-prep, or even preAP, but they don’t want to do the work and they sit right next to a student who can barely read at a fifth grade level, or a student with profound learning challenges or emotional problems. It can be really hard to do what is best for everyone in that one room. And often I just can’t.” However, the theme most present in Mrs. Green’s description of the class was her frustration with their work ethic. “I spend more time trying to find a way to make sure that they can pass. Some of them are great and I don’t have to worry, but for many of them, they just don’t do their work, in class or at home. In fact, I almost
never give homework since they just don’t do it.” When I showed her my field notes on the difference in on task behaviors between her front row students and the rest of the students in the back row, Mrs. Green responded, “Yes, sometimes I just get tired of pushing them. The front row will answer me, so I tend to ask them questions just to keep my sanity. The rest of them would respond if I called on them but if I asked them to do something independently, half of them would sit and stare and half of them would maybe start to do it, but not for long, while the front row just did it.”

Although the class could be frustrating for Mrs. Green, she also identified developing relationships with these students as one of the sources of satisfaction for her as a teacher. During the interview on this course, Mrs. Green noted that she made every attempt that she could to build a relationship with her students. “They sometimes are more needy, emotionally and socially, than my other students. It can be hard to understand them or to feel like I really connect with them, so when I make a connection, it just makes it all worthwhile.” Mrs. Green identified one particular student that was difficult to communicate with at the beginning of the year. “It took some time but he and I built a relationship throughout the year, to the point that he was showing me the painting that he did in Art and talking to me about different classes and what he was doing outside of school...it is funny because when you think of everything you do in the course of a year and the relationships you build and that was probably one of the best ones. Not because it was spectacular or lots of great conversation but just very difficult...he is a very difficult kid to get to and I was really happy to get to know him better,” she said.

“Passing is good enough”: Students and grades. Regarding grades and the students in her Applied Biology course, Mrs. Green notes, “Most of them really don’t care. I have a couple who want to do well and who check on their grades pretty often, but the rest of them really don’t
care. Passing is good enough. And even for a couple students, even passing isn’t something they care about.” When I asked Mrs. Green what she thought her students thought grades meant or communicated, she responded, “I really don’t know. Mostly I think they believe a grade means they sat in the chair or came to school. Usually, they just care that they passed, that the number is at least a sixty-five.”

Mrs. Green is working on moving the course to a standards-based assessment system, but she identified some concern about how that would influence the students in her Applied course. She stated, “I am worried about them. I do the effort check [on homework], which I hate doing, but they need to see that they are going to get an eight for the quarter...do you know how little you have to do to get an 8 for the quarter?! And I honestly think that was after I excused all daily work....they wouldn't make up tests or make up labs.” Mrs. Green identified the incomplete work as the primary reason for students struggling to pass her class. “There is a lot of not having their work done but I have accommodated for that by making sure that they have time to bring it later…but I am still chasing work right up until the last day of the quarter,” Mrs. Green said. I asked Mrs. Green about her greatest frustration around grades and grading in this course and she replied, ”I care more than they do. And I am tired of it, but I don’t know what else to do. I can’t just let them fail, but sometimes I just give up for awhile. I am sick of caring when they obviously don’t.”

“Always glad to see her come in”: The Applied Biology student participant. Mrs. Green has positive feelings about the student participant for this case study. Mrs. Green reflected on her relationship with Nancy, “I think it was a good relationship, a good student teacher relationship. She is an easy kid to talk to and is likeable. She is a nice kid, I enjoyed having her in class.” Mrs. Green identified Nancy as having supportive grandparents who were her guardians, but that
Nancy sometimes struggled with attendance and completing her work. Mrs. Green noted that at the start of the year, Nancy sat in the front row and was very attentive and concerned about her grades. However, as the year went on Nancy started missing school more and more frequently. “When she was with me, she paid attention, she was that front row crowd for half of the year...at the end of the year, she moved toward that back group, and it was something that was reflected in her grade as well. She missed a lot of school, she misses a ton of school, and that is a real detriment for her,” Mrs. Green said. When asked about Nancy’s attitudes toward her grades, Mrs. Green responded, “Well like any kid if she had put more effort in, then she would have done better. I think she does struggle with school but she definitely could have had a more solid grade in my class had she tried harder. She seemed to care about her grades. She was happy with anything above a seventy-five.”

The student and the grade. The student participant in this case study is a fifteen year-old female. Nancy (a pseudonym) was willing to participate in the study after the teacher participant asked her. She is one of only two females in the Applied Biology course. We were able to schedule the first interview within the first two weeks of the case study time period, but the second interview needed to be rescheduled several times. Nancy is interested in a career in welding and has taken an evening course in welding at a local community college. She is taking applied level courses. She identifies herself as a strong student in the sciences. Nancy stated that she has a difficult time with school, mostly due to bullying and what she calls the “drama of school.” She also admitted that her mother’s death from an illness five years has made her high school years difficult. Nancy loves her grandmother, with whom she and her brother live, but she misses her mother and often finds it difficult to attend school during holidays or family birthdays.
Nancy indicates that she enjoys her Applied Biology class and Mrs. Green. “I am pretty good in the sciences and I really like my Bio class. And Mrs. Green is super nice. She is funny and tells us stories about her kids and her husband. She is easy to talk to,” said Nancy.

“I am pretty happy with myself”: Student and grading. When I asked about her current GPA, Nancy indicated that she thought that it was around a seventy-three. “I am happy for the most part. If you try even your hardest, you might get a low grade but it is put in there with other grades and I look at the whole thing and I am pretty happy with myself for getting what I have gotten,” Nancy said. She said that her current grade in Applied Biology was “about a 85 or 86, really high.” When I asked her if she checked her grades regularly on PowerSchool (online reporting) she said that she checked them usually once a week. When I asked Nancy if she worried about her grades, she responded, “Not really, well maybe in classes that are hard for me, but overall when I am not doing good in a class, I just work harder at it and the grade usually comes up. As long as I am passing, it is ok.” Later in the interview, Nancy revealed that she had failed a couple courses last year and had to take summer school. When I asked her if she had been upset about failing the courses she answered, ”A little I guess, but not a lot. I was having trouble in school with bullying and stuff and I just couldn’t concentrate at home or at school. So summer school was easy. I got most of my work done before everyone else. It was easier to concentrate away from all the drama.”

Nancy identified grades as important for showing what a student can actually do or understand in a subject, however, she does not believe that grades currently reflect an accurate picture of student learning. “The way gradebooks are now…it doesn’t show if you are struggling with it or not. You can be doing well in something but you don’t do your work and it brings your grade down. If you understand how to do something they should give you a test or a project or
something to prove it and that is what you get for a grade and then you move on,” Nancy said. In her second interview on the same topic, Nancy developed her beliefs about the need for better gradebooks, “There are some people that judge you if your grade is low, that you aren’t smart, but if it is high, they think you are a genius. But it doesn’t maybe mean that. I think that a grade really just says whether or not you get your work in. Not what you know,” Nancy stated. When I asked Nancy about whether or not effort should be part of a grade, she said, “Well, maybe a small part, but not very much. If I know what I am doing and I can pass my test or my project, then why should I have to do daily work? I don’t think effort should count in grades, but I also know that some kids want it. And kids need to take responsibility for their grades. They can’t blame the teacher.”

In a series of direct questions about how the teacher communicated with grades, Nancy responded similarly to several questions on the importance of relationships between the student and the teacher around grades. “A lot of teachers don’t approach kids when they are doing bad in class….they don’t tell you. I think my teachers should talk to me, not someone in guidance,” Nancy said. When I asked Nancy if she understood how Mrs. Green constructed her grades, she indicated that she had a syllabus with the explanation on it, but “I wish they would talk to us more about it. Teachers should talk to us about how they put things in and why so we can understand better.” Additional responses indicated that Nancy felt that the relationship between the teacher and the student around achievement and grades was important. However, she did not place the entire onus for the relationship around grades on the teacher, “In all fairness, students can’t get mad at the teacher when they don’t do good. Most teachers want to help and they are just putting the numbers in the book, it is the students who need to do the work. The student needs to ask for help.”
The interview data suggested that grades played a straightforward role in Nancy’s life. She views grades as a way to get into college and to make money in a career. “Colleges care about a high grade. They want you to keep the number up so you can get accepted. They just look at the number,” Nancy said. When I asked Nancy what she thought the number communicated to the colleges, she responded, “I don’t know. I guess it tells them that you did your work in school. That you passed.”

“Students should hold more responsibility than they want to”: Fairness in grading. The process of grading was another focus of the interview questions and Nancy was very forthright when it came to her beliefs about fairness in grading practices. There were two primary themes that she returned to in all of our interviews. The first was that grades needed to take into account what students knew and could do rather than how much homework they completed. “A fair grade is a grade that tells someone what a student can actually do, not how much homework he does. Some kids can’t do homework at home for lots of reasons but they can pass the test, so the grade should only have the test in there, not the homework he didn’t do. He knows the stuff,” Nancy said in our second interview. The second theme that Nancy brought up three times in our interviews was that fairness in grading needed to include more responsibility on the part of the students. She felt that changes to grades to make them more fair would require an increase in responsibility on the part of the student to actually learn the material. In addition to her point that teachers were just the ones who were “putting the numbers in the book, it is the students who need to do the work,” Nancy said that “Students need to take more responsibility than they want to. School can be a drag but if you want to get a job or go to college, you need to try. You are the one who needs to know stuff and the teacher is trying to help.”
“A grade should show what I can actually do”: Grades as communication. When I asked Nancy what her grades in Applied Biology communicated to her and to her grandparents, she replied “they say that I do good in science and in Biology.” When asked for more detail, Nancy added, “A grade should show what I can actually do and I think my grade in Biology shows that I know my biology pretty good. I do good on labs and in class work. I understand the material.”

The guardian and the grade. The parent participant in the Applied Biology case study is the student participant’s grandmother. She is a fifty-one year old who identifies herself as Native American and works as the director of a nutrition program for the elders of the local tribe. She became guardian of her two grandchildren, Nancy and her brother, five years ago when her daughter passed away from an illness.

Mrs. Jones (a pseudonym) describes her attitude toward her own high school career (at Northern Maine High School) as troubled. Mrs. Jones states, ”I remember high school being a struggle and I dropped out a couple times, but I always went back. I was the first one in my family to graduate from high school.” When I asked Mrs. Jones if she can remember why high school was a struggle for her, she replied, “Well, I had a father who hated school and would rather that we just quit. It was outside issues, not issues with school. I did ok in school and I had a teacher and my [now] husband who was supportive so I finished.” Mrs. Jones notes that she was surprised when she requested a high school transcript six years ago to apply to an associate’s degree program that her grades were better than she remembered. “I had been out of school so long that I didn’t remember what my grades were in school. I didn’t think that I did very well. I don’t know why but I didn’t think that I was a good student. When I picked up my transcript, all my grades were As and Bs! It was quite surprising since I just remember the struggle,” she said.
“Well, as long as you pass”: The guardian and grades. Grandmother seems to be anxious for her granddaughter to do well in school because she believes that Nancy has a lot of ability, and she sets high expectations for her granddaughter’s grades. “I have to say that I set my expectations high…I tell her to think of college and to think ahead,” she stated. But she also found that her expectations were causing some tension between Nancy and herself, and she noticed that Nancy often struggled to keep her grades as high as her grandmother hoped. “But then I realized that she was struggling. She was having a lot of emotional struggles and I started to back off a bit and said, ‘Well, as long as you pass.’ As a family, we have to pay attention to the holidays and watching the emotions because of her mom,” Mrs. Jones said. She is very proactive about her grandchildren and wants the school to understand when the children are having a hard time. “Sometimes I need to call up and remind the teachers that it is hard for her around the holidays and her mother’s birthday. Give her some extra time and she will come out of it,” Mrs. Jones explained. She is relatively happy with Nancy’s grades and encourages Nancy to stick with it. “I just remind her that she can do if she just listens and pays attention. I want her to do well, but sometimes I just need to remind her to just pass. But even if she doesn’t there is always summer school,” Mrs. Jones said. “Ultimately, she just needs to graduate and go on to college. I want her to go to college.” When I asked Mrs. Jones about Nancy’s Applied Biology grade, she stated “I am happy with it since she is happy with it and I think both she and the teacher felt the grade was good.”

“It tells me if she understands”: Grades as communication. When I asked Mrs. Jones what she believed grades communicated to her as a parent, she replied, “Well it tells me if she understands, if she is paying attention. If it is low, then ok, maybe she needs some help or maybe she isn’t paying attention in class so we talk about it. I call the teacher to see what she says.”
Sometimes I get her help from a tutor.” As we discussed grades as communication, Mrs. Jones explained that she was often frustrated with the primary method of communication about grades at the school, PowerSchool. “Powerschool is a real problem. I check it but I get so frustrated with it. Things aren’t kept up and grades aren’t always in. Some teachers don’t put things in right away and I can’t tell if it is passed in or if they didn’t do it. And then the child tells me he did it, and then gets mad at me for not believing him. It causes a lot of problems but it is how I know what they are doing.” When I asked her if she felt there was a better way to communicate grades as Nancy progressed through the grading period, Mrs. Jones replied, “I don’t really know. The big thing is keeping the grades updated. I know teachers have a lot of work and kids and a life outside school and they get overwhelmed. It is a real struggle. But I can’t fix it if I don’t know.”

Several times during the interview, Mrs. Jones indicated that she believed that grades communicated that a student was ready to move on to a career. She hopes that Nancy will go to college and states that she often reminds Nancy how much her mother loved her college courses and how proud she would be of Nancy if she completed college. “Good grades will help her get into college. She is smart and she can do it, but she has to have passing grades. We know she can do it and she knows it. But I have to remember that you can’t be perfect all the time, so I try not to push too hard on high grades.”

**Summary of themes from Applied Biology case study.** Mrs. Green identified the Applied Biology course as her biggest struggle as a teacher. She identifies the primary problems for her as the mix of ability levels in the classroom as well as the tendency for many of the students to require what she called “a lot of hand holding and pushing on my part” to pass the course. One comment that Mrs. Green made several times in the interviews about this course was that “I care more than they do about passing the class.” According to Mrs. Green, these students
tend to require less homework, fewer reading assignments, and shorter, more concrete assessments so that they can attain a passing grade. Mrs. Green indicates that the students tend to be more concerned with passing the course than they are with getting a high grade. Based on the interview data, the student participant meets a few, but not most, of the qualities typical of the Applied Biology classroom. She is one out of only two female students in the course, and she seems to genuinely enjoy the class and is engaged in the topic. Nancy’s final grade for the grading quarter was good, but Mrs. Green noted that Nancy “moved to the back of the room as the year went on and just didn’t do as well.”

As the primary audience for the grade, Nancy states that she cares about her grades but also admits, “…that I could do better.” Overall, Nancy wants to do well in her courses, but also states that she at least wants to pass her class. She defines doing well as any grade above a seventy-five. Nancy views grades as tending to reflect “whether or not you do your work, not whether or not you know the material.” Nancy believes that grades currently do not clearly communicate what they should communicate, which is a student’s understanding of the topic rather than their work ethic.

Nancy’s grandmother, is very supportive of her granddaughter but appears to have mixed feelings about her granddaughter’s grades. On the one hand, she states that she expects her granddaughter to get high grades and do well in school, and she pushes her to do her best. But on the other hand, Mrs. Jones admits that pushing her granddaughter was causing a lot of tension between them and so she has chosen to simply encourage her to pass her courses. She identifies Nancy’s emotional struggles as getting in the way of her achievement in school and so she tries to be understanding even though she recognizes that Nancy could achieve higher grades. Mrs.
Jones views Nancy’s grades as a way for Nancy to move on to the next step, work or a career. She hopes that Nancy will choose to go to college.

Additionally, Nancy’s grandmother noted that the system that Northern Maine High School used to communicate grades in progress, PowerSchool, was a great source of frustration for her. Rather than communicating the current status of her grandchildren’s grades, Mrs. Jones identified PowerSchool as often being incomplete or out of date. This lack of accurate, up to date information has been an ongoing source of frustration for Mrs. Jones since she states that she cannot support her grandchildren if she does not know what is going on with their grades.

Summary of Research Question 2. This second research question examined the interpretation of grades through two polar case studies. The major themes that emerged from the data were: Acceptable Grades, Fairness in Grading, and Grades as Communication.

For each case study, the student and parent participants identified similar concepts of acceptable grades. The participants in the preAP case study indicated that an acceptable grade was a ninety or above, although the parent participant stated that a grade above an eighty-five was acceptable if his child was making an effort in the course. The participants in the Applied Biology case study indicated that an acceptable grade was at least a seventy-five, although both the student and her grandmother identified a passing grade (sixty-five) as acceptable.

The student participants had differing definitions of fairness in grading. One student identified fairness as grounded in clear expectations for assessments and student effort as the foundation for a fair grade. In other words, the student felt that if she knew what she was supposed to do for the assessment and she put in the time and effort, that a high grade was expected and therefore, fair. Alternatively, the other student identified fairness in grading as having less to do with student effort or work ethic, and about students being able to demonstrate
their learning on assessments. Both parent participants noted that grading was complicated by factors outside of the classroom and that grades could not fairly reflect all the potential variables in a student’s situation.

Finally, all of the participants indicated that grades communicated more than achievement in a single course. The participants identified grades as payment for effort in and outside of the classroom, as a ticket to college and a good career, or as an indication that a person was ready to move on to work or college. Additionally, both parents viewed grades as a method of judging the strength of the communication between the student and the teacher. If the student was satisfied with the grade and believed that the grade reflected their achievement in the course, the parent participants identified the student and teacher as being “on the same page” or “communicating well.”

The next section of this chapter focuses on the third research question regarding how the level of course influences the construction and interpretation of the grade. That section will further develop the similarities and differences in the data collected from each of the case studies explored in this section.

**Research Question 3: How does the level of the course influence construction and interpretation?**

The third research question for this study focuses on how the level of course influences the construction and interpretation of the grade. The two case studies for this research study were chosen as polar case studies, and each class represents one polar end of the curricular choices in sophomore Biology at Northern Maine High School. The data related to this question was collected during interviews with all of the study participants for both case studies. In addition,
some data on general classroom atmosphere and interactions was collected during classroom observations of each class.

The data is organized in the following categories: Construction of the Grade and Interpretation of the Grade. The first section on the construction of the grade will examine the following themes, Course Expectations and Assessments, Grading Practices, and Fairness. The section on Interpretation will be organized by the following themes: Students and Grades, Parents and Grades, Fairness in Grading and Grades as Communication. Data from each case study will be presented and compared in order to examine the similarities and differences for each course level. At the end of the section, the key themes from the data are summarized.

**Construction.** The construction of the grade is the method a teacher uses to build the omnibus grade at the end of a grading period. In this case study, the grading period is eight weeks, or one quarter. The teacher participant, Mrs. Green, is the same teacher for each of the two case studies. This section will compare Mrs. Green’s expectations and assessments for each course, her grading practices, and how she defines fairness in each of the polar courses.

**Course expectations and assessments.** Mrs. Green states that the core principles for student learning in these two biology courses are the same, but that the level at which those expectations are met are different. When I asked her to discuss the similarities and differences between the courses, she said “There are core units that both classes do and those units have the same learning goals. But the differences are in the speed that we cover stuff and how they are assessed. And I expect more from the preAP kids. That is why they are in preAP.” Mrs. Green stated that she expected preAP students to “do their homework and readings, complete labs, and study for tests.” Although daily work is only thirty percent of the students’ grade, she acknowledged that “I often don’t collect it. I expect preAP students to do their work. I am getting
them ready for AP next year and college later on. They need to get some good study and work habits. Don’t do AP if you don’t want to do the work.” Mrs. Green identified the assessments in preAP as a mix of labs, projects, and exams. Exams were often a mix of multiple-choice, short-answer, and extended response. She has made some changes in her assessments that she said the students do not like, “Well, now I make sure to give them diagrams or questions that they haven’t seen before. If they know the material, they can answer the question. It tells me who really knows it and who is just regurgitating information. But they hate it. It stresses them all out.”

Mrs. Green identifies different class expectations for her Applied Biology course. “Well, we move at a slower pace and I try to spend more time reading the materials with them. So many of them don’t have the reading skills to manage the textbook,” she said. Additionally, Mrs. Green noted that unlike her preAP course, she typically accepted work late from her Applied Biology students. In fact, she stated that she “…often spend time chasing them to get work to me. A lot of them wouldn’t make up labs or tests or whatever. If I am not flexible with due dates, most of them would never pass. I feel like I shove some of them through the quarter just so they can pass.” When I asked her why she thought there was such a difference in timely work for this course, she said “I think most of them just want the credit. They don’t care about the learning or the subject, they just want the credit so they can graduate. Of course, they still have to do the work, but sometimes they need to be reminded of that.” Mrs. Green does struggle with assessments for the Applied Biology class. “I think that is my greatest struggle, maybe my biggest downfall as a teacher, I can’t seem to find a way to assess them since they have such diverse learning styles and different ability levels,” Mrs. Green said. Typically, Mrs. Green creates assessments that are different from the assessments in the preAP course. “They need to
be more concrete. So the questions are more about the concrete information and less about the in-depth concepts. The tests are shorter and I don’t give them much writing to do. They don’t do well with writing essays so I try to avoid that,” she said.

**Grading practices.** During her interviews, Mrs. Green consistently reflected that she truly hated grading. This was true in all of the interviews that I conducted with her, regardless of the course that we were discussing. She preferred to talk about assessments rather than the process of grading or her grading practices. The grade in both courses is constructed the same way: 40% exams and projects, 30% labs, and 30% daily work. The construction of the quarter grade is outlined on the course syllabi and was confirmed by Mrs. Green during her interviews. The primary differences are in the construction of the assessments that lead to the final grade as well as the tendency for Mrs. Green to accept late work, in some cases up to the last day of the grading period, from her Applied Biology students. One grading practice that Mrs. Green discussed during the interviews was a tendency to drop all homework grades if that student passed his or her labs and exams. “In good conscience, I cannot fail a student who didn’t need to do the daily work and ended up passing all the assessments and labs. I had one student who was failing until I took out the daily work grade, and her grade went up to an 83,” she said. She indicated that she was perhaps more likely to need to remove poor daily work grades for Applied Biology students, although she was willing to do the same for preAP students. “Well, I just am more likely to have students who don’t do homework in the Applied Biology class. In the preAP, most of them want to get as high a grade as they can, so they tend to do the work,” she said.

**Fairness in grading.** Mrs. Green defined fairness in grading as “everyone is evaluated with the same tool and on the same information.” When I asked her how her students would define fair, she responded, “Well, they would define unfair as a question or a diagram that they
had never seen before. But to me that is perfectly fair. I want to know what they actually know.” Additionally, as referenced in the previous section, Mrs. Green does not believe that it is fair for a student to fail a course based on homework grades. However, as we discussed the two courses that she taught, she noted that she does not use the same evaluative tool in her preAP course as she does in her Applied Biology course. “Maybe I am not fair. I think all my bio kids leave my class with the same basic information, but the preAP kids need to be able to be successful in AP next year. If I gave the same questions to my Applied students as I do my preAP, it would be a disaster. My Applied kids don’t have the same reading level and I don’t think it is fair to ask them to take a test designed for preAP,” she said. Mrs. Green identified a lot of tension around the concept of fairness in grading, stating “It is so hard. I want to be fair, but fair isn’t always the same. And then I worry that I am not fair. It is hard to define and each kid is so different.”

**Interpretation.** The interpretation of the grade is how the grade is perceived by the audience. For the purposes of this research study, the audience for the grade is the student and parent. This section will compare the audience data from both of the polar case studies.

**Students and grades.** Both students stated that grades were important to them. However, there was a significant difference in how each student defined acceptable grades. The preAP Biology student (Karen) identified herself as “stressed” about her grades and admitted that she checked her grades at daily. She stated that an acceptable grade was anything above a 93, and she made every effort to ensure that her grades were as high as possible. In her responses to interview questions on the importance of grades, Karen often referred to her grades as representing herself. “When my grades are good, I feel good about myself. I get frustrated when I get a bad grade, but I remind myself that I just need to try harder next time,” Karen said. The Applied Biology student (Nancy) also stated that grades were important to her and that she was
concerned about her grades. She checked her grades once a week and was happy with grades that were “in the 80s, but at least 75.” However, Nancy also stated that “in the end, as long as I am passing, it is ok. I would like to get a better grade, but sometimes….I am just done. And if I pass, that is ok.” Although both students identified themselves as concerned with grades for their future, the language that they used indicated different viewpoints. While Nancy was more likely to use the term “passing” to talk about her grades, Karen tended to use specific scores “95” or grades “all As” to talk about her grades.

**Parents and grades.** There was a tendency for the attitude toward grades by the student participant to be reflected in the responses of the respective parent participant. Karen’s father often echoed his daughter’s emphasis on the importance of high grades and was proud of her achievements. “She makes the high honor roll and always has above a 90. I never have to worry about her grades. In fact, she worries more than I do,” he said. He did indicate some discomfort with her emphasis on having high grades, however. “I don’t know if it is good that she stresses so much about it, though. Sometimes there is too much emphasis on grades. She gets upset and her grade was a 94. A 94! I would have been happy when I was in school to get a 94. It is kind of frustrating for me sometimes because she puts so much on herself,” Mr. Smith said. Mrs. Jones, the grandmother of Nancy, also indicated that she had high expectations for her granddaughter’s grades, but that her high expectations occasionally caused tension between she and her granddaughter. Like Nancy, she would prefer a grade above a C, but “sometimes, I tell her just pass the class. Get through it and pass,” Mrs. Jones said.

Both parent participants indicated that grades did not always reflect what was going on with the individual student. Both Mr. Smith and Mrs. Jones made comments about the difficulty of a grade to encompass what was going on with a student’s life outside of school. Mrs. Jones
discussed this in terms of her own situation following the death of Nancy’s mother. “She has struggles and sometimes those struggles are worse around the holidays or birthdays. And I need to remember that she is having a hard time and just try to support her,” she said. Mr. Smith noted that his own daughters “…are lucky to have a stable home life. But there are a lot of kids who have a lot going on at home and that gets reflected in their work at school. They might have problems at home and it is harder for them than for other kids.”

**Fairness in grading.** Both student participants indicated that fairness in grading was important, but each student had different ideas of how they defined fairness. Karen, the preAP Biology student tended to view fairness as related to the effort and attention that she put forward to complete an assessment. “Fairness in grading means that if you gave it your best effort and your answer isn’t completely wrong than you shouldn’t get it wrong, just some points taken off.” In answer to a follow up question on fairness, Karen noted that “I expect teachers to be clear on what is going to be on the test. I mean, if it is barely mentioned than it isn’t fair for it to be on the test.” Nancy’s responses on fairness tended to focus on performance on assessments rather than effort. She felt that it was not fair “if a student can pass all the projects and tests but doesn’t do the homework so she fails. Maybe she doesn’t have to do the homework.” When I asked her if teachers should remove the requirement for homework in her courses she agreed that they should, but added “but that puts more on the kids. That means that the kid has to know when they need help or when they need to do the homework. It puts more responsibility on the kids and some won’t like that.”

**Grades as communication.** All of the participants agreed that grades communicated more than course achievement. For Karen, the preAP student, grades communicated her willingness to work hard and her readiness for college. “If you don’t have good grades you might
not get into college, or if you get in, you might drop the ball and you won’t make it,” she stated. For Karen’s father, grades communicated her ability to manage her time, her work ethic, and her potential to a college and future employer. “With all that she has to do, her grades mean that she can manage herself and manage her time….that might mean to an employer that she can take on a lot of responsibility,” he said. Additionally, for Karen grades communicate something about herself. Karen identified good grades as making her “more confident” and “I feel good when I do good.”

Nancy views grades as a gateway to the future but she appears to view passing her courses as a sort of passage out of high school and into career. “Grades are important to communicate that you are ready. If you pass your classes, you move on and go to work or college,” she said. Nancy’s grandmother also indicated that grades communicated a readiness for career, although she was more specific about the kind of grades that she hopes Nancy will get, “Good grades will help her get into college. She is smart and she can do it, but she has to have passing grades.”

**Summary of Research Question 3.** This third research question examined how the level of course influenced the construction and interpretation of grades. The data indicates that the teacher’s construction of the grade is influenced by course level. She has similar grading procedures for both courses, but utilizes different assessments to build the course grades. She also tends to have higher expectations of the work ethic of her students in preAP Biology since she assumes that they are taking the course in order to prepare themselves for AP Biology and college.

The parent and student participants had some similarities in how they viewed the importance of grades, however, how they defined acceptable grades differed between the
participants at each course level. All of the participants viewed grades as communicating something about a student’s readiness for the future, but there were differences in how the actual numerical grade was viewed by future admissions counselors or employers. The participants in the preAP Biology case study tended to view a higher grade as more meaningful for the future, while the participants in the Applied Biology case study tended to view a passing grade as the vital element.

Finally, both parent participants indicated the difficulty for a single number to communicate the many variables at work in a student’s life. The participants both discussed the influence of the world outside the classroom as having an important role in the achievement of a student in a classroom.

**Summation**

This chapter analyzed the data collected to answer three research questions: How does a science teacher construct a grade?; How do audiences interpret a grade?; How does the level of course influence the construction and interpretation of the grade? This summation will be organized by the research questions, i.e., Construction, Interpretation, and Course level. The major themes for each research question will be reviewed and synthesized in order to prepare for the application of the theoretical framework in chapter five.

**Construction.** The data collected on the construction of the grade by the teacher reflects the tensions that the teacher experiences around both the process of grading as well as the communicative aspect of the grade itself. Two major themes emerged from the teacher data on grade construction; Antipathy for Grading and Tensions Around Grading as Communication. Mrs. Green enjoys the instruction and interaction of teaching, and does not mind developing the assessments that her to, as she states “understand what they have learned and what they haven’t.”
However, the construction of the grade or the need to create a single, omnibus grade at the end of the grading period is the source of tension for her. Mrs. Green hated grading but recognized that she had to do it. Interestingly, her hatred of grading was something that she was reluctant to admit. As the inventor of the message that is the focus of this study, Mrs. Green was an unwilling messenger.

One of the most consistent themes to emerge from the teacher data was the important influence that teacher/student relationships had on Mrs. Green and her experience of teaching and grading. The pattern in the data around the classroom and student-teacher interactions was an interesting mix of powerfully positive comments on her relationships with students in the classroom, and the equally powerful disappointment she experiences when the student interactions are difficult or negative. One of the most important findings as related to this study is that Mrs. Green identified that it was most likely that difficult or negative experiences would be connected to students’ grades. Since Mrs. Green views relationships with her students as a vital element of her teaching, the potential negative experiences she has around grades may making the construction of grades more difficult, or at be a reason for her antipathy for the construction of grades.

**Interpretation.** The major themes that emerged from the data on audience interpretation of grades were: Acceptable Grades, Fairness in Grading, and Grades as Communication. For each case study, the student and parent participants identified similar concepts of acceptable grades. The participants in the preAP case study indicated that an acceptable grade was an A, while the participants in the Applied Biology case study indicated that a passing grade was acceptable.
The student participants had differing definitions of fairness in grading. One student identified fairness as the teacher giving clear expectations for assessments and that student effort should play a role in the construction of the grade. Alternatively, the other student identified fairness in grading as having less to do with student effort or work ethic, and about students being able to demonstrate their learning on assessments.

Finally, all of the participants indicated that grades communicated more than achievement in a single course. The participants identified grades as payment for effort in and outside of the classroom, as a ticket to college and a good career, or as an indication that a person was ready to move on to work or college. Additionally, both parents viewed grades as a method of judging the strength of the communication between the student and the teacher. If the student was satisfied with the grade and believed that the grade reflected their achievement in the course, the parent participants identified the student and teacher as being “on the same page” or “communicating well.” All of the adult participants in the study noted that the meaning of a grade was complicated by factors outside of the classroom and that a true interpretation of a grade required an understanding of the many variables in an individual student’s situation.

**Level of Course.** The final research question examined how the level of course influenced the construction and interpretation of grades. The data indicates that the teacher’s construction of the grade is influenced by course level. Mrs. Green has similar grading procedures for both courses, but utilizes different assessments to build the course grades. Additionally, Mrs. Green has a success bias for her students but how she defines success may be different for each course. For example, she tends to have higher expectations of the work ethic of her students in preAP Biology course since she believes that she is preparing them for college,
while she is more tolerant of late or missing work from her Applied Biology students since she is supporting them in completing the course.

All of the participants viewed grades as communicating something about a student’s readiness for the future, but there were differences in how the actual numerical grade was viewed by future admissions counselors or employers. The participants in the preAP Biology case study tended to view a higher grade as more meaningful for the future, while the participants in the Applied Biology case study tended to view a passing grade as the vital element.

The next chapter will apply the theoretical framework, Rhetorical Transaction Theory, to the themes from the data in order to explore the interactions between the teacher as inventor of the message (the grade), the audience (students and parents) as interpreters of the grade, and the influence of the rhetorical contexts surrounding the communication of grading.
Chapter 5: Discussion

For the past one hundred years or more, educational specialists have been admonishing classroom teachers to standardize their grading practices (Schneider & Hutt, 2013). Most research into classroom grading practices indicates that both teachers and students are comfortable with the current system of “hodge-podge” methods of grade construction (Black & Wiliam, 1995; Brookhart, 1997, 1998, 2004, 2013; Carifio & Carey, 2012; Cox, 2011; Zhang & Burry-Stock, 2003). However, the current educational policy emphasis on standards-based reporting of academic achievement in American schools is forcing school districts to reconsider these hodge-podge methods and develop new, standardized methods of reporting grades that will allow the stakeholders for student grades to have a better understanding of what those grades communicate (Marzano, 2010; Stiggins et al., 2006). If the end goal of standardized grading practices is increased transparency of the message of the grade, then examining the purposes, methods, and meaning of grades for the primary stakeholders, the teacher and the student, may help educational researchers and practitioners to develop grading systems that serve the needs of those primary stakeholders, which would increase the likelihood of sustainable change in American schools (Szabla, 2007).

Since the majority of research on grading practices were quantitative survey studies on teachers’ classroom grading practices and experience with assessment practices (Betts & Grogger, 2003; Bonner & Chen; 2009; Carifio & Carey, 2012; Cross & Frary, 1999; Iacus & Porro, 2011; Planel et al., 2000), the goal for this research study was to examine the variables and details involved in the communication of grades as a message from teacher to a student and his or her parent. Rather than rely on teacher surveys of general grading methods and attitudes
about grading, this research study used a case study perspective since it affords for a more personal, dynamic, and context-specific examination of grading as a communicative process. Coupled with the case study perspective, the theoretical framework of rhetorical transaction theory was used to examine the interactions and influences on the construction and interpretation of grades. Rhetorical transaction theory assumes that communication is purposeful, persuasive, and interpreted within the specific situational contexts surrounding the inventor of the message and the audience (Bitzer, 1968). Additionally, this communication theory is transactional, which means that the interpretation of the message by the audience and the message’s effects on the audience are of equal importance to the inventor’s intention for the message. In the case of classroom grading, the areas for examination were the teacher as inventor of the grade, the interpretation of the grade by the audience (in this case, the student and her parents), and the situational contexts for the communication. The situational contexts for grading are variables like the teacher’s history with grading, the student’s history with grading, the parent’s experiences of school, the position of the teacher within the school as organization, and the relationship between the teacher and the student.

The general goal for the research study was to examine these complex interactions of communication in order to gain a better understanding of the process of grading from the teacher and student perspectives. If grades are primarily messages from the teacher to the student about his/her academic achievement in a course, then a more descriptive examination of grading from these primary stakeholders may suggest additional avenues for research and development of grading methods that support the communication at the heart of grading. Although my original assumptions were that the focus for grading as rhetorical message would be from the student, or audience, perspective (e.g., What does my grade say about me? What does it say to colleges or
employers?), the findings of this study suggested that the more powerful and complex rhetorical communication came from the teacher’s construction of the grade. For the teacher in this study, the transactional quality of grades as communication — that meaning is made between the teacher and the student and other audiences — is exactly what causes tension and ambivalence around grading.

This final chapter will synthesize the study’s findings on grading with communication theory and the literature on classroom grading practices. The chapter begins with a short section to review the main findings from the data from the two polar case studies and will be followed by an examination of those findings through the theoretical framework of rhetorical transaction theory. Following the interpretation of the research findings, implications for research and practice and the limitations of the research study will be discussed, and finally a personal action plan will place the research findings within the local framework of my school and classroom contexts.

Interpreting Grades as Communication: Review of Major Findings

Although the research study used three research questions, the major findings for these three questions are more usefully discussed within the categories of Construction and Interpretation, which are two of the three major elements of rhetorical transaction theory. The third element of rhetorical transaction theory, situational contexts are an interactive element in both Construction and Interpretation and will be included in the discussion of those two primary elements.

The first research question was on how teachers construct grades, and there were two major findings from the data. The first finding was the teacher participant’s antipathy for grading, which makes her an unwilling inventor of the message (the grade) in this rhetorical
transaction. Secondly, the teacher identified relationships with her students as vital to teaching, but she also identified her role as judge of students’ classroom achievement during the process of grading as a source of tension.

The second research question was on how audiences interpreted grades, and for this research study the primary audiences for the grades were identified as the student and his or her parent. There were three major findings from the two case studies; the definition of an acceptable grade, fairness in grading, and what grades communicate to various audiences. The last finding indicated that age and experience may play a role in the interpretation of grades as communication since all the adult participants in the study remarked on the impossibility of a single number to express the many unique variables in any student’s individual academic and social situation.

Finally, the third research question on how the level of course influenced the construction and interpretation of grades found that the teacher had different expectations and assessments for the two polar course levels, and that the different audiences from each course level (student and parent) also had different expectations and interpretations of grades. The findings for this third research question will be discussed within the two primary communicative categories of construction and interpretation.

**Construction.** The construction of grades is a complicated process, influenced by multiple personal, interpersonal, and contextual variables. When teachers construct grades, they have multiple rhetorical purposes for those grades. Grades are a teacher’s accounting of a student’s academic performance in a course. Grades can be used by teachers to motivate students to improve or can reward them for hard work. Grades can also be used to signal a teacher’s estimation of a student’s readiness for academic work in college. All of these purposes have been
identified by research as some of the many purposes that teachers have in constructing grades (Brookhart, 2004; Tierney et al., 2011; Weis & Fine, 2012; Zoekler, 2007). The data in this research study found that the teacher disliked the grading process, valued student relationships more than the role of student judge, and constructed grades depending on variables like the level of course being taught. When combined, these findings suggest that the importance of the relationship between the teacher and his/her students takes communicative precedence over other rhetorical purposes for grades, often influencing how grades are constructed.

**The unwilling messenger.** This research study supported earlier research studies (Allen, 2005; Barnes, 1985; Brookhart, 2004; Kain, 1997; Tichenor & Tichenor, 2005; Tierney et al., 2011) on the tension teachers experience around the construction of classroom grades. Although the teacher participant was very willing to discuss assessments and her students’ reactions to grades, she seemed to avoid direct discussion of the construction of grades and her attitudes toward grading. Eventually, Mrs. Green admitted that she hated grading, even though, as she stated, “…that likely makes me a bad teacher.” This dislike of the construction for the message is an interesting, and likely important, element of the rhetorical transaction of grades. On the one hand, the teacher knows that an important part of her job is to construct grades for each student. However, on the other hand, she dislikes grading and is reluctant to actually construct the grade. She is the unwilling messenger of a message that she must deliver.

In examining this antipathy for grading within the construct of rhetorical transaction theory, this identification of the teacher as unwilling messenger is a complicated element of grading as a form of communication. Typically, messages are constructed for a purpose designated by the rhetor. However, in the classroom grading situation, the findings from this study suggest that teachers may view grading as a necessary evil, they are constructing a
message that they do not wish to deliver but must deliver as an integral part of their jobs. This antipathy for the process of constructing the message, therefore, becomes one of the many situational contexts surrounding the rhetorical transaction of grading. This is not a process that the teacher enters with willingness or enjoyment, but rather she appears to experience strong negative feelings around the process of grading and constructing a final grade. This antipathy is not evident in any of the data on her attitude toward assessments, which are directly linked to grades, but is rather focused on the construction and reporting of the grade itself.

In order to understand the teacher’s antipathy for grading, it is important to examine the reasons for that antipathy. The data on her own history with grades as a student suggest no reason for a dislike of grading, since she identified herself as a good student who cared about her grades with no memories of strongly negative experiences around grades. When asked about her history with grading as a teacher, the potential root of the antipathy for grading takes shape. She identifies grades as the source of most of her negative experiences as a teacher. Mrs. Green states that her communications around grades as the most common reason for problems with students, parents, and the administration. This suggests that the role of the teacher as unwilling messenger is due to how the message, the grade, influences her interactions with the many audiences for grades.

Research in organizational communication indicates that in general individuals are not comfortable giving or receiving negative feedback (Cox et al., 2011). Research on the Mum Effect (Rosen & Tesser, 1970) may be relevant to the situation of the teacher as reluctant messenger. The Mum Effect is the reluctance or failure to communicate negative information (Cox et al., 2011). Common responses by the messengers of this negative information are to avoid delivering the message or to sugarcoat the message (Cox et al., 2011; Marler et al., 2012).
Typically, the messenger will evaluate the potential negative consequences of the message and engage in behaviors that reduce the psychological costs associated with delivering negative information (Marler et al., 2012).

Although teachers are not always intending to construct messages that deliver negative feedback, it is likely that unless a teacher is delivering a grade that indicates perfect academic performance to a student, there is potential for the student to interpret the message as negative feedback. Given that the two likely responses to the Mum Effect are to avoid delivering the message or to sugarcoat it, teachers may engage in construction methods that reduce the negative message of the grade in order to protect self-image or the relationship between the teacher and the student.

**Student advocate.** The most consistent theme in the data on the teacher participant was her identification of relationships with students as the most vital aspect of her job. This orientation toward the importance of student relationship supports other studies which found that teachers place a high value on relationships with individual students (Brookhart, 1994, 1998, 2004; Cizek et al., 1996; Cox, 2011; Zoekler, 2007). The teacher in this study consistently identified her relationships with her students as an important and rewarding aspect of her job. Throughtout the year, Mrs. Green stated that she attempted to build positive relationships with her students both inside and outside of the classroom. The process of building positive relationships is known in relationship research as affinity seeking (Kerssen-Griep, 2012). Affinity seeking is the communicative strategy of seeking similarities with another person in order to build a positive foundation for a relationship. Affinity seeking, or affiliation, occurs through both verbal and nonverbal strategies, and in the classroom teachers use interpersonal strategies like calling a student by name, asking questions about extracurricular events or family
vacations, telling personal anecdotes, and non-verbal strategies like smiling, open body language, and tone of voice (Kerssen-Griep, 2012). In this research study, the teacher indicated that she intentionally and consistently sought to develop positive relationships with her students, indicating that she places a high social value on these positive relationships.

The research on communication within the teacher-student relationship tends to focus on the importance for both teachers and students to form positive relationships that then support learning (Frymier & Houser, 2000; Kerssen-Griep & Witt, 2012). The teacher-student relationship is unique as an example of interpersonal relationships since it is not an equal relationship and it is bound by time and context (Frymier & Houser, 2000); however, many of the communication processes of friendship are relevant to the development of teacher-student relationships. Teachers and students meet at the start of the course, exchange information formally and informally over time, and develop expectations within the relationship for the behavior of the other (Frymier & Houser, 2000). Within the classroom, this relationship has a common goal of academic achievement for the student, where both the teacher and the student are working toward that goal. It is in this sense that the teacher can be viewed as advocates for their students. This role causes tension for the teacher who is then expected to take on the functionally opposing role as the student’s judge at the end of the grading period.

Research into teachers’ relationships with students also suggests that teachers have a “success orientation” or a success bias for their students when constructing grades (Brookhart, 2013; Cizek et al., 1996; Kalthoff, 2013). The data on the teacher participants’ attitude from this study also indicates that she has a success bias for her students. Mrs. Green occasionally removed or reduced the impact of daily work grades from a student’s course grade if the daily work grade caused a significant negative effect on the final grade. She also occasionally would
remove her students’ lowest grade from the construction of the final grade. However, she did not remove a students’ highest grades or remove daily work if it was boosting a student’s final course grade. This finding suggests that Mrs. Green views student effort through daily work worthy of reward. Research into teachers’ attitudes on student effort suggests that teachers tend to reward effort they can quantify (i.e., homework, attention in class, improvement over the school year) since they view this effort as indications of engagement in the learning environment (Howley et al., 2001; McMillan, 2001).

The teacher participant viewed grades as communicating student achievement in a course, but indicated that student achievement could be complicated by any number of variables. The issue of fairness in the construction of grades was based in what the teacher participant viewed as fair for an individual student. Although the teacher participant’s initial response to questions on fairness in grading was on a certain standardization of assessments and expectations, as the interview continued she stated that fairness was not going to be the same for every class or for every student. She indicated frustration with the impossibility of a single grade to encompass all the variables that influence an individual student and his or her grade. This is again consistent with previous research on teachers’ view of fairness in grading as grounded in construction methods that are fair for individual students rather than exactly the same for all students (Briscoe, 1991; Brookhart, 1993, 2004, 2013; Manke & Loyd, 1991; Stiggins et al., 1989; Tierney et al., 2011).

**Advocate or judge?** Interestingly, communication theory views both instruction and evaluation as inherently “face threatening” (Kerseen-Griep & Witt, 2012) and that individuals will often experience emotional distress as they attempt to save “face,” or their desired self-image, within the communicative interaction. If the teacher views him- or herself as a student
advocate, and research indicates that this is the role that teachers value (Brookhart, 1993, 2013; McMillan & Nash, 2000), then the very practice of constructing a grade may create tensions within a teacher who views herself as a student advocate rather than a judge. Additionally, any negative feedback from students or parents about the validity of a grade could be a face threat for the teacher, which could have negative influences on the communicative situation between the teacher and the student or, more generally, create additional intrapersonal tensions for the teacher around the grading that s/he must do on a daily basis. Mrs. Green identified complaints about her course or her grades as a major source of frustration for her. Mrs. Green identified herself as frustrated and sometimes angry about negative student reactions to her efforts to support them in academic achievement in her course. Additionally, she viewed herself as often caring more than her students did about their learning in the course.

**Relationships and the grading transaction.** Rhetorical transaction theory assumes that the rhetor, in this case the teacher, wants something from the audience, the student, in the communicative situation. Research into the relationships between college instructors and students suggest that both teachers and students have two primary needs in the relationship, competency and fellowship needs (Kerssen-Griep & Witt, 2012). The need to be viewed as competent in the rhetorical situation could explain a teacher’s need to have his or her grade viewed as valid. If grades are one of the most visible communications between a teacher and student, then the credibility of that grade could be viewed as an important element of a teacher’s competency. This is relevant from the point of view of the teacher as well as from the student. If the student does not view the message, the grade, as valid, and the student voices that interpretation, the teacher could view that response as threatening to his or her competency. In rhetorical communication, the development of credibility, or ethos, is a vital part of
communication (Borchers, 2006) and so the student’s perception of a teacher’s ethos in the communicative situation could affect all communication between the two individuals. Additionally, this is a potential threat to the relationship between the student and the teacher since the teacher may experience a sense of betrayal by the student’s negative response, which could affect the teacher’s experience of his relationship with the student, with all students, or with the job itself.

The findings on the tension for the teacher participant around grading as communication are all grounded in the relationship between the teacher and the student. Her desire to develop strong relationships with her students coincides with her desire to be fair to individual students since that fairness would need to be developed through an understanding of that student’s particular situation. Her success bias is also a function of her relationship with her students, since she values her role as advocate for students over her role as judge. Additionally, the teacher’s experience of tension around grades and grading most likely arises out of a sense of conflict in her role within the communicative situation — is she advocate or judge? Finally, this tension around the delivery of the message itself is a complicating factor for the communicative situation since the likelihood that the audience (any of her students or their parents) will respond negatively to the teacher’s message is relatively high in any given grading period. This negative response, or negative responses, to her message must influence her emotional state during the communication (Kierrsens-Griep & Witt, 2012). In other words, the teacher’s desire to maintain positive relationships with her students is potentially threatened each time she grades students, and that potential for disruption of the relationship is likely to cause emotional distress that would influence her communication.
Course level differences in construction. The data from the research study indicated that the teacher’s construction of the grade was influenced by the level of the course she was teaching. Overall, her expectations for her preAP Biology students were that they understood that their choice to take a preAP course required them to maintain a strong academic work ethic in order to be successful. Additionally, she stated that she assumed that they were taking the preAP course in order to prepare themselves for AP Biology and for college. Therefore, she indicated that she expected her preAP students to complete daily work assignments, labs, and projects on time and with an age-appropriate attention to detail and thoughtfulness. Although the science department at Northern Maine High School has common grading practices which requires teachers to construct grades using standardized percentages for three assessment categories, the teacher participant does use different assessments to build course grades. Her expectations for her Applied Biology students were different since she stated that their diverse learning needs required more flexible expectations. She indicated that although the basic learning goals for the two Biology courses were the same, the level at which the students were expected to comprehend the material was different. Additionally, she indicated that she created assessments and labs that were more concrete and teacher-directed for her Applied Biology students. Finally, her expectations for homework were reduced in the Applied Biology course and she was more likely to accept late work. These research findings support earlier studies on the reluctance of teachers to standardize grading practice across all of their courses, since they view standardization as removing their professional discretion to “boost” students who might have borderline grades but are making an effort to improve (Brookhart, 1994; Cizek et al, 2000; Randall & Engelhard, 2010).
Mrs. Green had a clear success bias for students in each of her Biology courses, but the shape of that success bias was formed by her different expectations for students in each of the two courses. Mrs. Green identified her preAP Biology students as motivated and interested in completing college-preparatory work. Therefore, her expectations for them were to develop skills that would serve them in a college or university setting. She spoke of dropping daily work grades if those grades were hurting students’ course grade, but that she did expect them to pass in work on time and to put forth effort in class and outside of it to be successful. Her bias for these students tended to be toward supporting them in developing what she viewed as long term academic work habits for college. In contrast, her success bias for her Applied Biology students seemed to be broad. She stated that many of her students in that course had learning difficulties or emotional issues that made academic work challenging. Her expectations for these students were to support them in successfully completing the course, since she identified that many of the students were there to “earn a credit” rather than because of an enjoyment for science. She hoped to encourage them to enjoy science, but was more interested in supporting them in passing the course. Her success bias for these students led her to re-read short essay responses in order to “hunt for something to give them points” and to accept work until the end of the grading period. Additionally, since many of her students in Applied Biology struggled with reading comprehension, she often read portions of the textbook to them in order to help them understand the material. Writing assignments were limited since she found that open-ended essay questions often were difficult for her students. This finding also supports earlier research into the diverse grading practices of teachers who may change assessment types based on student ability and content area, this is dismissively called “hodge-podge grading” by researchers (Brookhart, 1991,
1997, 2004; Cox, 2011), but these hodge-podge grading practices may have purpose in the interaction within the classroom context.

In applying the communicative theory to the construction of the message, there are clear differences in how the teacher constructs the message of the grade for each course level. These differences in course expectations and the assessments would be part of the rhetorical situation (Bitzer, 1968). In communication theory, the rhetorical situation is made up of many variables that influence the communicative transaction (Bitzer, 1968; Borchers, 2006). The personal history of each individual, the relationships between the individuals, the classroom environment, and the norms and values of the community are all variables in the rhetorical situation. These variables influence both the construction of the message as well as the interpretation of the message.

The teacher in this study identified a concern about the limitations of a single grade to communicate about the many variables that influence a student’s grade. She noted variables like ability, learning difficulties, home life, emotional status, and peer relationships as being some of those variables. Her awareness of these variables may lead her to make decisions about the rhetorical situation that are within her control. In other words, as the teacher, she has the power to decide what elements will be used to construct the grade, what instructional practices she will use, what assessments she uses, as well as what classroom expectations and norms that she constructs. The teacher cannot control for every variable in the rhetorical situation, but the data from this research study suggests that she attempts to control for some of the variables of the rhetorical situation that she does have power over in an attempt to support student success. Her construction of the grade, which is based on classroom instruction and assessments that she invents, is influenced by the variables that she controls in the rhetorical situation. Because of
this, classroom grades cannot be easily interpreted out of their rhetorical situation or local contexts. The message, the grade, was shaped by the inventor, the teacher, within a specific rhetorical situation. Additionally, if we use the influence of the Mum Effect (Rosen & Tesser, 1970) on the manipulation of variables in the communicative situation, the teacher may attempt to sugarcoat the information contained in the message through the manipulation of these variables. This desire to sugarcoat the message may be more likely in the case of the Applied Biology course, but certainly the construction of course expectations and assessments are relevant to both course levels. It also allows the teacher as inventor of the grade to maintain of positive relationships with her students since she is supporting them in a way that makes sense for their immediate needs — additionally it may reduce the amount of negative feedback that she gets for grades from the students, parents, and administration.

**Summary of the findings on construction of the grade.** There were two major findings in the research study’s data on the teacher’s construction of the grade, the antipathy for grading and the tensions around grading in the context of teacher-student relationships. Both of these findings relate to the primacy of relationships with students for the teacher-participant. Like all relationships, the teacher-student relationship can be a source of joy or frustration, and this was reflected in the data on the teacher-participant’s relationships with her students. Additionally, the teacher participant used different construction methods for different course levels. Overall, these differences appeared to be part of her success bias for her students. The teacher participant identified grades as the source of her greatest frustration as a teacher. The potential for negative feedback from students, parents, and administrators is highest around the topic of grades, which makes the process of grading a source of tension for the teacher.
The application of communication theory to the construction of the grade suggests that teachers and students tend to build relationships that are similar to friendships and that they will use interpersonal communication strategies to build those relationships. However, part of the communication required in the teacher-student relationship is the construction of a message, a grade, that has the potential to be viewed as negative feedback by the audience, the student and parents. Therefore, a teacher may construct the message, the grade, in a manner that reduces the threat to the teacher-student relationship. Rather than viewing a teacher’s success bias for students as part of how teachers construct grades, it may be that teachers construct grades using a success bias as a communication strategy to reduce threats to the teacher-student relationship.

The teacher in this research study valued relationships with her students but also understood that grading was an important element of her job. This tension between her need to maintain relationships with her students as well as perform her function as a judge of students’ academic achievement, made the process of grading a subjective and complicated process that was deeply connected to her identity as a teacher.

**Interpretation.** Grades are a primary communication vehicle between a school and the community. Research on stakeholder attitudes toward grades indicates that grades are assumed to reflect reliable messages about student achievement (Zoekler, 2007). The stakeholders for grades interpret grades for many different purposes. The focus of this research study was on the interpretation of grades by students and parents. Students use grades most commonly to assess their academic achievement, but also use grades for social purposes in order to understand themselves in relation to peers, school, and society (Pryor & Torrance, 2000). Parents use grades to evaluate their children’s academic achievement, but also to gauge how well the school is
meeting their children’s needs as well as preparing them for college and career (Pryor & Torrance, 2000; Weis & Fine, 2012).

The data for this research study indicated that both students and parents viewed grades as having multiple purposes and the research data centered around grades as communicating readiness for college and career. In addition, the data indicated that the interpretation of the grade by parents and students was influenced by multiple variables, including students’ past history with grades, family attitudes toward education, and the relationship with the teacher. The themes in the data on interpretation of the grade were on acceptable grades and fairness in grading. Finally, interview data from all of the student and parent participants indicated that they trusted the teacher to construct the grade. One parent stated that the teacher’s job was to “judge the students” and that it was not appropriate for students or parents to have any input into the construction of grades.

**Grades communicate multiple messages.** All of the participants in the study indicated that grades communicated more than simply academic achievement. Both student participants indicated that good grades gave them a sense of self-worth or achievement. This finding supports research by Brookhart & Bronowicz (2003) that indicates that high school students view grades as reflecting their abilities and achievement in the classroom. Additionally, the student participants viewed grades as communicating their effort in the classroom, which is reflected in the earlier finding for student effort as an element of fair grading. This finding supports earlier studies that grades are often viewed by teachers and students as being analogous to payment for work performed by the students (Brookhart, 1993; Barnes, 1985; Baron, 2000; Tippin et al., 2012). Additionally, in this research study, both parent participants also viewed grades as communicating a student’s efforts in the classroom.
The participants in both case studies indicated that grades communicated readiness for college and career. The parent participants for both case studies indicated that they hoped that grades communicated that their child was capable of completing college. Additionally, the preAP Biology parent identified high grades as communicating a student’s ability to manage his/her time, be organized, and engaged in academics. Recent research on middle class families by Weis and Fine (2012) suggests that American parents are increasingly concerned about their children’s ability to compete in the current global economy. Although neither parent participant indicated a high level of concern about grades in relation to admittance to a prestigious university, both parent participants did indicate that high school grades were an important element of their child’s economic future since grades communicated readiness for college.

**Acceptable grades.** The findings of this research study indicated that there were similarities in how the student and parent participants for each of the polar case studies defined an acceptable grade. The student and parent participant for the preAP Biology case study viewed acceptable grades as ninety or above, while the student and parent participant for the Applied Biology case study defined acceptable grades as seventy-five or above. However, both parent participants indicated more flexibility in their definitions of acceptable grades, giving a ten-point span, ninety to eighty and seventy-five to sixty five, respectively, as their definition of acceptable. This finding supports earlier research on the influence of individual family variables (i.e., socioeconomic variables, past history with grades and schools, etc.) as influencing the interpretation of the grade (Weis & Fine, 2012; Panofsky, 2003). Additionally, the definition of an acceptable grade may be influenced by what the audience perceives as the end product of that grade. In the case of the preAP Biology case study, there was a clear expectation from both the student and parent participant that the student would continue on to a four-year college. This
expectation would then be reflected in how the family defined an acceptable grade as at least an eighty-five. The Applied Biology student and her grandmother viewed a passing grade as acceptable, although a seventy-five was preferable. Several times the grandmother stated that she encouraged her granddaughter “…just pass. Get through it [the class] and pass.” This definition of acceptable grades as passing may reflect a view of the purpose of the grade as part of high school completion rather than preparedness for college.

**Fairness in grading.** This research study supported earlier studies on fairness in grading as being based in two elements; instructional practices that prepared the students for assessments and the students’ expectations for their final grade (Brookhart, 1994; Gordon & Fay, 2010; Tippin et al., 2012). Both student participants defined one element of fairness as how well the teacher prepared them for the assessments in the course. The preAP Biology student was very clear in her description of fairness in grading as “knowing what to expect” on tests and project assessments.

The second element for fair grading as defined by all of the study’s participants was the similarity of the course grade to the student’s expectation for the course grade. In other words, how closely the grade constructed by the teacher matched the student’s expectations for that grade was an important for both the students and the parents in terms of fair grading practices. These expectations are influenced by many variables, including former academic achievement, perceived ability, and perceived effort. The variable of student effort was mentioned by all of the participants in the study to varying degrees. The pre AP Biology student participant and both parent participants indicated that effort should definitely be an element of grading, and the Applied Biology student stated that it should be taken into consideration but not as much as it currently was in the teacher’s grading construction. These findings on the importance of effort in
the opinion of students and parents supports earlier research that found that parents and students prefer the addition of non-academic factors like effort and behavior in the construction of grades (Brookhart, 1997; Cross & Frary, 1999).

**Interpretation - differences in expectations and interpretations.** The data for this research study supported earlier research that suggests that the understanding of grades may be influenced by socio-cultural and socioeconomic differences (Panofsky, 2006; Weis & Fine, 2012). The participants in each of the polar cases studies differed in how they defined acceptable grades and what the actual number of the grade indicated to stakeholders outside of the high school. The participants in the preAP Biology case study viewed an acceptable grade as a grade in the nineties, or at the very least the high eighties. The demographic information gathered for these participants indicates a low-middle class socioeconomic demographic, with one parent having completed a four year college degree and the other completed vocational certification as an electrician. These participants also believed that high grades communicated to potential colleges and employers that an individual was organized, possessed a strong work ethic, and was capable of advanced study or responsibilities. This viewpoint supports the work of Weis and Fine (2012) on middle class families and the increasing emphasis that these families place on high grades for acceptance into college.

The participants in the Applied Biology course, whose demographic information indicates that the family is a working class, Native American family, had different expectations of acceptable grades as well as what those grades communicated to outside stakeholders. The participants in the Applied Biology case study viewed acceptable grades as seventy-five to eighty-five, but ultimately that a passing grade was important. Both participants in this case study indicated that the student’s future plans included college, but they did not state any link
between the student’s grades and acceptance into college. This suggests that the participants in this case study viewed the completion of the high school diploma as the meaningful element of communication to the colleges rather than the level of the student’s GPA. This data supports earlier research by Panofsky (2006) into how working class families viewed education and grades. The data from this study indicates that the participants viewed college as desirable but they did not view the student’s grades in school as communicating anything more than the credential of a diploma. The participants viewed learning as important but did not always view the grade as a reflection of the depth of the student’s understanding or skill in the course.

**Communication theory applied to the interpretation of grades.** One of the most important elements in rhetorical communication theory is the rhetor’s credibility to the audience in the rhetorical situation (Bitzer, 1968; Borchers, 2006). Rhetorical transaction theory views the interpretation of the message as equally important to the intention of the message itself (Bitzer, 1968). Rather than the message, or the grade, as existing as separate from the teacher as messenger, the audience’s trust in the messenger — the student and parent’s trust in the teacher — is a powerful predictor of the interpretation and the acceptance of the message by the audience. In the communicative transaction of classroom grades, this would mean that the teacher’s credibility to the student and his or her parents is vitally important to their interpretation and acceptance of the grade. Therefore, definitions of fairness in grading and acceptable grades are also influenced by the perceived credibility of the teacher.

In this research study, both student case study participants indicated that they were happy with their grade in their respective Biology courses. Additionally, both parent participants were similarly satisfied with their child’s course grade. In examining the data from the interviews for indications of participants’ perceptions of teacher credibility, I found that each case study
participant made a statement that suggested trust in Mrs. Green as the inventor of the grade. Both students stated that they “liked” Mrs. Green and the class. In addition, both students indicated that they felt comfortable with Mrs. Green and would go to her for support or help in the course. Mrs. Green similarly indicated that she had a positive relationship with both student participants. The preAP Biology parent participant stated that his daughter’s grade in the course “tells me that the teacher and she are on the same page, they are communicating well.” The Applied Biology parent participant stated that since her granddaughter “seems happy and satisfied with her [Mrs. Green] and the class” that she didn’t feel the need to contact Mrs. Green about her granddaughter’s grades. These statements suggest that in the case of this research study, both students had a sense of trust in the teacher and her construction of the grade, but additionally, that the grade met their expectations for the course.

An additional element to the rhetorical transaction is the message’s appeal to the audience’s emotions. This is also known as pathos appeals in rhetorical theory (Black, 1978). Pathos appeals are powerful elements of rhetorical transactions and are frequently employed in communication (Borchers, 2006). In this case, the student’s emotional sense of the classroom as well as of the teacher’s, would influence the interpretation of the grade. The positive relationships described by both the teacher as well as the student participants for this research study would be indicators of the positive emotional connections between the teacher and the students. This in turn influences the students’ perception of the teacher’s credibility as well as of the grade. Since neither of the two student participants viewed the grade as negative, we cannot know how much the emotional influence of the grade would have influenced the students’ interpretation of the grade.
Both the student’s emotional response as well as the student’s perception of credibility would likely influence the interpretation of the grade by the parent. The parent participant responses might indicate that the students’ expectation of the grades influenced their interpretation of the grade as fair. In other words, if the student was satisfied with the grade and the course, then the parent tended to be satisfied with the grade and the course. This could suggest that the parent’s interpretation of the grade as communication is interactive with their child’s interpretation of the grade. Rather than viewing students and parents as separate, but connected, audiences for grades in the communicative situation, perhaps there is an interaction between the student and the parent that co-creates the interpretation of the grade.

**Summary of the findings on the interpretation of the grade.** There were three major findings in the research study’s data on the interpretation of the grade by the audience; acceptable grades, fairness in grading, and grades as communication. All of these findings suggest that many variables can influence how a grade is interpreted by students and parents, despite the intention of the teacher in constructing the grade. Grades are viewed by these two audiences as having multiple meanings. Among the messages communicated by grades are student academic achievement, effort, ability, and sense of self. Additionally, grades can communicate a readiness for college and career, and hopefully signal a student’s potential for future economic stability.

The application of communication theory to the interpretation of the grade suggests that positive emotional relationships and teacher credibility are vital for the acceptance of a grade as a message by the audience. In rhetorical communication theory, three persuasive appeals, logos, ethos, and pathos, combine within the communicative situation to influence the audience (Borchers, 2006). In the case of classroom grades, the logos appeal would be the logic behind the
construction of the grade. However, rhetorical transaction theory suggests that of equal importance are the emotional (pathos) and credibility (ethos) elements of the communication (Bitzer, 1968). Therefore, the interpretation of classroom grades may rely less on the logic of the construction of the grade as on the trust that the student has in his or her teacher.

**Implications**

Although this case study research investigated the subject of grading from the teacher’s as well as the student and parent’s point of view, the findings on the teacher as inventor of the grade have the strongest implications for research and practice. Although assessment researchers often view grading as a simple, mechanistic process, the teacher in this study viewed grading as a highly subjective and complicated procedure, deeply connected to her view of herself as a teacher.

**Implications for research.** The findings of this research study supported earlier studies on the complexity of classroom grading. Given the limited nature of the case study research utilized here, larger studies should be conducted to develop theories and practices that take the complexities of grading into account. Rather than viewing grades as simple numbers or mechanical symbols of achievement, researchers should examine the many influences on classroom grading in order to support all stakeholders in the communication of grades. Educational measurement researchers should conduct mixed method research studies that compare their recommendations for classroom grading practices with the complex communicative and social relationships that teachers struggle with in the classroom. Studies that connect best practices in assessment and grading with the complex social relationships in the classroom would hopefully find a way forward for teachers and educational policy makers in the development of a grading system that met the needs of all stakeholders.
Additionally, educational researchers must begin to view classroom practices, even when they do not meet the standards of researchers’ best practices, as possibly having viable purpose within the classroom environment. The tone of several research studies reviewed for this study revealed a clear annoyance with classroom teachers for not following the advice of researchers on grading practices (Brookhart, 1993; Cizek, Fitzgerald, & Rachor, 1996; Cox, 2011; Cross & Frary, 1999; Randall & Engelhard, 2010). Although understandable, researchers may want to consider that classroom practices may have some purpose within the situational contexts of the classroom. This study indicates that although grades are, technically, “just numbers” or “data points,” to the classroom teacher there is a complex web of communicative interaction within the grading process that has the potential to damage his/her relationships with students, parents, and administrators. Therefore, what educational researchers dismissingly refer to as “hodge-podge grading” methods, may actually be a complex system of grade construction designed to reduce threats to the relationships that teachers value as educators.

**Implications for practice.** The teacher in this study stated that she hated grading. As a teacher, I can sympathize and understand that response. Although as a scholar-practitioner, I am interested in assessment and grading, I also find the process of grading frustrating and tense. For both the teacher-participant and in my own practice as a teacher, negative reactions from students are most commonly based in the communication of grades. This research study had several conclusions that suggest implications for practice.

First, many teachers experience tension around grades and grading. Some teachers, like the teacher participant in this study, may not want to admit that grading — this process often considered an integral element of teaching — can cause stress and tension both internally and in classroom interactions with students about grades. Recognizing that the process of grading can
be a major source of professional tension for teachers may be a first step for teachers to be able to talk openly about those tensions and how they can be managed. Perhaps groups of like-minded teachers could plan activities for teachers to support each other during the end of grading periods. Professional development that supports teachers in examining their own responses to grades and grading within a safe and productive discussion session could also support a faculty in developing honest exchanges about job stressors and how to manage those stressors.

Second, this research study as well as previous studies indicated that teachers view students as the primary audience for grades. If grades communicate multiple messages to multiple stakeholders, teachers may want to examine how their idiosyncratic construction of grades communicates to stakeholders. Additionally, teachers may want to examine if their construction of grades values students as the primary audience for grades. Teachers may want to discuss their grading practices with their students in order to get feedback on how students interpret the messages that the teacher is sending through the message of the grade. Student input could also suggest some ways to clarify course expectations, assessment scoring guides, and end of semester grade construction procedures for students. District faculty members could engage in examination and discussion of grade-level or departmental grading practices in order to clarify for themselves as well as for students what grades should communicate and how they should be constructed in order to support clear communication.

Finally, the most consistent conclusion in this research study among all the participants was the importance of positive relationships between teachers and students. Teachers prefer to view themselves in the role of student advocate and students (and parents) tend to view grades as credible if they come from a teacher that they find credible. Therefore, professional development that supports teachers in developing positive relationships with students both inside and outside
of the classroom may have a positive influence on the construction and interpretation of grades. Teachers who have positive relationships with students may be more likely to develop grading construction practices that support students’ academic development; and students who have positive relationships with teachers may be more likely to seek support from teachers and engage in classroom tasks that would give an accurate accounting of academic achievement.

**Research Limitations**

This research study had several limitations. First, the case study design limits the sample size and therefore the generalizability of the study to larger populations. Additionally, the sample was drawn from a small, rural Maine community which limited the demographic population from which the study was conducted. The student participant in the Applied Biology course was not a true reflection of the demographics of that course. Although she was a willing participant, she was academically successful in the course and, as one of only two females in the course, she was not representational of the male students who tended to struggle to pass the Applied Biology course.

As an organizational insider, I did have access to the site as well as a positive and trusting relationship with the teacher participant. Additionally, I have an understanding of the organizational context as well as of the current changes in grading policy instituted by the district. However, this close relationship to the site and the teacher participant may limit my ability to see alternative explanations for research findings. In order to control for some of my researcher bias, I did complete member checking with participants and completed the analysis of each case study as a separate entity prior to combining the data to examine the differences between the two polar cases. I attempted to reduce problems of validity and reliability through
my methodology, but it is unlikely that I could significantly reduce these problems as a single, novice researcher completing a case study project.

**Personal Action Plan**

This research study has made me more aware of my own communication to students and parents regarding grades. I suspect that I am often communicating inadequate information to my students as well as their parents, and I hope to work collaboratively with students next year to develop clearer communication about their academic achievement in my class. Additionally, I hope to develop ways to increase communication with parents throughout the year rather than simply at the end of the grading period through the limited message of the report card.

With the introduction of Standards-based Grading in our school, I hope to be a leader in my district around how we can make choices in how we communicate with grades in order to clarify the messages inherent in grades to students and parents. I plan to discuss my research findings with the administrators in my building and to plan professional development opportunity for administrators in my district, and perhaps other local districts, around the complexity of grades as communication and the tensions that teachers experience around grading. Secondly, as one of the teacher leaders in my building around issues of assessment and grading, I plan to present my findings to the faculty department heads as we move forward in developing a new grading system. Although there are some structures to the system already in place, we are still early enough in the process to be able to consider how we want to use grades to communicate to students and parents. Finally, I plan to contact the local campus of the University of Maine to plan a presentation to the current students and faculty in the college of education on grading, which is a topic of interest at the university given the many changes in assessment and grading in education.
References


Panofsky, C. P. (2003). The relations of learning and student social class: Toward re-
"socializing" sociocultural learning theory. In A. Kozulin, B. Gindis, V. Ageyev, & S.
Miller (Eds.), *Vygotsky's educational theory in cultural context* (pp. 411-431). New York, New York: Cambridge University Press.


## Appendix A: Case Study Questions

### Table 1: Case Study Questions

#### Research Question 1: How do teachers construct grades

<table>
<thead>
<tr>
<th>Case Study Questions</th>
<th>Data Collection</th>
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</thead>
<tbody>
<tr>
<td>What is the credibility of the rhetor (teacher) in this situation?</td>
<td>Teacher interview 1, Student interview 1, Parent interview</td>
</tr>
<tr>
<td>How comfortable or confident is the rhetor in the situation?</td>
<td>Teacher interview 1</td>
</tr>
<tr>
<td>What is the purpose of the message (grade)?</td>
<td>Teacher interview 1,2</td>
</tr>
<tr>
<td>What elements go into the construction of the message (grade)?</td>
<td>Teacher interview 1,2</td>
</tr>
<tr>
<td>Is the construction of the grade different for different courses?</td>
<td>Teacher interview 1,2</td>
</tr>
<tr>
<td>What values or beliefs does the teacher have about grading?</td>
<td>Teacher interview 1, 2 Student interview 1,2, Parent interview</td>
</tr>
<tr>
<td>What is the teacher’s power in this communicative situation?</td>
<td>Teacher interview 1, 2 Student interview 1,2, Parent interview</td>
</tr>
<tr>
<td>How does the grade impact teacher/student relationships?</td>
<td>Teacher interview 1, 2 Student interview 1,2, Parent interview</td>
</tr>
<tr>
<td>What history does the teacher have with grading? (Personal/professional)</td>
<td>Teacher interview 1</td>
</tr>
<tr>
<td>What are the social norms of the school community around grading?</td>
<td>Teacher interview 1, Observation, Document collection.</td>
</tr>
<tr>
<td>What is the school history around grading?</td>
<td>Teacher interview 1, Student interview 1, Parent interview, Document collection.</td>
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<tr>
<td></td>
<td>Teacher interview 1</td>
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</tbody>
</table>
Table 1: Case Study Questions

Research Question 2: How do various audiences interpret grades?

<table>
<thead>
<tr>
<th>Case Study Questions</th>
<th>Data Collection</th>
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<tbody>
<tr>
<td>What is the credibility of the rhetor in this situation?</td>
<td>Student interviews 1,2. Parent interview.</td>
</tr>
<tr>
<td>What expectations does the audience have for the message?</td>
<td>Student interviews 1,2. Parent interview.</td>
</tr>
<tr>
<td>What power does the audience have in the communicative situation?</td>
<td>Student interviews 1,2. Parent interview.</td>
</tr>
<tr>
<td>What is the purpose of the message (grade)?</td>
<td>Student interviews 1,2. Parent interview.</td>
</tr>
<tr>
<td>How is the message constructed?</td>
<td>Student interviews 1,2. Parent interview.</td>
</tr>
<tr>
<td>How reliable is the message?</td>
<td>Student interviews 1,2. Parent interview.</td>
</tr>
<tr>
<td>What impact does the message have on the audience?</td>
<td>Student interviews 1,2. Parent interview.</td>
</tr>
<tr>
<td>What impact does the message have on the relationships between stakeholders?</td>
<td>Student interviews 1,2. Parent interview.</td>
</tr>
<tr>
<td>What history does the audience have with grading?</td>
<td>Student interviews 1,2. Parent interview.</td>
</tr>
<tr>
<td>What are the social norms of the school community around grading?</td>
<td>Student interviews 1,2. Parent interview. Classroom observations.</td>
</tr>
<tr>
<td>Document collection.</td>
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</tbody>
</table>


Table 1: Case Study Questions

Research Question 3: How does the level of course impact the construction and interpretation of grades?

<table>
<thead>
<tr>
<th>Case Study Questions</th>
<th>Data Collection</th>
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</thead>
<tbody>
<tr>
<td>- What are the differences in demographics between the two cases?</td>
<td>- Student interview 1, Parent interview: demographics.</td>
</tr>
<tr>
<td>- What are the similarities and differences between the two cases regarding the construction of the grade?</td>
<td>- Cross-case analysis</td>
</tr>
<tr>
<td>- What are the similarities and differences between the two cases regarding the interpretation of the grade?</td>
<td>- Cross-case analysis</td>
</tr>
</tbody>
</table>
Appendix B: Recruitment Letters

teacher recruitment letter

February 1, 2014

To Whom It May Concern:

Hello, as you know, I am a doctoral student in a graduate program at Northeastern University. I am writing to invite you to participate in my research study about classroom grades as communication. The purpose of the study is to examine both the construction of classroom grades as well as the interpretation of grades by students and their parents. This study would take place over a grading quarter. You are eligible for this study because you teach both advanced and general levels of the same course.

If you decide to participate in this study you will be interviewed three times over the course of the study about the construction of grades. I would like to record the interviews in digital audio files for transcription. I would also, with prior notice, request to conduct classroom observations and to gather some course documents like syllabi and course expectation handouts.

Participation in this study is completely voluntary. You can choose to be in the study or not. If you would like to participate in the study or you have any questions about the study, please email me at Bourassa.j@husky.neu.edu, or at home, 768-5907.

Thank you.

Sincerely,

Jennifer Bourassa

Northeastern University

Doctor of Education Program
student recruitment letter

February 1, 2014

To Whom It May Concern:

Hello, I am a student in a graduate program at Northeastern University, and I am doing a research study at PIHS. I am writing to invite you to participate in my research study about classroom grades. The purpose of the study is to look at how teachers create grades and how students interpret, or understand, those grades. This study would take place over a grading quarter. You are eligible for this study because you are in one of the classes that (insert teacher name) teaches at PIHS.

If you decide to participate in this study you will be interviewed two times over the grading quarter about your grades. Each interview would last about 45 minutes and would be done at school at a time that works for you. I would like to record the interviews on my iPad in a digital audio file so that I can type up our conversation correctly for the study. To thank the students who participate in the study, I will be giving them a twenty-dollar gift card for iTunes or Google Play or Bradley’s Citgo.

Participation in this study is completely voluntary. You can choose to be in the study or not. If you would like to participate in the study or you have any questions about the study, please email me at Bourassa.j@husky.neu.edu, or at home, 768-5907.

Thank you.

Sincerely,

Jennifer Bourassa
Northeastern University
Doctor of Education Program
parent recruitment letter

February 1, 2014

To Whom It May Concern:

Hello, I am a student in a graduate program at Northeastern University, and I am doing a research study at PIHS. I am writing to invite you to participate in my research study about classroom grades. The purpose of the study is to look at how teachers create grades and how students and parents interpret, or understand, those grades. This study would take place over a grading quarter. You are eligible for this study because your child is in one of the classes that (insert teacher name) teaches at PIHS.

If you decide to participate in this study you will be interviewed once over the grading quarter about your grades. The interview would last about 45 minutes and would be done at the high school at a time that works for you. I would like to record the interviews on my iPad in a digital audio file so that I can type up our conversation correctly for the study.

Participation in this study is completely voluntary. You can choose to be in the study or not. If you would like to participate in the study or you have any questions about the study, please email me at Bourassa.j@husky.neu.edu, or at home, 768-5907.

Thank you.

Sincerely,

Jennifer Bourassa
Northeastern University
Doctor of Education Program
Appendix C: Informed Consent

teacher informed consent form

Informed Consent Form

Study Title: Examining Classroom Grades as Complex Communication

Principal Investigator: Jennifer Bourassa

Co-Principal Investigator/Faculty Adviser: Dr. Corliss Brown-Thompson

Northeastern University Doctor of Education Program

This consent form will give you the information you will need to understand why this research study is being done and why you are being invited to participate. It will also describe what you will need to do to participate as well as any known risks, inconveniences or discomforts that you may have while participating. We encourage you to ask questions at any time. If you decide to participate, you will be asked to sign this form and it will be a record of your agreement to participate. You will be given a copy of this form to keep.

PURPOSE AND BACKGROUND

The purpose of this research study is to examine classroom grades as a form of communication. I am interested in how teachers create grades and how grades are understood by both students and parents. As part of my dissertation, I would like to interview you during the grading quarter about how you construct classroom grades.

PROCEDURES

If you agree to be in this study, you will participate in the following:

• Three interviews
• Classroom observations

Collection of classroom documents related to grading in the course.

The interviews will take place at a time that is convenient for you during the grading period. The interview will take place at the high school, in your classroom or in the conference room.

RISKS
In the unlikely event that some of the interview questions make you uncomfortable or upset, you are always free to decline to answer or to stop your participation at any time.

**BENEFITS**

There will be no direct benefit to you from participating in this study. However, the information that you provide may help educational professionals better understand how teachers construct grades, and how students and parents interpret grades.

**EXTENT OF CONFIDENTIALITY**

Reasonable efforts will be made to keep the personal information in your research record private and confidential. Any identifiable information obtained in connection with this study will remain confidential and will be disclosed only with your permission or as required by law. The members of the research team and the Northeastern University Office of Human Subject Research Protection may access the data. Northeastern University monitors research studies to protect the rights and welfare of research participants.

Your name will not be used in any written reports or publications which result from this research. Data will be kept for three years (per federal regulations) after the study is complete and then destroyed.

**PAYMENT**

You will not be paid for your participation in this study.

**PARTICIPATION IS VOLUNTARY**

You do not have to be in this study if you do not want to. You may also refuse to answer any questions you do not want to answer. If you volunteer to be in this study, you may withdraw from it at any time without consequences of any kind or loss of benefits to which you are otherwise entitled.

**QUESTIONS**

If you have any questions or concerns about your participation in this study, you may contact the Principal Investigator, Jennifer Bourassa at 207-768-5907.
If you have questions about your rights as a research participant, you may contact the Northeastern University Institutional Review Board (IRB), which is concerned with the protection of volunteers in research projects. You may reach the board office between 8:00 AM and 5:00 PM, Monday through Friday, by calling 617-373-4588, by email at n.regina@neu.edu, or by writing: Northeastern University Human Subject Research Protection, 360 Huntington Ave, 960 RP, Boston, MA 02115.

**DOCUMENTATION OF CONSENT**

I have read this form and decided that I will participate in the project described above. Its general purposes, the particulars of involvement and possible risks have been explained to my satisfaction. I understand I can withdraw at any time.

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<th>Printed Name of Study Participant</th>
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<th>Signature of Person Obtaining Consent</th>
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student informed consent form

Informed Consent Form

Study Title: Examining Classroom Grades as Complex Communication

Principal Investigator: Jennifer Bourassa

Co-Principal Investigator/Faculty Adviser: Dr. Corliss Brown-Thompson

Northeastern University Doctor of Education Program

This consent form will give you the information you will need to understand why this research study is being done and why you are being invited to participate. It will also describe what you will need to do to participate as well as any known risks, inconveniences or discomforts that you may have while participating. We encourage you to ask questions at any time. If you decide to participate, you will be asked to sign this form and it will be a record of your agreement to participate. You will be given a copy of this form to keep.

PURPOSE AND BACKGROUND

The purpose of this research study is to examine classroom grades as a form of communication. I am interested in how teachers create grades and how grades are understood by both students and parents. As part of my dissertation, I would like to interview you during the grading quarter about how your classroom grade.

PROCEDURES

If you agree to be in this study, you will participate in the following:

- Two interviews, 30 to 45 minutes long
- Classroom observations

The interviews will take place at a time that is convenient for you during the grading period. The interview will take place at the high school, in your classroom or in the conference room.

RISKS

In the unlikely event that some of the interview questions make you uncomfortable or upset, you are always free to decline to answer or to stop your participation at any time.
BENEFITS

There will be no direct benefit to you from participating in this study. However, the information that you provide may help educational professionals better understand how teachers construct grades, and how students and parents interpret grades.

EXTENT OF CONFIDENTIALITY

Reasonable efforts will be made to keep the personal information in your research record private and confidential. Any identifiable information obtained in connection with this study will remain confidential and will be disclosed only with your permission or as required by law. The members of the research team and the Northeastern University Office of Human Subject Research Protection may access the data. Northeastern University monitors research studies to protect the rights and welfare of research participants.

Your name will not be used in any written reports or publications which result from this research, Data will be kept for three years (per federal regulations) after the study is complete and then destroyed.

PAYMENT

In order to thank you for your participation, I will give you a 20 dollar gift card for iTunes, Google Play, or to Bradley’s Citgo.

PARTICIPATION IS VOLUNTARY

You do not have to be in this study if you do not want to. You may also refuse to answer any questions you do not want to answer. If you volunteer to be in this study, you may withdraw from it at any time without consequences of any kind or loss of benefits to which you are otherwise entitled.

QUESTIONS

If you have any questions or concerns about your participation in this study, you may contact the Principal Investigator, Jennifer Bourassa at 207-768-5907.

If you have questions about your rights as a research participant, you may contact the Northeastern University Institutional Review Board (IRB), which is concerned with the protection of volunteers in research projects. You may reach the board office between 8:00 AM and 5:00 PM, Monday
through Friday, by calling 617-373-4588, by email at n.regina@neu.edu, or by writing: Northeastern University Human Subject Research Protection, 360 Huntington Ave, 960 RP, Boston, MA 02115.

**DOCUMENTATION OF CONSENT**

I have read this form and decided that I will participate in the project described above. Its general purposes, the particulars of involvement and possible risks have been explained to my satisfaction. I understand I can withdraw at any time.

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<th>Printed Name of Study Participant</th>
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Parent: Guardian Informed Consent

Informed Consent

Study Title: Examining Classroom Grades as Complex Communication

Principal Investigator: Jennifer Bourassa

Co-Principal Investigator/Faculty Adviser: Dr. Corliss Brown-Thompson

Northeastern University Doctor of Education Program

Dear Parent/Guardian:

My name is Jennifer Bourassa and I am a doctoral student in the graduate program at Northeastern University. I am asking for your permission to include your child in my research. This consent form will give you the information you will need to understand why this study is being done and why your child is being invited to participate. It will also describe what your child will need to do to participate as well as any known risks, inconveniences or discomforts that your child may have while participating. I encourage you to ask questions at any time. If you decide to allow your child to participate, you will be asked to sign this form and it will be a record of your agreement to participate. You will be given a copy of this form to keep.

PURPOSE AND BACKGROUND

The purpose of this research study is to examine classroom grades as a form of communication. I am interested in how teachers create grades and how grades are understood by both students and parents. As part of my dissertation, I would like to interview your child twice during the grading quarter about his/her grades.

PROCEDURES

This study will include two, 45 minute interviews of your child about his/her understanding of grades in the high school and in his/her class. Those interviews will be done at the high school in the conference room. The interviews will be digitally recorded. In addition, several general observations of your child’s classroom will also be conducted over the grading period.
RISKS/DISCOMFORTS

Your child may feel uncomfortable being interviewed or perhaps being digitally recorded. You are able to remove your child from the study at any time and your child will continue to receive quality instruction in the classroom.

EXTENT OF CONFIDENTIALITY

Reasonable efforts will be made to keep the personal information in your research record private and confidential. Any identifiable information obtained in connection with this study will remain confidential and will be disclosed only with your permission or as required by law. The members of the research team and the Northeastern University Office of Human Subject Research Protection may access the data. Northeastern University monitors research studies to protect the rights and welfare of research participants.

Your child’s name or your name will not be used in any written reports or publications that result from this research. Data will be kept for three years (per federal regulations) after the study is complete and then destroyed.

BENEFITS

There will be no direct benefit to your child from participating in this study. However, the information gained from this research may help education professionals better understand how students interpret grades.

PAYMENT

A small gift card for twenty dollars, in appreciation for their willingness to participate in the study, will be given to your child.

QUESTIONS

If you have any questions or concerns about participation in this study, you should first talk with the investigator Jennifer Bourassa at 207-768-5907.

If you have questions about your rights as a research participant, you may contact the Northeastern University Institutional Review Board (IRB), which is concerned with the protection of
volunteers in research projects. You may reach the board office between 8:00 AM and 5:00 PM, Monday through Friday, by calling 617-373-4588, by email at n.regina@neu.edu, or by writing: Northeastern University Human Subject Research Protection, 360 Huntington Ave, 960 RP, Boston, MA 02115.

**DOCUMENTATION OF CONSENT**

I have read this form and decided that my child will participate in the project described above. Its general purposes, the particulars of involvement and possible risks have been explained to my satisfaction. I will discuss this research study with my child and explain the procedures that will take place. I understand I can withdraw my child at any time.

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<th>Printed Name of Parent/Guardian</th>
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<tr>
<th>Signature of Person Obtaining Consent</th>
<th>Date</th>
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</table>
Informed Consent Form

Study Title: Examining Classroom Grades as Complex Communication

Principal Investigator: Jennifer Bourassa

Co-Principal Investigator/Faculty Adviser: Dr. Corliss Brown-Thompson

Northeastern University Doctor of Education Program

This consent form will give you the information you will need to understand why this research study is being done and why you are being invited to participate. It will also describe what you will need to do to participate as well as any known risks, inconveniences or discomforts that you may have while participating. We encourage you to ask questions at any time. If you decide to participate, you will be asked to sign this form and it will be a record of your agreement to participate. You will be given a copy of this form to keep.

PURPOSE AND BACKGROUND

The purpose of this research study is to examine classroom grades as a form of communication. I am interested in how teachers create grades and how grades are understood by both students and parents. As part of my dissertation, I would like to interview you during the grading quarter about your child’s classroom grades.

PROCEDURES

If you agree to be in this study, you will participate in the following:

• One interview, 45 minutes

The interview will take place at a time that is convenient for you during the grading period. The interview will take place in the conference room at the high school.

RISKS

In the unlikely event that some of the interview questions make you uncomfortable or upset, you are always free to decline to answer or to stop your participation at any time.
BENEFITS

There will be no direct benefit to you from participating in this study. However, the information that you provide may help educational professionals better understand how teachers construct grades, and how students and parents interpret grades.

EXTENT OF CONFIDENTIALITY

Reasonable efforts will be made to keep the personal information in your research record private and confidential. Any identifiable information obtained in connection with this study will remain confidential and will be disclosed only with your permission or as required by law. The members of the research team and the Northeastern University Office of Human Subject Research Protection may access the data. Northeastern University monitors research studies to protect the rights and welfare of research participants.

Your name will not be used in any written reports or publications which result from this research. Data will be kept for three years (per federal regulations) after the study is complete and then destroyed.

PAYMENT

You will not be paid for your participation in this study.

PARTICIPATION IS VOLUNTARY

You do not have to be in this study if you do not want to. You may also refuse to answer any questions you do not want to answer. If you volunteer to be in this study, you may withdraw from it at any time without consequences of any kind or loss of benefits to which you are otherwise entitled.

QUESTIONS

If you have any questions or concerns about your participation in this study, you may contact the Principal Investigator, Jennifer Bourassa at 207-768-5907.

If you have questions about your rights as a research participant, you may contact the Northeastern University Institutional Review Board (IRB), which is concerned with the protection of volunteers in research projects. You may reach the board office between 8:00 AM and 5:00 PM, Monday
through Friday, by calling 617-373-4588, by email at \texttt{n.regina@neu.edu}, or by writing: Northeastern University Human Subject Research Protection, 360 Huntington Ave, 960 RP, Boston, MA 02115.

\textbf{DOCUMENTATION OF CONSENT}

I have read this form and decided that I will participate in the project described above. Its general purposes, the particulars of involvement and possible risks have been explained to my satisfaction. I understand I can withdraw at any time.

\begin{tabular}{|l|l|l|}
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\textbf{Printed Name} of Study Participant & \textbf{Signature} of Study Participant & Date \\
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\hline
Signature of Person Obtaining Consent & Date \\
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Appendix D: Interview Protocols

Teacher Interview 1 Protocol

To help me with note-taking and data collection, I would like to digitally record our conversation today. Please sign the release form. For your information, the only person that will have access to these recordings is myself. Eventually, these recordings will be destroyed after they are transcribed.

In addition, you must sign a form that is intended to ensure your protection as a human subject in a research study. Essentially this document states that: 1) all information is confidential, 2) your participation is voluntary and you can stop your participation at any time, and 3) I have no intention of inflicting any harm to you.

Thank you for agreeing to participate.

I have planned this interview to last approximately forty-five minutes. During that time I have several questions that I would like to cover. IF time begins to run short, I may have to interrupt you or to change the topic of the interview in order to push ahead and finish the goals for the interview.

Introduction

I am speaking with you today because you have been identified as someone who has a broad experience of teaching students in different course levels. My research project focuses on the creation of a grade as a message to a student and his/her parents. I am particularly interested in how grades are constructed and how and what they communicate.
My study is not intended to evaluate your teaching techniques or your assessment choices. I am interested in learning more about how teachers construct grades, what they intend to communicate with grades, and how students and parents interpret those messages. Ultimately, I am interested in exploring how grades communicate information.

A. BACKGROUND

How long have you been teaching? _________________

How long have you been teaching at this school? _____________

What is your field of study? ______________________

What is the highest degree you attained? _______________________

1. What do you believe are the purposes of grades?

   Probe: What would you identify as your purpose for grades?

2. Do you experience any challenges around grading or the construction of a grade?

   Probe: How confident do you feel about your grading practices?
3. How have your grading practices changed over the course of your career?

Probe: What drives the changes to your grading practices?

4. Describe the expectations in your department for assessment and grading practices.

Probe: How do you know? (evidence)

5. Describe the expectations in the school or district for assessment and grading practices.

Probe: How do you know? (evidence)

6. How much training/education did you have in assessment practices in your teacher education program?

7. How much training/education have you had in assessment practices in professional development or workshop opportunities?

8. What is your own history with grades?

9. Overall, how would you describe your attitude toward grading?
Post Interview Comments/Observations:
Teacher Interview 2 and 3 Protocol

To help me with note-taking and data collection, I would like to digitally record our conversation today. Please sign the release form. For your information, the only person that will have access to these recordings is myself. Eventually, these recordings will be destroyed after they are transcribed.

At our last meeting, I had you sign a consent form. Although you do not need to sign another form, I wanted to remind you that: 1) all information is confidential, 2) your participation is voluntary and you can stop your participation at any time, and 3) I have no intention of inflicting any harm to you.

I have planned this interview to last approximately forty-five minutes. During that time I have several questions that I would like to cover. IF time begins to run short, I may have to interrupt you or to change the topic of the interview in order to push ahead and finish the goals for the interview.

Introduction

This is the second round of interviews, and we will be completing an interview for each of the courses under study for this research.

A. BACKGROUND

Title of the Course/Level of Course:
How many students are in the course?

Describe the class as a whole.

How long have you been teaching this course?

Probe: What are the benefits and challenges of teaching this course?

Do you teach the only course of this type or are there others in your department who teach this course also?

Are there common grading practices for this course?

Probe: How were those common grading practices developed or agreed upon?

How much power or influence did you have over the grading practices for this course?
B. COURSE GRADING

1. Describe the overall learning goals for the course. What differentiates it from courses with similar material?

2. How do you go about assessing whether students have learned course material?

   Probe: What assessments best capture what students are learning in your class?

   Probe: What assessments do you typically give in the course of a grading period?

3. How do you combine assessments into a single grade at the end of a quarter?

4. What, if any, non-academic factors do you take into account when finalizing a grade?

   Probe: How much weight do you think nonacademic factors should have in a student’s grade?

   For what reasons should nonacademic factors be considered in this course?
5. What do you want an end of quarter grade to say/communicate to the student participant?

6. What do you want an end of the quarter grade to say/communicate to the parent?

7. How important are the individual relationships with the student or his/her parents to the communication of the grade?

   Probe: How would you describe your relationship with this student and his/her parents?

8. Overall, how well do you think the grade for this course communicates the student’s achievement in your class?

   Post Interview Comments/Observations:
Student Interview Protocol 1

Date:

You have been selected to speak with me today because you have been identified as someone who is willing to discuss your thoughts and experiences on grades and grading. The purpose of this study is to look at how teachers create grades and how students interpret, or understand, those grades.

Because your responses are important and I want to make sure to capture everything you say, I would like to audio tape our conversation today. Do I have your permission to record this interview? [if yes, thank the participant and turn on the recording equipment]. I will also be taking written notes during the interview. I can assure you that all responses will be confidential and I will change your name when quoting from the transcripts. I will be the only one who has access to the audio recordings, which will be eventually destroyed after they are transcribed.

To meet our human subjects requirements at the university, you must sign the form I have with me. Essentially, this document states that: (1) all information will be held confidential, (2) your participation is voluntary and you may stop at any time if you feel uncomfortable, and (3) we do not intend to inflict any harm. Do you have any questions about the interview process or this form?

We have planned this interview to last about forty-five minutes. During this time, I have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. Do you have any questions at this time?

A. BACKGROUND
Age:

Do you know your G.P.A., the average of your grades in high school?

Do you use PowerSchool to look at your grades over the course of the quarter?
   Probe: How often do you check PowerSchool?

What do you plan to do after high school? College/career/other?

Overall, what how would you describe your experiences at this high school?
   Probe: Do you feel prepared for your post-graduation plans?

B. GENERAL GRADES/GRADING

1. How would you describe your attitude towards your grades?
   Probe: Are you worried or anxious about grades?

2. Have you had any difficult experiences with grades in the past?
   Probe: (Evidence)

3. How would you describe your friends’ attitudes toward their grades?

4. How important are grades?
Why are they important/not important?

5. Have you ever gotten in trouble or gotten a reward because of your grades?
   Explain.

6. What do people in the community think about grades? Do they think they are important?
   Probe: How do you know? (Evidence)

7. In your opinion, what does a grade mean? What is a grade supposed to say?

C. COURSE GRADING

1. What are your grades in this class?

2. How does your teacher create or determine your class grade?
   Probe: How do you know?

3. Does your grade in this class seem fair to you?
   Probe: Explain.

4. How good a job does your teacher do in creating your grade?
   Probe: Explain.
5. At the end of this grading period, what do you expect your grade to be?

6. Do you have any say in how you are graded in this class?

   Probe: What do you think about students having more of a role in how a grade is determined?

Post Interview Comments/Observations:
This is a follow-up interview, and although you don’t need to sign the consent form to speak to me again, I did want to remind you that: (1) all information will be held confidential, (2) your participation is voluntary and you may stop at any time if you feel uncomfortable, and (3) I do not intend to inflict any harm. Do you have any questions about the interview process?

Because your responses are important and I want to make sure to capture everything you say, I would like to audio tape our conversation today. Do I have your permission to record this interview? [if yes, thank the participant and turn on the recording equipment]. I will also be taking written notes during the interview. I can assure you that all responses will be confidential and I will change your name when quoting from the transcripts. I will be the only one who has access to the audio recordings, which will be eventually destroyed after they are transcribed.

We have planned this interview to last about thirty minutes. During this time, I have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. Do you have any questions at this time?

A. COURSE GRADING

1. It is now the end of the grading period. What is your grade for the quarter?
2. How did your teacher create or determine your class grade?
   
   Probe: How do you know?

3. Does your grade in this class seem fair to you?
   
   Probe: Explain.

4. How good a job did your teacher do in creating your grade?
   
   Probe: Explain.

5. Is your grade in the class what you expected it to be?

6. Is this grade going to have any impact on your plans for next year? Either in what classes you take or for college or career?

7. How would you describe your relationship with your teacher?

8. How would you describe your parent’s attitudes toward grades?

9. If you had to explain to someone what exactly your grade communicated about your learning in this class, what would you say?

10. Overall, what do you think grades should be for?
Post Interview Comments/Observations:
Parent interview protocol

Date:

You have been selected to speak with me today because you have been identified as someone who is willing to discuss your thoughts and experiences on grades and grading. The purpose of this study is to look at how teachers create grades and how students and parents interpret, or understand, those grades.

Because your responses are important and I want to make sure to capture everything you say, I would like to audio tape our conversation today. Do I have your permission to record this interview? [if yes, thank the participant and turn on the recording equipment]. I will also be taking written notes during the interview. I can assure you that all responses will be confidential and I will change your name when quoting from the transcripts. I will be the only one who has access to the audio recordings, which will be eventually destroyed after they are transcribed.

To meet our human subjects requirements at the university, you must sign the form I have with me. Essentially, this document states that: (1) all information will be held confidential, (2) your participation is voluntary and you may stop at any time if you feel uncomfortable, and (3) we do not intend to inflict any harm. Do you have any questions about the interview process or this form?

We have planned this interview to last about forty-five minutes. During this time, I have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning. Do you have any questions at this time?

A. BACKGROUND: Demographics
Age:

Occupation/Profession:

Highest degree earned: some high school, high school, some college, Associates degree, Bachelor’s degree, Master’s degree, Doctorate.

Looking back on your own experiences in school, how would you describe your attitude about grades?

B. GENERAL GRADES/GRADING

1. How important are your child’s grades?

What are your expectations for his/her grades?
2. Do you use PowerSchool to keep an eye on his/her grades? If so, how often do you check?

3. Are grades ever a source of friction between you and your child?
   Probe: Explain. Frequency?

4. How would you describe your child’s attitudes toward his/her grades?

5. What do people in the community think about grades? Do they think they are important?
   Probe: How do you know? (Evidence)

6. From your perspective as a parent, what is a grade supposed to communicate to you?

7. Overall, how well do you think grades reflect your child’s achievement in his/her courses?

C. COURSE GRADING

1. What are your child’s grades in this class?

2. How does the teacher create or determine your class grade?
3. Does your child’s grade in this class seem fair to you?

Probe: Explain.

4. What is your relationship with the teacher? When it comes to the teacher’s grading process, do you trust him/her?

Probe: Explain.

5. At the end of this grading period, what do you expect your child’s grade to be?

6. Do you have any say in how students are graded in this class?

Probe: What do you think about parents having more of a role in how a grade is determined?

Post Interview Comments/Observations: