The grading gradient: Teacher motivations for varied redo and retake policies

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ABSTRACT

Standards-based grading has emerged as a leading progressive mode of classroom assessment. Although standards-based grading has several core components, there is appreciable anecdotal evidence that one component is being frequently implemented in the absence of the others. Namely, by allowing students to redo and revise work without regard to deadlines, some teachers are assessing what students know at the end of the course rather than at pre-specified intervals. Here, we surveyed 429 secondary teachers to quantitatively assess their grading practices and evaluate their connection to standards-based grading. Whether teachers allow redo's/retakes was affected by school policies, teacher content area, and what the teacher's personal beliefs were about the importance of deadlines and student ownership of learning and accountability. Additionally, our findings suggest that there is a disconnect between best practices in grading and teacher beliefs. Teachers displayed confusion regarding whether or not their schools had implemented standards-based grading policies.

1. Introduction

Teachers rely on assessment to determine how much their students have learned. Methods of assessment have profound implications for students' futures, from the courses they are eligible to take later in their academic careers, to the colleges and universities they have the option to attend. Traditionally, grading is a system in which a single letter or percentage is provided at the conclusion of a grading period to summarize a student's competency covering a wide range of skills. In traditional grading, many nonacademic factors may be included, such as behavior, effort, and the ability to meet deadlines (Marzano & Heflebower, 2011). As a result, traditional grading consistently evaluates only minimally on academic knowledge, and instead rewards engagement and persistence (Brookhart et al., 2016).

In response to this disconnect between academic knowledge and traditional grades, progressive educational reformers have proposed standards-based grading whereby students are only assessed on their mastery of state standards (Proulx, Spencer-May, & Westerberg, 2012). Standards-based grading is reflective only of academic factors and does not additionally assess students on compliance or other classroom behaviors (DuFour & Marzano, 2015; Guskey, Swan, & Jung, 2011;

Marzano, 2000; Marzano & Heflebower, 2011; O'Connor & Wormeli, 2011; Reeves, 2008; Townsley & Buckmiller, 2016). In deemphasizing non-academic factors such as deadlines, standards-based grading incorporates multiple opportunities for student feedback during the learning process, and only assesses what students know at the completion of the course (Marzano, 2000; Marzano & Heflebower, 2011; O'Connor & Wormeli, 2011; Townsley & Buckmiller, 2016; Reeves, 2008). One obviously identifiable feature of standards-based grading is allowing students to retake, revise, and redo assignments and assessments with no penalty to their final grade (Wormeli, 2011). The practice emphasizes what students know at the end of a course, rather than on test day.

Although these two systems can be distinguished by what they incentivize – work, for the traditional grading system, and actual learning, for the standards-based system (Varlas, 2013) – many teachers employ grading practices in the grey area between traditional and standard-based grading (Hancock, Kilgore, & Maxey, 2016). For example, many teachers permit some level of revision to student work, increasing the amount of their grade that reflects student knowledge at the end of the course. However, it should be noted that this is not true standards-based grading if the late or revised work is penalized in any

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way (Clymer & Wiliam, 2007; Marzano, 2000; O'Connor & Wormeli, 2011). Partial adaptation of standards-based grading principles has been reported previously (Hancock et al., 2016), but no attempt was made to understand the factors motivating individual teachers to stake out this position on grading. Stiggins (1986) described school grading policies as "hodgepodge" and listed three possible explanations for the discrepancy that existed at that time between recommended grading practice and reality: differences of opinion of best practices, day-to-day realities making recommended practice inappropriate, and teachers lacking sufficient knowledge and skills to meet recommended standards. We will now consider the three categories presented by Stiggins as potential obstacles to unanimity in grading policy.

1.1. Differences of opinion of best practices

Given the best available research, it is still not clear what the "best" approach is to grading student work. A wide variety of grading approaches have been documented (Brookhart et al., 2016), and while the effects of standards-based grading on students have received academic attention (Reys, Reys, Lapan, Holliday, & Wasman, 2003; Welsh, D'Agostino, & Kaniskan, 2013), the results have been mixed. Case studies have demonstrated a variety of outcomes when schools transition to standards-based grading. Some found no relationship between students' standards-based grades and standardized test achievements (Greene, 2015) and some found a weak connection (Welsh et al., 2013). Other studies have looked at the effects of the transition to standards-based grading on student grades. These also have demonstrated mixed success, showing an increase in overall student GPA (Fisher, Frey, & Pumpian, 2011; Reeves, 2008), or no effect on student earned grades (Hawks, 2014). To date, it appears that the academic community has not identified a superior grading option.

1.2. Day-to-day realities make recommended practice inappropriate

Administrators frequently encounter negative reactions from parents when considering transitioning from traditional grading to standards-based grading (Franklin, Buckmiller, & Kruse, 2016). Other impediments are the cost/time requirement associated with making the transition and the expectation from college admissions teams that students be graded on a 100 point scale (Guskey et al., 2011). Although challenges from parents and colleges exist, the largest source of pushback in the effort to transition to a more progressive grading standpoint comes from teachers (Erzen, 2013; Greene, 2015; Sailor, Stowe, Rutherford Turnbull, & Kleinhammer-Tramill, 2007). This may be due to Stiggins' third idea regarding the existence of hodgepodge grading: teachers lack sufficient knowledge and skill.

1.3. Teachers lack sufficient knowledge and skill

Although research describes highly effective teachers as those who support meaningful learning through the practice of allowing students to revise work (Noguera, Darling-Hammond, & Friedlaender, 2015), in general, teacher grading practices seem to be influenced by personal experience rather than research (Shippy, Washer, & Perrin, 2013; Stephens, 2010). Many teachers believe that allowing students to continue to edit work after a due date fails to develop a sense of responsibility and accountability (Greene, 2015; Wormeli, 2014). Analysis of more recent effective educational reform has shown that successful change occurs when capacity building (e.g. investment in teacher development) is the primary thrust behind change, rather than top-down administration (Noguera et al., 2015). Creation of a school culture where teachers feel respected, heard, and provided with meaningful professional development creates space for successful school reform (The Equity & Excellence Commission, 2013). Because teachers are the ones actually interacting with students and implementing classroom policies, they should be the focus of our examination of existing classroom practices. In this work we explore whether teachers lack sufficient knowledge and skill, or if they simply have a difference of opinion regarding best practice.

2. Context of the study

Partial adaptation of standards-based grading principles has been reported previously (Hancock et al., 2016); however, the factors motivating individual teachers to stake out their position on grading remain poorly understood. Grades are a key element of many college admissions decisions, which in turn may have profound effects on a students' future career path and lifetime earnings attainment (Binder, Davis, & Bloom, 2016), but relatively little is known about the process by which they are awarded, particularly for teachers who grade in the hybrid area between true standards-based grading and a traditional system that may include rewards for behavior, effort, and/or adherence to deadlines.

Here, we consider what motivates individual teachers to implement specific grading policies, as well as to define what exactly these grading practices are. We do this by surveying secondary teachers in one region in the southeast United States. Specifically, we asked the teachers:

1. Do you believe that your school or department has a standards-based grading policy?
2. What are your attitudes towards redo's/retakes by students and standards-based grading?
3. Do you allow redo's/retakes by students even if your school does not have a standards-based grading policy?
4. What are your classroom policies for redo's/retakes?
5. What are your justifications for your redo's/retake policies?

Many of the surveyed teachers operate somewhere between a strict standards-based grading framework and a traditional framework. Notably, only one of the seventeen schools studied has an explicit standards-based grading policy that is documented and disbursed to their staff. This school expects teachers to grade students in a standards referenced fashion; however, they still translate these grades to a 100-point scale for final grading. All other schools participating in this survey do not have an explicit policy on grading. This study also explores the motivations behind teachers' nuanced grading approaches. We propose that if grading policies are to truly be reformed, the target audience (teachers) must be understood. Professional development should acknowledge existing teacher beliefs and focus on increasing a shared vision between researchers and practitioners of what effective teaching looks like (Noguera et al., 2015).

3. Methodology

We developed a survey instrument based on a thorough review of the literature to determine how redo's/retakes are implemented (three yes or no and six multiple-choice items) and how the policy was implemented or perceived by teachers (21 Likert-scale items). The survey also contained five open-ended questions regarding redo's/retakes at their school. Additionally, the survey included five demographic questions comprising subject area, size of the school, years of teaching, level of education, and licensure. A desk review of the instrument was constructed by the researchers (Olson, 2010; Willis, Schechter, & Whitaker, 1999). An electronic version of the survey (see Appendix A) was disseminated electronically to 1573 secondary teachers at 17 schools representing 15 districts in the northwest region of Arkansas in May of 2017. All public secondary schools in the region were contacted. The survey remained open until the end of the school year.

3.1. Participants

Five hundred fifty-one teachers responded to the survey prompt

Table 1
School demographics summary.

School	Number of Students	Proportion Free/Reduced Lunch	Proportion White Students	Proportion Black Students	Proportion Latino Students	Proportion Other Students
School 1	260	0.52	0.90	0.01	0.04	0.05
School 2	353	0.44	0.89	0.01	0.08	0.02
School 3	429	0.58	0.70	0.01	0.10	0.19
School 4	486	0.41	0.92	0.02	0.05	0.01
School 5	511	0.69	0.83	0.00	0.08	0.09
School 6	553	0.40	0.91	0.00	0.03	0.06
School 7	558	0.40	0.95	0.01	0.03	0.01
School 8	606	0.49	0.89	0.00	0.09	0.02
School 9	679	0.32	0.89	0.03	0.07	0.01
School 10	1223	0.47	0.66	0.01	0.24	0.09
School 11	1243	0.28	0.72	0.05	0.14	0.09
School 12	1705	0.38	0.64	0.02	0.25	0.09
School 13	1911	0.31	0.74	0.10	0.10	0.06
School 14	2062	0.56	0.54	0.01	0.32	0.13
School 15	2149	0.69	0.35	0.02	0.51	0.12
School 16	2182	0.50	0.53	0.01	0.41	0.05
School 17	3900	0.20	0.77	0.03	0.10	0.10

Note: School 17 is the only school with an explicit Standards Based Grading policy.

(35% response rate) and 429 (27%) provided responses to enough of the survey to be included in our analyses (see Appendix A for more on data preparation). These teachers work with students from a diversity of socioeconomic statuses (free and reduced lunch rates: range = 20%–69%, mean = 45%) and racial demographics (range = 35–95% Caucasian, mean = 75% Caucasian) (Table 1). The schools that these teachers work at are attended by 1151 students on average (enrollment: range = 260–2657 students) (Table 1). The respondents themselves also represent a diverse cross-section of teaching experience (mean 14.6 years, range: 1–48 years) and content areas (Fig. 1). Respondents were from all subject areas (Fig. 1), with a response rate representative of the population of teachers in the region.

4. Analysis

We employed an exploratory factor analysis (EFA) on the Likert-scale questions (Questions 10–30) to determine if any statements grouped together. Because our data met assumptions of normality and sampling adequacy (Kaiser, Meyer, Olkin Measure of Sampling Adequacy = 0.71), and lacked outliers, we deemed EFA to be an appropriate analytical approach (Tabachnick & Fidell, 2013). We determined the number of factors to extract visually, using a scree plot. Generally, we retained all factors with Eigenvalues > 1. We applied a varimax orthogonal rotation, which assumes factors in the analysis are uncorrelated, because correlation among factors was low (< 0.30) (Tabachnick & Fidell, 2013). We iteratively removed Likert-scale questions with a communality < 0.45, resulting in the exclusion of Questions 10–16, 18, 23–24, 29–30. We interpreted variables when factor loadings > 0.32. The resulting model met assumptions of model fit (RMSR = 0.014, TLI = 0.893) (Tucker & Lewis, 1973).

To identify teacher and school characteristics associated with each factor identified in the EFA, we constructed one linear model for each factor. These models differed only in their response variable, and all contained the following explanatory variables: school size, teacher content area, years of teaching experience, highest level of education, licensure path, whether teachers were in an Alternative Learning Environment (ALE), and an interaction between school size and years teaching. We treated school size as a categorical variable and classified schools as "small" (260–606 students), "medium" (679–1223 students), and "large" (1243–2182 students). When the linear models revealed a factor that was significantly associated with teacher attitudes, we conducted post-hoc Tukey tests to identify differences between factor levels.

Finally, to determine variables associated with teachers' redo and retake policies (Question 4), we constructed a multinomial log-linear regression model. Multinomial regressions are an extension of simple binary logistic regressions and do not make assumptions regarding normality, linearity, or homoscedacity. Our data did not contain any influential outliers. For this model we included demographic explanatory variables as in the linear models, as well as teacher beliefs identified during the EFA and whether their school or department had a redo/retake policy.

All analyses were performed using R version 3.3.0 (R Development Core Team, 2016). EFA was conducted using package 'psych' (Revelle, 2016), linear models with package 'car' (Fox & Weisberg, 2011), Tukey tests with package 'lsmeans' (Lenth, 2017), and multinomial regression with package 'nnet' (Venables & Ripley, 2002).

5. Results

5.1. Do teachers believe that their school or department has a standards-based grading policy?

Forty-one percent of teachers responding to the survey indicated that their school had a standards-based grading policy (Question 1), and nearly all teachers identified that their school and department allowed redo's/retakes (Question 2 school: 98%, Question 3 department: 96%). Teachers who identified their school as having a standards-based grading policy taught at a variety of school sizes (17% at a small school, 10% at a medium school, and 73% at a large school). However, notably none of these schools administer a standards-based report card, and only one large high school has an official document promoting standards-based grading that was disseminated to their staff (Table 1).

5.2. What are teacher's attitudes towards redo/retake and standards-based grading?

Retained variables were well defined by the exploratory factor analysis (Table 2). Variables loaded onto a single factor and communalities, or the proportion of variation in a variable explained by factors, were high. However, twelve of the twenty-one questions did not load onto any factor, indicating that the items in the survey were quite heterogeneous. We identified three factors that affected the implementation of a teacher's redo/retake policies: school wide factors, ownership beliefs, and deadline beliefs.

Factor 1 (F1: School wide factors) reflected teacher attitudes regarding school policies and support for implementing standards-based grading and redo's/retakes (Table 2). Whether teachers viewed their
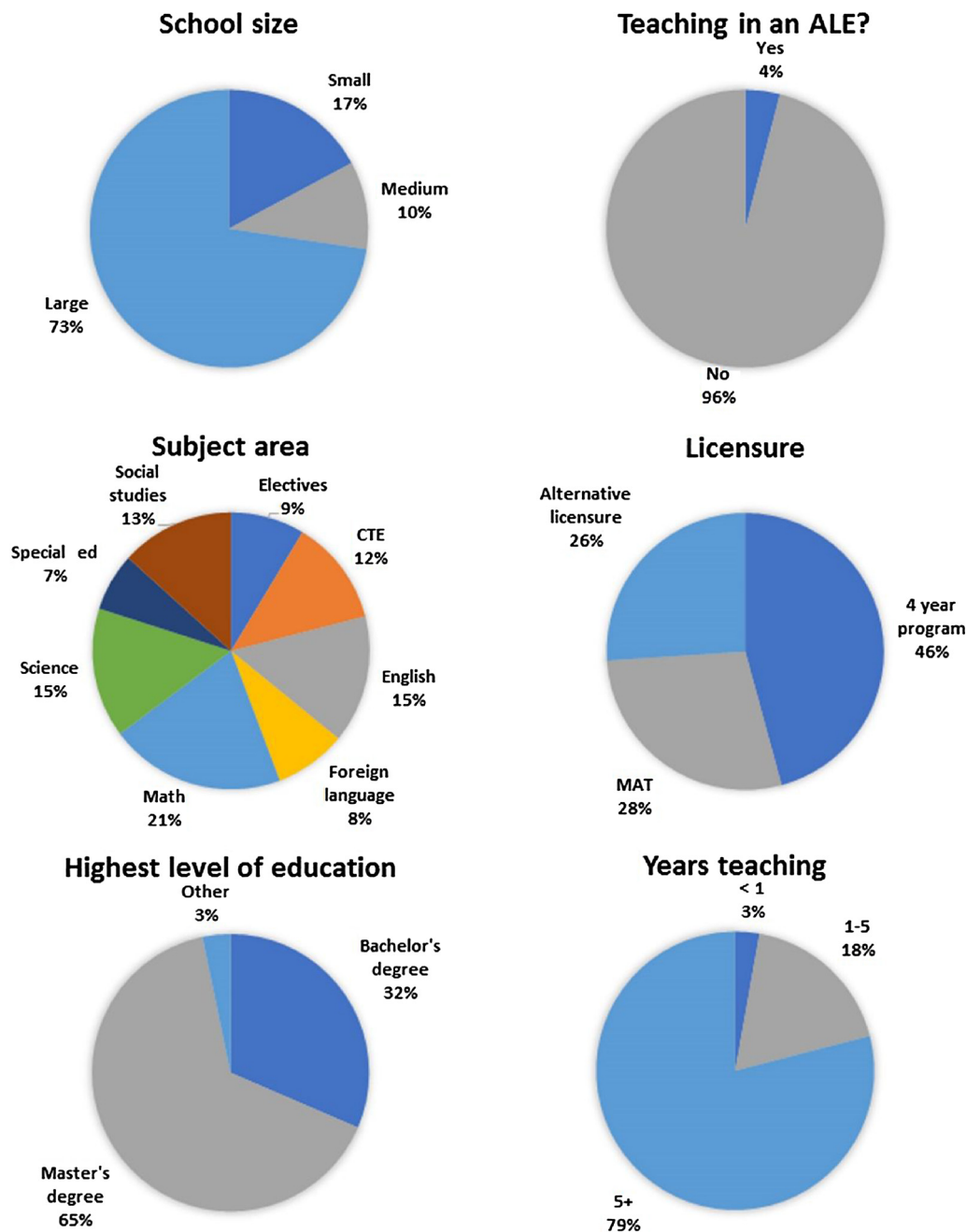
Fig. 1. Summary of school and teacher demographics. Schools classified as small had an enrollment of 260–606 students, medium schools had an enrollment of 679–1223 students, and large schools had an enrollment of 1243–2182 students. CTE = Career and Technical Education; Special ed = Special Education.

school's policies as effective depended on school size (Fig. 2, Table 3). Teachers at large schools felt marginally more positively about their schools' policies than those at medium schools (Tukey's test $p = 0.056$). There was no difference in attitudes between small schools and other sized schools.

Factor 2 (F2: Ownership beliefs) reflected teacher attitudes with respect to building a sense of student ownership and accountability (Table 2). F2 was associated with teacher content area assignment (Fig. 2, Table 3). Teachers in career technical education (i.e., family and consumer sciences, agricultural sciences, technology and engineering, and business education) were more likely to believe that allowing students to redo and retake work increased student accountability; whereas teachers in social studies did not believe that redoing and re-taking work increased a sense of student ownership (Tukey's test $p =$

0.048). All other content areas fell somewhere between these two belief sets (Fig. 2).

Factor 3 (F3: Deadline beliefs) was associated with teacher attitudes on the importance of deadlines (Table 2). F3 was explained by teacher content area assignment (Fig. 2, Table 3) and whether the teacher taught in an ALE or traditional high school (Fig. 2, Table 3). Teachers of foreign languages were less likely to believe deadlines were a useful teaching tool, while elective teachers believed deadlines were an important classroom feature to prepare students for the real world (Fig. 2, Tukey's test $p = 0.013$). However, there was no difference in teacher beliefs between the other content areas. Teachers in ALE's were also less likely to believe deadlines are important than teachers in traditional secondary schools (Fig. 2, Tukey's test $p = 0.055$).

Table 2

Factor analysis results. Factor loadings greater than 0.32 (bold) were identified as meaningful and retained for further analysis. Positive factor loading indicate respondents strongly agreed with the statement and negative factor loadings indicate respondents strongly disagreed. SBG = standards-based grading.

Question	Likert Scale Statement	F1	F2	F3	h^2
Q17	Allowing redo's and retakes has a positive impact on student performance	0.18	**0.65**	−0.19	0.48
Q19	PD time is provided for instruction on SBG	**0.75**	0.05	0.04	0.56
Q20	PD time is provided for instruction on redo's and retakes	**0.73**	0.13	0.01	0.55
Q21	My school has implemented SBG effectively	**0.77**	0.08	0.03	0.60
Q22	My school has implemented an effective redo's/retakes policy	**0.74**	0.23	−0.09	0.61
Q25	Deadlines teach responsibility	−0.01	−0.14	**0.91**	0.84
Q26	Deadlines prepare students for the real world	0.03	−0.16	**0.93**	0.72
Q27	Redo's/retakes increases accountability	0.12	**0.83**	−0.08	0.72
Q28	Redo's/retakes increases student ownership	0.10	**0.93**	−0.09	0.88

h^2 = communality.
F1: School wide factors.
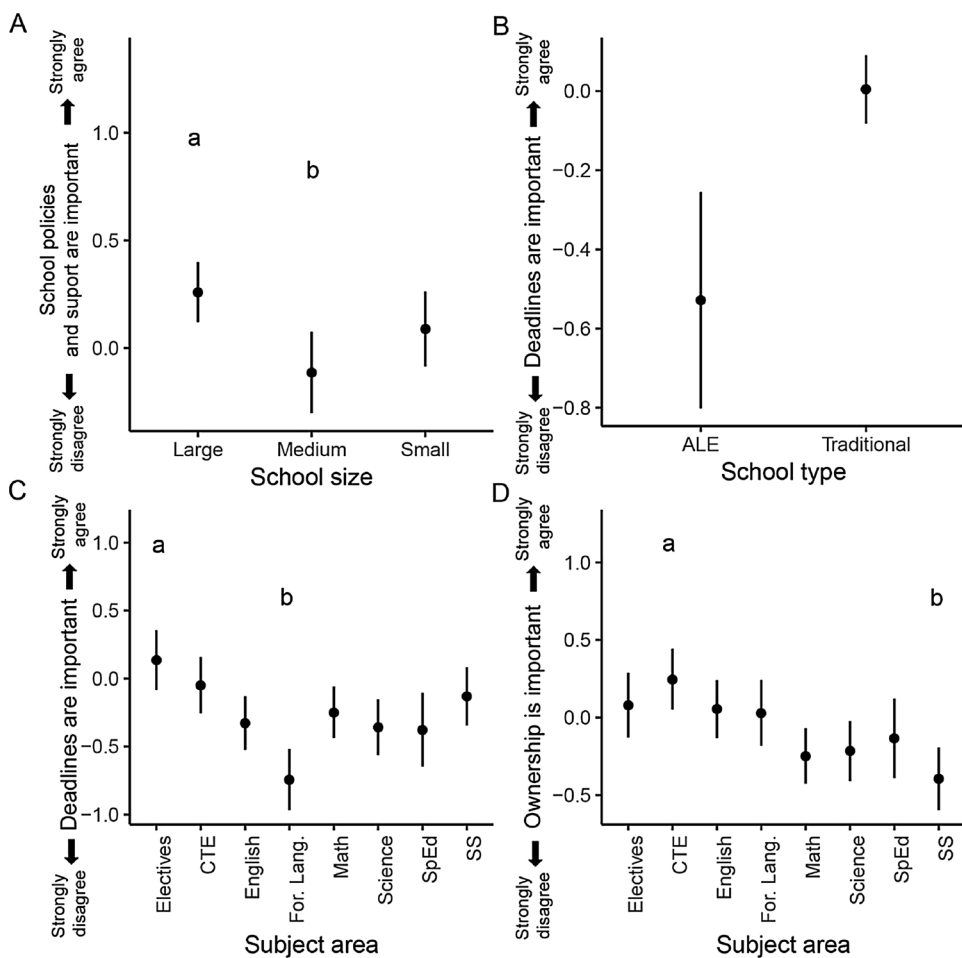F2: Ownership Beliefs.
F3: Deadline Beliefs.

Fig. 2. Teacher attitudes regarding school policies and support for implementing standards based grading are affected by school size (A), with teachers in schools with a large enrollment having more positive attitudes than those in medium sized schools. Teacher attitudes regarding deadlines were associated with whether that teacher worked in an Alternative Learning Environment (ALE) (B) and what they taught (C). Teacher attitudes regarding ownership were also associated with their subject area (D). Filled circles and error bars represent mean ± 1 SE; lower case letters denote groups that differ when there are more than two categories; CTE = Career and Technical Education; For. Lang. = Foreign Language; SpEd = Special Education; SS = Social Studies.

5.3. Do teachers allow redo's/retakes by students in the absence of a schoolwide standards-based grading policy?

Of the teachers that taught at schools without a standards-based grading policy, 51% allowed redo's/retakes on all assessments, 29% allowed redo's/retakes on in-class assignments and homework, and 12% on all graded work. Their colleagues that identified as working at schools with a standards-based grading policy were as likely to allow redo's and retakes (Fig. 3). Interestingly, 8% of teachers who indicated that their school has employed a school wide standards-based grading policy stated that they do not accept late assignments (Fig. 3) and 80% of teachers who indicated that their school has a standards-based

grading policy penalize late work (assignments: 62%; assessments: 47%). These responses suggest that many teachers who believe they are expected to adhere to standards-based grading practices are still allowing non-academic factors (e.g., student behavior via their ability to meet deadlines) to contribute to the grade earned.

5.4. What are teachers' classroom policies for redo's/retakes?

The teachers in our survey implemented a variety of redo/retake policies in their classrooms, with almost half of teachers allowing students to redo assessments. A smaller subset of teachers only allowed redo's/retakes on homework and in class assignments (28%) or on all

Table 3
Factors associated with teacher attitudes. The intercept represents elective teachers at large schools, whose highest education is a bachelor's degree, earned their licensure through a 4 year teacher preparation program, and do not teach at an alternative learning environment. CTE = Career and Technical Education; For. Lang. = Foreign Language; SpEd = Special Education; ALE = Alternative Learning Environment. Significant values (P < 0.05) are in bold and marginally significant values (P < 0.06) are italicized.

Variable		Schoolwide policies				Deadlines				Ownership			
Levels	DF	Estimate	SE	F	P	Estimate	SE	F	P	Estimate	SE	F	P
Intercept		0.431	0.317			−0.119	0.343			−0.023	0.324		
Subject area	7			1.02	0.417			**2.23**	**0.032**			**2.08**	**0.045**
CTE		0.264	0.225			−0.304	0.243			0.144	0.230		
English		0.113	0.218			−0.583	0.236			−0.048	0.223		
For. Lang.		−0.064	0.234			−0.999	0.253			−0.073	0.239		
Math		0.199	0.208			−0.503	0.225			−0.350	0.213		
Science		−0.040	0.223			−0.613	0.241			−0.319	0.228		
SpEd		0.092	0.273			−0.631	0.296			−0.236	0.280		
Social Studies		0.149	0.224			−0.386	0.243			−0.498	0.230		
School size	2			*2.99*	*0.052*			1.26	0.286			0.06	0.945
Medium		0.057	0.162			−0.298	0.175			−0.015	0.165		
Small		0.260	0.146			0.042	0.158			−0.071	0.149		
Years teaching	1	0.007	0.006	1.55	0.215	0.002	0.007	0.13	0.718	0.000	0.006	0.004	0.947
Highest degree	1			2.93	0.088			0.1	0.749			0.14	0.707
Masters		0.223	0.122			−0.161	0.132			−0.070	0.125		
Teaching license	2			2.07	0.128			0.05	0.952			0.17	0.841
MAT		0.728	0.149			−0.167	0.161			−0.053	0.153		
Alternative licensure		0.598	0.137			−0.126	0.148			0.036	0.140		
Teach in an ALE	1			0.12	0.731			*3.72*	*0.055*			1.09	0.298
No		0.343	0.255			0.414	0.276			0.250	0.261		

graded work (15%). Few teachers did not allow redo's/retakes of any sort (8%). The classroom policies for redo's and retakes enacted by teachers were dependent on teacher perception that their school has a standards-based grading policy, departmental policies on redo's/retakes, teacher content area, teacher attitudes regarding deadlines and student ownership, and an interaction between years teaching and school size (Table 4, Fig. 3). Unsurprisingly, teachers in schools and departments that had a standards-based grading policy or allowed redo's/retakes were more likely to allow redo's/retakes in some form. Foreign language teachers were more likely to allow redo's/retakes on all assignments, as were teachers who felt deadlines were unimportant (responding with disagree or strongly disagree to the statements "Deadlines teach responsibility" and "Deadlines prepare students for the real world") and teachers who believed redo's/retakes instilled a sense of ownership (responding with agree or strongly agree to the statements "Allowing students to retake/redo work increases student accountability" and "Allowing students to retake/redo work increases student sense of ownership"). At large and small schools, teachers with more experience were less likely to allow redo's/retakes. However, at medium-sized schools, the pattern was reversed, and teachers with more experience were more likely to allow redo's/retakes.

5.5. What are teachers' justifications for their redo/retake policies?

5.5.1. Perceptions of school policies

Teacher responses to the question "What are your reasons for your redo/retake policy?" frequently used school policy as their single justification for the policy. The responses to this question ranged from teachers expressing a neutral, fact based justification based on policy like "It is implemented throughout my PLC [professional learning committee] that students may retake any assessment" and "Students are allowed to turn work in at any time during a 9 weeks *(sic)* period. This is from administration. If the student is failing, we must let them redo to pass" to teachers expressing negative feelings towards policies pressed on them by leadership. Teachers frequently cited pressure to increase graduation rates (e.g. "Pressure from administrators if students don't pass the class. Need students to pass so our graduation rates go up. It has nothing to do with student learning." And "Increase pressure for the graduation rate…so every student must pass. We (teachers) have to do all we can to get these students to pass. The redo policy helps some

students but has made others lazy."). Other teachers expressed a lack of confidence that redo's and retakes actually increased student learning, and were not happy that their administration required that they accept redo's and retakes despite that (e.g. "It is required by the school, but I personally see it affecting student achievement negatively. Students, especially low achieving ones, are not encouraged to manage their time and instead procrastinate and do poorly on the first assessment, knowing they will get to do it again. The grade rarely improves on the retake, as time management and motivation have not increased.").

5.5.2. Beliefs about ownership

Teacher beliefs about ownership were used as justification both to support the penalization/rejection of late work, as well as to support an absence of penalties on late work/revisions. Some teachers indicated that their belief in the importance of student ownership led them to severely restrict the amount of late work accepted and minimize the opportunities for redo's and retakes (e.g. "Students need to be held accountable for their work and they need to work with the deadline in mind. I do allow assignments to be turned in late but they are docked heavily." and "Once the students realize they are going to not be allowed a 'retake' they start coming prepared for the test. They show up for extra help BEFORE the test, and come to my review sessions. I work with my struggling students and make sure they have ample time to learn the material. But I do not allow blanket retest. If a class as a whole does poorly I'd allow test corrections or something along that line. When I've taught lower level students (last year), I have allowed retest.").

Many of the teachers cited the idea of promoting a growth mindset (Dweck, 2006) and helping students develop resiliency as important reasons to have students redo work until they get it right (e.g. "I want students to learn both content, as well as resiliency. I don't necessarily care how long it takes a student to "get" something as long as they get it. I also want students to develop the ability to keep working at something until they get it right – not to be satisfied with turning in low quality work."). Evidence of Wormeli's influence was clear in some teacher responses. For example: "In most every other area of life where assessments are given, and deadlines need to be met, (driver's license, Praxis Exam, ACT tests, filing for a late return on your taxes, etc.) there are redo's and retakes. I believe I am responsible for teaching responsibility and accountability to the young people in my classes, and I
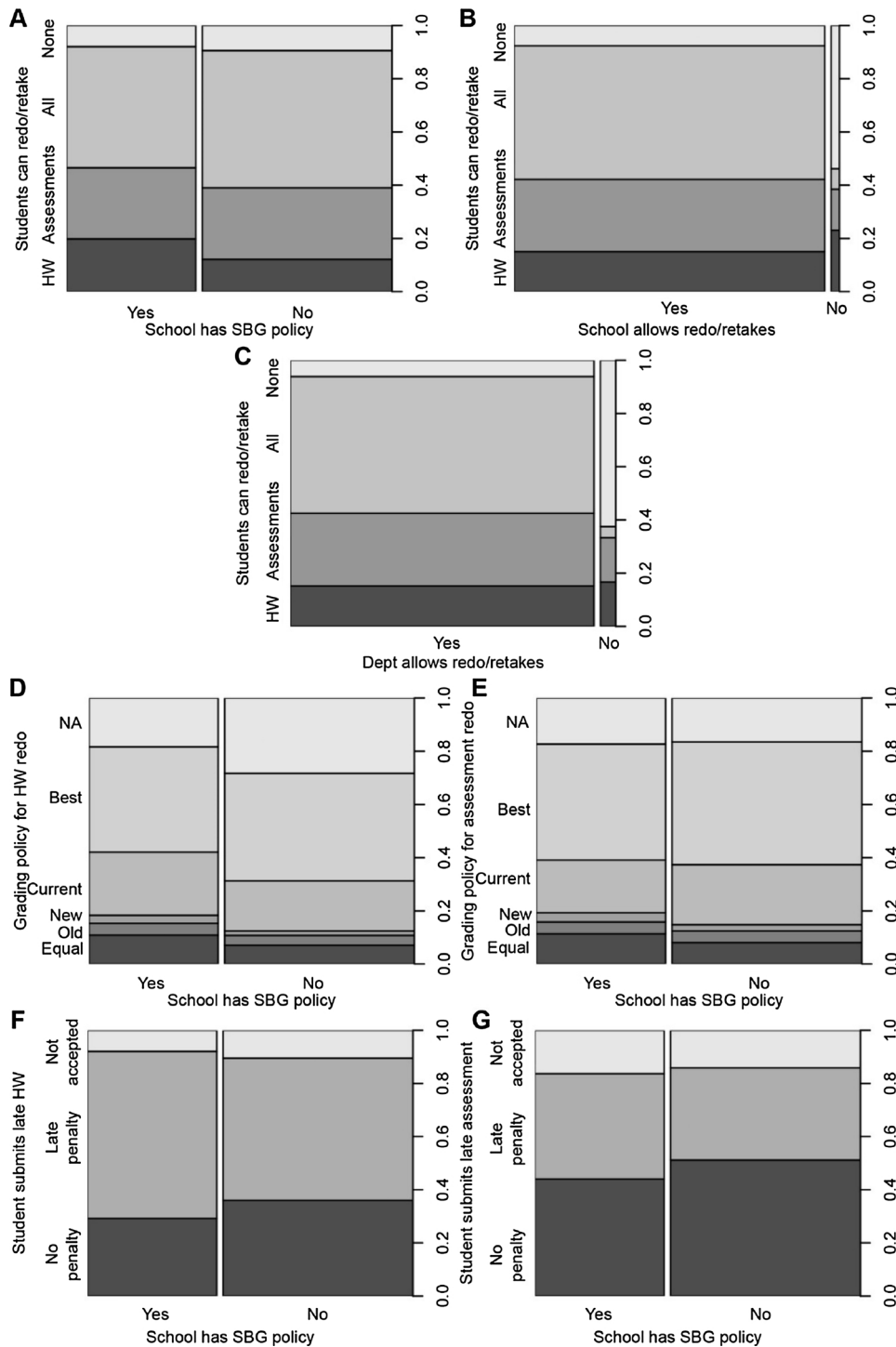
Fig. 3. Teacher redo/retake policies (A–C) and grading policies on redo/retakes (D–G) as related to school and department standards-based grading policies. The height and width of cells corresponds with the proportion of respondents. SBG = standards-based grading.

believe that you can teach them that by holding them accountable and responsible for their learning, which to me, means that they will retake until they learn." This statement follows the logic of Wormeli's professional development video series, in fact, lifting direct examples from it (Wormeli, 2010).

5.5.3. Beliefs about deadlines

Teacher beliefs about deadlines also led to grading policies that either accepted or rejected late work and revisions depending on the belief of the teacher in question. Statements attaching deadlines to

preparing students for "the real world" were common, and teachers used "real world" preparation to both support redoing assignments and point to the importance of not accepting late or revised assignments. A common sentiment in favor of assignment redo's is expressed in this typical statement, "I want to ensure students learn the content, even if it takes longer. I also believe that, in the "real world," we are typically not penalized to a great extent for needing extra time or second chances. Although I believe there should be clear expectations and limits, at the end of the day, I just want them to learn the content." Emphasis on the importance of deadlines is summarized best by the following two

Table 4

Summary of multinomial logistic regression. The intercept represents elective teachers at a large school whose highest education is a bachelor's degree, earned their licensure through a 4 year teacher preparation program, and do not teach at an alternative learning environment. These teachers work at schools with a formal standards-based grading policy and where both the school and department allow redo's/retakes. SBG = standards based grading; CTE = Career and Technical Education; For. Lang. = Foreign Language; SpEd. = Special Education; ALE = Alternative Learning Environment.

Variable	Level	Assessment only		All work		Do not allow		χ2	P
		Estimate	SE	Estimate	SE	Estimate	SE		
Intercept		−0.287	0.620	−0.920	0.605	−4.939	1.458		
School has SBG?	No	−0.839	0.338	−0.092	0.271	−1.147	0.641	8.71	0.033
School allow redo's/retakes?	No	1.651	1.459	1.335	1.462	4.323	1.754	6.28	0.098
Dept allows redo's/retakes?	No	1.676	1.361	1.758	1.303	3.943	1.355	12.75	0.005
Subject area	CTE	−0.338	0.560	−0.623	0.690	−0.707	1.445	59.5	< 0.001
	English	−0.602	0.600	0.643	0.587	1.005	1.223		
	For. Lang.	−0.084	0.720	1.047	0.652	1.351	1.423		
	Math	−1.179	0.632	0.947	0.555	1.830	1.100		
	Science	0.276	0.615	1.648	0.593	1.408	1.259		
	SpEd.	−15.393	0.000	−0.242	0.734	−18.996	0.000		
	Social studies	−0.808	0.627	0.675	0.585	1.195	1.166		
School size	Medium	0.207	0.800	−2.019	0.949	2.451	1.351	14.06	0.029
	Small	1.852	0.737	1.242	0.685	−0.758	1.722		
Yrs teaching		−0.006	0.023	−0.004	0.017	0.075	0.037	5.98	0.112
Highest degree	Masters	0.215	0.370	−0.062	0.306	0.527	0.657	1.14	0.98
Teaching licensure	MAT	−0.750	0.469	−0.122	0.358	−1.131	0.886	4.89	0.843
	Alternative	−0.392	0.402	−0.331	0.331	−0.797	0.830		
Schoolwide attitudes		−0.367	0.196	−0.010	0.146	−0.337	0.355	4.39	0.222
Deadline attitudes		0.315	0.196	0.221	0.137	0.806	0.398	7.89	0.048
Ownership attitudes		−0.244	0.171	−0.288	0.131	−1.432	0.339	25.41	< 0.001
Yrs teaching * School size	Medium	0.024	0.044	0.074	0.045	−0.121	0.079	15.92	0.014
	Small	−0.047	0.041	−0.088	0.048	0.046	0.075		

quotes: "I am not a fan of redo'/retake for anything *(sic)*. I believe that students need to understand that when they get out of school there will be deadlines for almost everything that they do. If they forget to pay a bill their service could be cut off or they will have to pay a late penalty. At their jobs if they do not do what they are supposed to do by the time it is supposed to be done they will not have a job. I believe that the education system has become too lenient on holding students accountable." And "…Most students can and will meet deadlines if they know they have to. Students need to realize that they will not get second chances on everything in the real world."

6. Discussion

Ninety-two percent of the teachers surveyed are implementing redo's/retakes in their classrooms. However, less than half of these teachers are doing so at a school that the teacher indicated had implemented standards-based grading. Even fewer of these teachers work in a school that actually has an explicit standards-based grading policy. This study demonstrates that a wide variety of grading practices are being employed, both within and apart from a standards-based framework. Now we will more deeply consider who allows redo's and retakes, as well as their reasons for allowing them.

6.1. Teacher content areas

Teachers of foreign languages had a significantly different attitude toward permitting student redo's and retakes as compared to the attitudes of all other teachers. Foreign language teachers did not believe deadlines were important, and as a result, were much more permissive of allowing students to redo and retake assignments without penalty. Language learning is a highly nonlinear and individual process (De Bot, Lowie, & Verspoor, 2007), and the attitudes of foreign language teachers appear to acknowledge and support this in their classroom practices. This was articulated by one of the survey respondents in their justification for their classroom redo/retake policy, "I am a language teacher and I know that learning a language takes repetition, practice, and time. Therefore, I want students to redo anything that will help

them learn more–which is almost everything. Not all students take advantage of that, but it is an option."

6.2. Perceptions of school policies

Teachers who believed that their school had implemented a school wide standards-based grading policy, as well as teachers who believed that their school had implemented a school wide policy on accepting student revisions of work were far more likely to permit student redo's and retakes on assignments, assessments, or both than teachers who did not believe their school had implemented broad policies. This is a relatively obvious observation; teachers are expected to be compliant with the policies of their employer. Two more interesting points arise though, when examining teacher statements about school wide policies.

First, not all teachers who indicated their perception of the existence of these school wide policies adhered to them. Of the teachers who indicated a school wide standards-based grading policy, some do not accept late work (assignments: 8%, assessments: 17%) and almost half penalize late work (assignments: 65%, assessments: 41%). This resistance to change may reflect teachers' distrust of decision makers. In a case study examining the impact of Sweden's push for nationally standardized education in classrooms, teachers reported an increasing number of constraints on classroom activity (Lundström, 2015). These constraints include increased class sizes, lack of time to reflect on or implement new policies, lack of professional training on new policies, and a continuous addition of tasks that appear to have no clear purpose to them (Lundström, 2015). This list might sound entirely familiar to American educators, and Lundström's conclusion that "The pressures seem to have resulted in a general skepticism regarding decision-makers and externally imposed change" (p. 77), makes for one plausible explanation as to why many teachers in the region choose to neglect perceived schoolwide policies.

It is also possible that these teachers simply do not understand the fundamental tenets of the expected grading system. Implementation of major policies, like the Common Core State Standards, have seen teachers floundering without sufficient provision of professional development (Ford, Van Sickle, Clark, Fazio-Brunson, & Schween, 2017), and

some teachers in this region may not understand how to implement standards-based grading. Alternatively, the overwhelming volume of policies and expectations may prevent teachers from fully implementing the expected grading policy (Pinto, 2015).

Secondly, just because a teacher indicated that their school had implemented a school wide standards-based grading policy does not mean that the school actually has a standards-based grading policy. Although a multitude of teachers across different school sizes indicated that their school had a standards-based grading policy, only one large high school out of the 17 high schools surveyed is known to have a formal school wide standards-based grading policy. This high school provides training and internal documents explicitly describing their expected grading policies and culture. Teachers may believe their school has a standards-based grading policy, or the term may sound familiar to teachers, but their school has not officially enacted a wide-sweeping policy. This could also contribute to an absence of opportunities for professional development, further contributing to the somewhat haphazard implementation of some features of standards-based grading.

Administrators should be aware of issues in communication, as well as constraints on a teacher's time and willingness to implement yet another policy in the current American educational environment. For administrators interested in rolling out progressive grading practices, efforts should be made to provide ample professional development, opportunities for teacher reflection, and time for teachers to develop the necessary materials that would accompany this change.

6.3. Teacher beliefs about ownership and deadlines

Teachers who believed that redo's/retakes increase student ownership and that deadlines do not teach responsibility or prepare students for the real world were more likely to permit student redo's and retakes than teachers who did not connect student persistence as demonstrated by revising work with developing ownership or felt deadlines were important. It makes sense that teachers who perceived redo's and retakes as tools to develop desirable student character traits would implement them in their classroom, while teachers who felt that redo's and retakes contributed to student "laziness" or "procrastination" (as presented in quoted teacher responses to Question 5) would not be inclined to use redo's and retakes in their classrooms. To close the gap between best practice and school policy, administrators interested in standards-based grading policies should focus their efforts on shaping teacher beliefs about ownership and deadlines.

One powerful tool for changing educator perception is vicarious experience (Ford et al., 2017), and emphasis in the professional development accompanying a standards-based grading policy deployment could include sharing of experiences by teachers who connect student redo's and retakes with an increase in student ownership. Teachers of foreign language, as well as ALE teachers, are already of the mindset that deadlines are not important and their testimony could contribute to the vicarious experience necessary to create a lasting change in the mindset of more traditionally minded teachers (Ford et al., 2017).

6.4. Limitations

Due to the population distribution of the region, most students are concentrated in five large high schools (out of 17), while several smaller rural districts exist. When teachers were surveyed, a substantially higher number of teachers at large high schools responded than small and medium high schools. The response rates were proportional to the number of teachers at each size of high school; however, our understanding of the viewpoints represented by teachers and medium and small high schools may be subject to measurement error. Due to the localized nature of the study, it is only representative of one region within a state in the southeast United States and may not be generalized to other states or regions.

7. Conclusions

Nearly all teachers in the region allow redo's and retakes by students even if their school does not have a standards-based grading policy. While much literature has considered the effects of standards-based grading and the grading practices implicit within that framework, it is important to recognize that many teachers are integrating some progressive grading practices while still grading from a traditional perspective. Roughly the same proportion of respondents indicated that they allowed redo's and retakes in some form, regardless of their overarching school policy (93% of those saying their school had no standards-based policy, 92% of those saying that their school did have a standards-based policy).

Teacher rationale for redo/retake policies were varied, but several common themes emerged. These frequently expressed sentiments as identified in the qualitative data are summarized as follows:

- School policies often feel foisted upon teachers from on high, rather than empowering teachers or resulting in them feeling encouraged by the uniformity of policy
- Allowing redo's and retakes promotes student resiliency and a growth mindset
- Students learn at different paces and should be allowed to demonstrate learning at similarly different paces
- Students who have to repeat skills until they can successfully perform them are held accountable for their learning
- Students who are allowed to procrastinate by not turning work in at a set time do not develop a necessary sense of responsibility
- When deadlines hold consequences (students are either given zeros or reduced scores for late work, and are not allowed to revise work) students are prepared for "the real world"
- Because few deadlines in "the real world" have major consequences, students should be allowed to redo and retake work as often as they would like.

Our work aligned with two of Stiggins' (1986) three explanations for the discrepancy between theory and practice. We found a clear difference of opinion on best practice, as evidenced by the list of common sentiments provided by teachers. This suggests that further research may be required, and, indeed, is already ongoing, to identify the optimal grading practice to support student learning. The mixed reviews present in the literature (Brookhart et al., 2016; Fisher et al., 2011; Greene, 2015; Hawks, 2014; Reeves, 2008; Reys et al., 2003; Welsh et al., 2013) indicate that best practice remains elusive, and educators and researchers should collaborate to move the field forward.

Our work also suggests that teachers may lack the sufficient knowledge and skills needed to implement a standards-based grading policy using redo's and retakes. Given the discrepancy between the number of teachers who self-identified as having a school wide standards-based grading policy and the number of schools that actually employ a standards-based grading policy in the area, something must be wrong. Teachers, under constant, varied, and increasing demands on their time, clearly do not understand what is expected of them. Administrators have a role in closing this gap. Teachers must understand school policy and be afforded the requisite time to implement best practices.

This is not to say that teachers are uninformed with respect to research-based practices. Some elements of research-based education principles appear to be ingrained in teachers (e.g. Dweck's (2006) growth mindset), while others have achieved mixed levels of traction amongst teachers. Some teachers, when justifying their reasons for allowing redo's and retakes, produced near-verbatim quotes of Rick Wormeli's professional development video series. Other teacher beliefs on the topic were more aligned with previous research that suggested teachers emphasize teaching responsibility and ownership by enforcing deadlines (Erzen, 2013; Sailor et al., 2007).

None of the prevalent ideas expressed by teachers who participated in this study are novel to the body of literature; however, the quantitative analysis provided by this paper suggests that there are four key factors that contribute to teachers allowing redo's and revisions in line with progressive grading practices (Reeves, 2008; Wormeli, 2011):

1 School policies
2 Content area
3 Teacher beliefs about ownership
4 Teacher beliefs about deadlines

The teacher participants in this study are hardly unique in their discomfort with policies initiated by administration for reasons that they do not understand (Cohen & Mehta, 2017). Teachers seemed to be largely compliant, but a healthier and more collaborative school environment could be produced if teacher buy-in were sought, and meaningful professional development was provided on the topic (Noguera et al., 2015). This study also suggests that some content areas, like foreign language, are already comfortable with allowing students as much time as they need to learn material. Professional development, then, does not need to target this group of teachers.

The other area of focus for professional development is affecting teacher beliefs about ownership and deadlines. What we saw in teacher justifications for their policies was that teachers already hold beliefs about ownership and deadlines, and that these beliefs affect their policy; however, not all teachers' grading policies are in line with the current push for an emphasis on grading what a student knows at the conclusion of a course. In *Fair isn't Always Equal,* Wormeli (2006) states "When we don't allow re-takes, we allow students to get away with not learning. When we mandate re-takes, however, we are in students' faces, tenacious, demanding excellence" (p. 21). This work suggests that promoting this idea is the final element to creating lasting change to grading practices. This information should provide background on teacher motivations for those seeking to initiate policy change.

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Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:https://doi.org/10.1016/j.stueduc.2018.06.005.

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