

2022

Including homework and employability skills in class grades: An investigation of equitable grading outcomes in an urban high school

Robert Griffin
University of Northern Iowa

Matt Townsley
University of Northern Iowa

Follow this and additional works at: <https://scholarworks.umass.edu/pare>



Part of the Curriculum and Instruction Commons, Curriculum and Social Inquiry Commons, Educational Assessment, Evaluation, and Research Commons, Educational Leadership Commons, Educational Methods Commons, Secondary Education Commons, Secondary Education and Teaching Commons, and the Social and Philosophical Foundations of Education Commons

Recommended Citation

Griffin, Robert and Townsley, Matt (2022) "Including homework and employability skills in class grades: An investigation of equitable grading outcomes in an urban high school," *Practical Assessment, Research, and Evaluation*: Vol. 27, Article 27.

Available at: <https://scholarworks.umass.edu/pare/vol27/iss1/27>

This Article is brought to you for free and open access by ScholarWorks@UMass Amherst. It has been accepted for inclusion in Practical Assessment, Research, and Evaluation by an authorized editor of ScholarWorks@UMass Amherst. For more information, please contact scholarworks@library.umass.edu.

Practical Assessment, Research & Evaluation

A peer-reviewed electronic journal.

Copyright is retained by the first or sole author, who grants right of first publication to *Practical Assessment, Research & Evaluation*. Permission is granted to distribute this article for nonprofit, educational purposes if it is copied in its entirety and the journal is credited. PARE has the right to authorize third party reproduction of this article in print, electronic and database forms.

Volume 27 Number 27, November 2022

ISSN 1531-7714

Including Homework and Employability Skills in Class Grades: An Investigation of Equitable Grading Outcomes in an Urban High School

Robert Griffin, *University of Northern Iowa*
Matt Townsley, *University of Northern Iowa*

Historically, race and poverty have been contributing factors when considering gaps among students in their academic achievement. The purpose of this study was to determine how employability and homework scores within traditional points and percentages weighted grading models impact grades from an equity lens. This study analyzed 779 students' semester math grades at an urban high school to see if students' grades were inflated or deflated due to including homework and employability scores in the grade. Final grades which included homework and employability points were compared to each student's overall summative assessment scores to determine grade inflation or deflation. The study then analyzed if including homework and employability points in the grade helped or hurt student's grades based on race and socio-economic factors. In comparing grading results based on students' socio-economic statuses, there were statistically significant differences.

Keywords: Standards-based grading, Homework, Employability, Equity

Introduction

In a 2018 USA Today article, Stebbins and Comen (2018) described the worst cities for racial disparities when comparing Black and White Americans. Inequities among Blacks and Whites such as household income, unemployment rates, and homeownership rates were vividly noted. Stebbins and Comen's findings showed Black American median incomes (\$25,897) were 46.8% less than Whites in the most discrepant metro areas. In addition, Blacks were unemployed at a much higher rate (23.9%) compared to Whites (4.4%). All these discrepancies show that racial disparities are still prominent in today's culture, and schools are suggested as one of the possible foundations for these continued inequities. The results from several studies suggest race plays a key factor in academic achievement gaps among students in the United States (Lleras, 2008; Merolla & Jackson, 2019).

Historically, poverty has also been a contributing factor when considering gaps among students in their academic achievement (Chmielewski & Reardon, 2016; Plucker & Peters, 2018). Specific to letter grades, data collected by the U.S Department of Education (1994) based on a national sample of 8th-grade students found the "B" student in the schools with the highest poverty concentrations received about the same standardized test scores as the students who received D's or less in more affluent schools. Further confirming the idea that poverty may contribute to gaps in achievement, Cross (1997) found "A" students from the poor schools scored at about the same range on standardized assessments as C- or D+ level students from the schools with low poverty levels. In both cases, grading appears to be highly subjective, and teachers in schools with higher poverty rates issue grades that are more inflated when compared to schools with lower poverty levels. While a number of studies have summarized

achievement gaps standardized among subgroups such as race and poverty in secondary school settings as measured by standardized test scores (Hung et al., 2020; Quinn & Cooc, 2015), few known studies have considered letter grades as the data source.

Previous research suggests teachers' subjectivity in assigning grades. For example, two subjective criteria that teachers have used when determining letter grades are student behavior (Chen & Bonnor, 2016; Guskey & Link, 2019) and student effort (Brookhart et al., 2016; Tierney et al., 2011). In fact, a student exhibiting teacher-pleasing behaviors and low levels of achievement may be more likely to receive a passing grade than a student exhibiting inappropriate behaviors with similar achievement skills (Randall & Engelhard, 2010). For example, Tierney and colleagues (2011) surveyed 77 secondary teachers and found nearly one-third of them raised or lowered a student's grade based upon effort. Because "student effort is a key element in grading" (Brookhart et al., 2016, p. 828), additional research is needed to understand the quantitative implications of considering non-academic factors such as classroom effort. This is especially important for understanding achievement gaps in race and socio-economic status (SES) because students living in poverty and minority student groups have been found to exhibit less teacher pleasing behavior such as disrupting class and not turning in homework when compared to their more affluent non-minority peers (Morris, 2005).

As such, equity must be a part of any meaningful conversation about grading reform (Feldman, 2019; Smith et al., 2017). This research focuses on race and poverty at the high school level within a diverse urban school district and explores how removing homework and employability points might create a more equitable approach to grading. The goal of this study was to determine the extent to which including the traditional grading components of homework and employability scores produce equitable grading outcomes for students based on race and SES. Through this project, the researchers explore how these grading practices impact students of different races and levels of poverty. This study may help educators better understand grading practices that provide more equitable outcomes for their students.

Literature Review

Subjectivity in Grading

Subjectivity in grading has perpetuated teachers' use of biased judgments with regards to determining students' final course grades. Specifically, Feldman (2018) states, "When teachers include in grades a participation or effort category that is populated entirely by subjective judgments of student behavior, they invite bias into their grading, particularly when teachers come from the dominant culture their students don't" (p. 54). Indeed, Guskey (2009) found secondary teachers were likely to include behavior and effort when determining students' grades. Yet, grades should be fair, equitable, and useful to students, parents, and teachers as they are key in communicating student learning. To do so, experts suggest grades should be based solely on the achievement of learning goals and primarily determined by summative assessments with behaviors reported separately from the final grades (Brookhart et al., 2020; Guskey, 2020). In spite of this, researchers have found grading practices between teachers vary significantly (Brookhart, 2004; Brookhart et al., 2016; Guskey & Link, 2019). Even courses that are taught within the same school by different teachers can produce very different grades based on the criteria used for grading (McMillan, 2001). In some cases, the difference between failing a class and making the honor roll simply depends on the teacher's grading policies (Reeves, 2008).

Stiggins et al. (1989) noted, "Most teachers would agree that grades should be based on achievement; however not all would agree that grades should be based on achievement alone" (as cited by Brookhart, 2004, p. 115). Furthermore, results from several studies suggest teachers are likely to include subjective grading categories such as "Employability Points," which gives students points based on teacher's perceptions of effort, behavior, and participation that impact a student's grade both positively and negatively (Kunnath, 2017; Roscigno & Ainsworth-Darnell, 1999). In particular, teachers report employability points are frequently considered when determining borderline grades (Randal & Engelhard, 2010; Sun & Cheng, 2013; Tierney et al., 2011).

The Role of Race and Poverty in Evaluating Students

Previous research suggests that educators' evaluation of students may be influenced by race or other factors (Denessen et al., 2020; Malouff & Thorsteinsson, 2016; Tennebaum & Ruck, 2007). For example, a meta-analysis conducted by Malouff and Thorsteinsson (2016) suggests that substantial grading bias can occur when teachers grade essays of students in minority racial groups. Absent any clear criteria to assess student learning, teachers may be more likely to match their biased expectations about which student groups will produce higher quality work (Quinn, 2020). A recent review of literature found teachers' attitudes and stereotypes towards students may be a meaningful predictor of student outcomes (Denessen et al., 2020).

Homework is an important aspect of student assessment that has been found to have a small but positive impact on student achievement in math and science (Fan et al., 2017). In 2006, Cooper and colleagues provided a summary of studies describing the impact of homework on immediate outcomes such as unit tests; they suggested additional research is needed to understand homework's influence on class grades for students from a variety of demographics. Since then, parent involvement has been found to be a contributing factor to homework completion and its connection to student achievement (Zhou et al., 2020). From an early age, children are molded and influenced by their families in learning to read, write, talk, follow social expectations, and any other learning experiences. Even parents being able to read is connected to students' overall educational achievement (De Graaf et al., 2000). In a study by Wang and colleagues (2016), grade point averages were found to have a strong association with the level of parental involvement among African American students. This is especially important to know as some estimates suggest that 74.3% of all White children live in two-parent homes compared to only 38.7% of Blacks under the age of 18 (Prince, 2016). With such a stark difference between these groups, Black and other minority students may not be provided adequate homework support when compared to their White classmates.

Theoretical Framework

The theoretical framework used in this study is cultural reproduction, first established by Pierre Bourdieu (1974). Bourdieu proposed that individuals

in society are equipped differently and therefore have easier or harder paths to success (Bourdieu & Passeron, 1977). These paths are often based upon cultural capital which is viewed as the symbolic make-up an individual acquires based on their social class (Jaeger, 2011). This symbolic makeup may include skills, knowledge, clothing individuals wear, mannerisms, and any other learned behaviors one acquires through their life experiences.

The amount of cultural capital one possesses gives students an advantage due to their ability to more easily follow social norms and because they have access to more resources to be successful. Bourdieu's theory of cultural reproduction (1974) suggests students achieve higher rates of success when they come to school with values and norms more closely aligned with the school culture which has been created by those with higher levels of cultural capital. Recent educational studies utilizing cultural reproduction theory have examined student capital and the opportunity to learn as demonstrated by PISA data (Wilson & Urick, 2021) as well as comparing early literacy opportunities with adolescents' ability to read (Notten & Becker, 2017).

The purpose of this study was to determine the extent to which including the traditional grading components of homework and employability scores produce equitable grading outcomes for students based on race and SES. The questions driving the study were as follows:

1. To what extent are students receiving free and reduced lunch (FRL) different from peers in the employability, homework, and summative assessment categories of the grade?
2. To what extent are students of color (i.e. Black, Hispanic, Asian) different from their White peers in the employability, homework, and summative assessment categories of the grade?
3. How does including employability and homework scores inflate or deflate grades for students within these subgroups?

Methods

Setting and Participants

This study was conducted at Diversity High School (pseudonym) in the state of Iowa. Diversity High was selected because it is one of several high schools within

the list of the worst metro areas for Blacks according to Stebbins and Comen (2018). The school serves about 900 students each year. As a state, 26.1% of the Iowa K-12 student population is non-White (Iowa Department of Education, 2021); however, Diversity High is located in an urban area with more racial diversity. Diversity High School's student population is 49.3% White and 50.7% non-white (31.2% Black, 11.2% Hispanic, 8.3% other races such as American Indian, and Asian).

Table 1 shows the breakdown of the participants in this study based on their identified race. These numbers approximately mirror the total population by the race of Diversity High School. Non-White students accounted for 51.7% of the students in this study which equates to 403 of the total 779 participants. Furthermore, Table 2 illustrates the SES of the participants in the study. As seen in Table 2, 558 participants were eligible for FRL which is equal to 71.6% of the total participants.

Table 1. Participants by Race

Race	Frequency	Percent
White	376	48.3
Black	251	32.2
Hispanic	90	11.6
Asian	12	1.5
Other	50	6.4
Total	779	100

Table 1. Participants by SES

SES	Frequency	Percent
FRL	558	71.6
Non-FRL	221	28.4
Total	779	100

Research Design

To conduct this study, the researchers obtained all students' math semester grades within Diversity High School over an academic year. At the beginning of the school year, the math teachers at the school committed to forming consistency for grading within the department. Previously, individual teachers were permitted to use weighted grading and gradebook categories at their own discretion, which created inconsistency in the way grades were determined

across the department. Prior to the start of the academic year, the team agreed to uniformly separate their grade books into the following categories: "Employability," "Homework," and "Summative Assessments." This consistency in the grading setup allowed the researchers to analyze grades from 779 students enrolled in a math course. Only students who had a full set of recorded summative assessment scores were utilized.

Employability points within this study were defined by the teachers as points given to students as part of their grades that reflect 21st-century skills demonstrated within the classroom environment. Teachers within this study gave students employability points each day based on their participation level in class activities, attendance/tardies, and their level of social responsibility (not disruptive or disrespectful to staff or peers) during class time. The math teachers included daily assignments in the homework category and participation, attendance, and social responsibility points were recorded in the employability category.

Homework was given points based on homework completion and not if the work was deemed correct. Teachers' policies for homework allowed for students to turn in late work and it could be turned in for full credit. Students who did not complete the homework received zero points for that assignment. Finally, summative classroom test scores were recorded in the summative assessments category. Summative assessments were traditional math tests (not projects) such as end of the unit tests or end of semester exams. Using a more traditional model of grading, teachers did not allow retakes for low scores on the assessments. The final grades were weighted with 70% of the overall grade based on summative assessments and the employability and homework categories were weighted evenly (15% each) for a total of 30%.

The following data points from math class grade books were analyzed in this study:

- 1) Final grade
- 2) Final grade percentage
- 3) Summative assessment percentage
- 4) Homework percentage
- 5) Employability skills percentage (e.g. arrive on time, attend class, participation, etc.)

- 6) Race/ethnicity (e.g. Black, White, Hispanic/Latino, Asian, etc.)
- 7) SES (Free/reduced lunch eligibility)

After receiving university institutional research board and school district approval, the data points were extracted directly from the district's electronic grade book with anonymous student and teacher identifiers. The grades were charted by documenting each student's unique variables as seen in the example illustrated in Figure 1. SES was recorded using students' free and reduced lunch (FRL) eligibility which is based on family income.

Each student's value for the semester "Final Grade Percent" was compared to the value of the summative "Assessments Percent" (see Figure 1) to see if and how much of the final grade was inflated or deflated through the inclusion of "Homework" and "Employability" categories. In other words, did homework and employability points help improve the students' final grades or hurt the final grades when comparing the summative assessment grades to the final grade. After charting these scores, the results were graphed by percentage to answer the research questions.

Data Analysis

To answer the first research question, the researchers compared the means of each grading category (employability, homework, and summative assessment scores) based on SES to see if there were significantly different means ($p < .05$) between low SES (FRL students) and higher SES (students not receiving FRL) groups. The researchers then used an independent t-test (2-tailed) to compare each group's equality of means to see if there was a statistically significant result in each area. Specifically, the means for low SES students were compared to peers in the area of employability, homework, and summative

assessment scores to see if there were statistically significant differences between each subgroup ($p < .05$).

The second research question was answered as researchers compared the means of each grading category (employability, homework, and summative assessment percentages). The researchers then used a one-way MANOVA to determine whether there were any statistically significant differences between independent groups and more than one dependent variable. The one-way MANOVA is an omnibus test statistic that cannot reveal which specific groups were significantly different from each other; rather it tells the researchers if at least two groups are statistically different. To find out which racial groups' means were significantly different from each other a series of Tukey post hoc tests were performed. The Tukey post hoc analyses were performed to examine the individual mean difference comparisons across each grading category and all five racial subgroups (White, Black, Hispanic, Asian, and Other).

Finally, to answer the third research question, the researchers compared inflation/deflation means based on SES and race. Students not receiving FRL were compared to students who did receive FRL to see if there were significantly different means ($p < .05$). The researchers used an independent t-test (2-tailed) to compare each group's equality of means to see if there was a statistically significant result in each area. In addition, the researchers also compared the means of grading inflation for each race to see if there were significantly different means ($p < .05$) between White students and their peers of differing races. The researchers compared the means of grading inflation/deflation for each race. Again, a MANOVA was used to determine whether there were any statistically significant differences between the independent groups. To find out which racial groups' means were significantly different from each other a series of Tukey post hoc tests were performed. The

Figure 1. Example of Grades Charted

Student	Final Grade	Final Grade %	Assessment Grade	Assessment %	Homework %	Employability %	Inflation or Deflation	Race	FRL
Student 1	D-	60.54	C+	78.8	14.16	25.13	-18.26	Black	Yes
Student 2	D	64.74	C-	71.33	11.53	125	-6.59	White	Yes
Student 3	B	86.22	B-	80.94	98.41	98.79	5.28	White	No
Student 4	B-	80.24	C	72.71	97.14	99.13	7.53	Hispanic	Yes

Tukey post hoc analyses were performed to examine the individual mean difference of inflation/deflation across all 5 racial subgroups (White, Black, Hispanic, Asian, and Other).

Results

Socio-Economic Impact on Grades

In comparing grading results based on students' SES, there were statistically significant differences ($p < .001$) when comparing the means between students with and without FRL. Students receiving FRL scored lower than their peers who did not receive FRL in every grading category. In the area of homework, the difference in means between those with FRL ($M=65.31$, $SD=25.4$) and those without FRL ($M=73.55$, $SD=24.7$), $t_{777}=-4.1$, $p < .001$ was 8.24%. Employability scores were also significantly different from those receiving FRL ($M=80.07$) compared to those who did not receive FRL ($M=89.32$). Employability means for students receiving FRL were 9.35% lower than non-FRL peers for this grading category. Finally, findings indicated mean differences between those with FRL ($M=65.64$, $SD=19.06$) and those without FRL ($M=71.65$, $SD=14.49$) in the area of summative assessments; $t_{527}=-4.8$, $p < .001$. Again,

students with FRL scored lower than peers with the mean difference between the summative assessment scores for these two groups being 6.01%.

Race Impact on Grades

A statistically significant MANOVA effect was obtained between race subgroups when considering jointly the grading category variables, Pillais' Trace = .07, $F(16, 3096) = 3.436$, $p < .001$. This indicated that at least two of the group's means were significantly different from each other. A series of one-way Analysis of Variances (ANOVA) were conducted on each of the five dependent variables as a follow-up to the MANOVA test with each ANOVA evaluated at an alpha level of .01. This compared the variances of means between each of the variables. As seen in Table 3 all ANOVAs for each of the dependent variables were significantly different.

To find out which racial groups' means were significantly different from each other a series of Tukey post hoc tests were performed. The Tukey post hoc analyses examined the individual mean difference comparisons across each grading category and all five racial subgroups (White, Black, Hispanic, Asian, and Other). The results revealed statistically significant differences in means between racial groups ($p < .05$) for the following comparisons as seen in Table 4.

Table 3. Test Between Subjects Effects for Race

	Type III Sum of Squares	df	Mean Square	F	Sig.
Summative Assessment Percent	10681.71	4	2670.43	8.487	0.000*
Homework Percent	14826.78	4	3706.70	5.863	0.000*
Employability Percent	11438.20	4	2859.55	5.265	0.000*

* Significant at the .01 level.

Table 4. Tukey Post hoc Test Comparisons for Race

Dependent Variable	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
				Lower Bound	Upper Bound
Summative Assessment Percent	White - Black	8.14*	1.45	0.00	4.19 - 12.09
	White - Hispanic	5.83*	2.08	0.04	0.14 - 11.52
Homework Percent	White - Black	6.90*	2.05	0.01	1.29 - 12.50
	White - Hispanic	11.67*	2.95	0.00	3.61 - 19.74
Employability Percent	White - Black	7.99*	1.90	0.00	2.79 - 13.18
	White - Hispanic	7.46*	2.73	0.05	-0.01 - 14.94

Table 4 results show statistically significant differences in means comparing White students to Black and Hispanic students in summative assessment, homework, and employability grading categories at the $p < .05$ level. These results show there are significant mean differences in percentages when comparing these subgroups indicating that there is an equity difference in regards to grades for these White and non-White subgroups.

In terms of race, there were large differences in mean scores in the area of homework. Asian students had the highest mean scores of 78.42% while Hispanic and Black students scored the lowest, scoring 59.68 and 64.46%. For Hispanic students, this is 18.74% lower in homework scores compared to Asian students and an 11.68% difference compared to White students.

In the area of employability, students scored more similarly as there was a smaller range of scores. Scores ranged from 78.26% for Black students to 87.61% for Asian students. This was a difference of 9.35% between these groups. Similar to homework scores Black (64.46) and Hispanic (59.68) students scored the lowest in the employability category while White (71.36) and Asian (78.42) students scored the highest.

Employability and Homework Scores Impact on Final Grades When Considering Race and SES

Overall, there were no significant differences for grading inflation/deflation between the SES subgroups and between the racial subcategories. All racial subgroups averaged inflated grades when homework and employability points were included in the grade; however, there were no statistically significant differences in overall grade inflation/deflation between any of the racial subgroups. The Asian population had the most overall inflation with 4.6% while the Hispanic population's grade was only inflated by 0.26%. Both students receiving FRL and those not receiving FRL also averaged inflation (1.26 to 2.06%) in grades when homework and employability points were included in the grade.

Discussion

In terms of race and SES, all groups had inflated grades with homework and employability points included in the grade. Based on students' SES, there were statistically significant differences ($p < .001$) when

comparing the means between students with and without FRL in every grading category. In addition, there were significant differences in all grading categories (summative assessment, employability, and homework) between White and non-White racial subgroups.

Bourdieu's (1974) theory of cultural reproduction suggests students achieve higher rates of success when they come to school with values and norms more closely aligned with the school culture. Prior to Covid 19, and the growth of remote learning, one-fifth of K-12 students reported they were unable to complete homework assignments due to a lack of internet at home (Project Tomorrow, 2017), which placed middle and upper-class students at an advantage when it came to homework completion points because they were more likely to have internet access. Additionally, a research synthesis suggests high school students benefit academically from parental involvement (Patall et al., 2008). This may explain the results of this study in which teachers included homework in the final grade and students of lower SES were clearly at a disadvantage. This finding aligns with Zhou and colleagues (2020) who found that parent involvement with homework, typically more prevalent for students of higher SES, is a contributing factor to students' success in mathematics.

Large differences in subgroups in homework and employability categories may be due to family backgrounds, attitudes, and beliefs. For example, Asian families may highly value education (Li & Xie, 2020; Vartanian et al., 2007) and therefore make homework a stronger priority when compared to other subgroups in this study. In the area of employability, there may be similar reasons for differences in the scores. Cultural reproduction theory suggests that those with more cultural capital are rewarded within school settings because their preferences, attitudes, and behaviors are more aligned to school settings (Bourdieu, 1974; De Graaf et al., 2000). In other words, having a cultural background that is more closely aligned with teachers or administrators within the educational setting gives students an advantage due to their ability to more easily follow social norms. The results of this study suggest it is easier for Asian and White students to be more closely aligned with the social expectations found in the employability category of the grade such as attendance, participation, and behavior. Because the results from Guskey and Link (2019) found that 10-

20% of the weight teachers use in determining letter grades comes from social expectations included in the employability category of the current study, it should not come as a surprise that family backgrounds, attitudes, and beliefs may explain subgroup differences in the homework and employability categories.

While some of the differences in subgroups for the employability grading category might be based on cultural capital, other differences may also be based on the subjectivity of the employability grading category. Quinn (2020) asserted that absent explicit criteria to assess student learning, in this case employability, teachers may exhibit more bias in their grading of students. Teachers may naturally have biases based on their experiences which influences their subjective judgments of students' participation and behavior. For example, Black students were found to be typically rated as "poorer classroom citizens" compared to White peers by White teachers (Downey & Pribesh, 2004). These types of judgments may result in inequities based on race that hinder students when assigning traditional grades that include non-academic factors such as employability skills.

Summative assessment scores within this study ranged from 70.68% for White students to a much lower mean score of 62.68% for Black students. Black students benefited from homework and employability points being included in the grade which is due to their employability (78.26%) and homework (64.46%) averages being higher than their summative assessment percentage (62.68). While homework and employability points appear to be helping Black students achieve a higher grade, there is an apparent achievement gap with regards to summative assessment scores. This achievement gap shows a clear advantage for White students and students not receiving FRL who scored much higher on summative assessments. This achievement gap is well documented and has been a point of emphasis for educators to address (Condrón et. al., 2013).

Although Black students may benefit from including homework and employability points in the final grade, they may not be actually learning the math skills, as communicated through the summative assessment category, which may create a cumulative learning gap over time. Considering non-White lower SES students scored consistently lower than their peers in every grading category, it is important for educators

to find solutions to accelerate achievement for lower-performing subgroups. When these gaps are not addressed minority students will continue to be disadvantaged by traditional grading practices (Feldman, 2018). This gap may be explained by Bourdieu's theory of cultural reproduction (1974) suggesting students that are well resourced at home will continue to succeed and those who do not may experience an even wider learning gap.

One such grading framework for educators to consider to lessen the achievement gap is standards-based grading (SBG) which emphasizes learning over point accumulation (Knight & Cooper, 2019; Muñoz & Guskey, 2015; Townsley, 2018). SBG permits students to retake assessments to demonstrate mastery of concepts and skills over time, which may help lower SES and non-White students achieve mastery when they are allowed ample time and opportunities to demonstrate learning. In many standards-based grading systems, a student with "A" level skills based on the product criteria demonstrated on summative assessments also receives a final letter grade of an "A" (Townsley & Wear, 2020). Furthermore, standards-based grade books communicate the standards students have met, which ones they were approaching, and finally, the standards that have not yet been met (Guskey, 2020; Townsley, 2021). In turn, educators are provided a better understanding of the level of mastery within the subject. This allows teachers, students, and parents alike to see the learning that has already occurred and pinpoint skills the student can continue to improve. Pinpointing these skills for non-White and low SES students and then remediating them may help minimize the grading differences between these subgroups and begin to disrupt the cycle of cultural reproduction (Bourdieu, 1974).

Future Research

Future qualitative studies should seek to understand the perspectives of students, teachers, and parents, particularly those of racial minority and low SES groups, to see how they perceive differences in grading practices. Studies may even look at the perceptions of key stakeholders when schools change from traditional grading methods to a grading system that separates the academic and non-academic factors such as standards-based grading. These studies would highlight how teachers, students, and parents feel

about each grading method and the extent to which changes in grading practices might provide more equitable opportunities and outcomes for students.

Conclusion

The current study sought to determine if including the traditional grading components of homework and employability scores produce equitable grading outcomes for students based on race and SES. This study focused on quantitative measures to understand the extent to which inequitable grading outcomes for subgroups may be based on race and SES factors. This investigation on the grading impact on equity uncovered several pieces of evidence to suggest the inclusion of homework and employability scores in final grades could be problematic and not an ideal grading practice (Feldman, 2022). Through this practice, grades are not accurate representations of the students' learning. This investigation revealed clear divides between white students and black/Hispanic students as well clear differences for high and low SES students. Also highlighted from this study was that final grades were mostly inflated for all subgroups when homework and employability scores were included. Therefore, it is problematic that the students' skill and knowledge demonstrated in the course did not match the final grade reported to the student, parents, and colleges.

Grades should be fair, equitable, and useful to students, parents, and teachers as they are important in communicating student learning. As educators seek to even the playing field, schools need to look at their grading practices and equity implications (Feldman, 2019). Educators should implement grading practices that lower student stress and increase equity, such as excluding homework points and eliminating the use of participation points when determining final grades (Feldman, 2020). As a further benefit, when these non-academic factors are removed from determining letter grades, final achievement grades will become a more accurate measure of student learning (Griffin & Townsley, 2021). Thus the purpose of this study has been to help the academic community learn more about how various subgroups are affected by the traditional grading practices of homework and employability scores that impact students based on race and SES. In a perfect world grading practices would be fair for all individuals to have equal chances

at success regardless of their backgrounds or resources. This study assists in shedding new light on this issue and may help to create a more equitable education system for all students.

References

- Ainsworth-Darnell, J. W., & Downey, D. B. (1998). Assessing the oppositional culture explanation for racial/ethnic differences in school. *American Sociological Review*, 63(4), 536–553.
- Brookhart, S. M. (2004). *Grading*. Upper Saddle River, NJ: Merrill.
- Brookhart, S. M., Guskey, T. R., McTighe, J., & Wiliam, D. (2020). Eight essential principles for improving grading. *Educational Leadership*, 78(1). Available at <https://www.ascd.org/el/articles/eight-essential-principles-for-improving-grading>
- Brookhart, S.M., Guskey, T.R., Bowers, A.J., McMillan, J.H., Smith, J.K., Smith, L.F., Stevens, M.T., & Welsh, M.E. (2016). A century of grading research: Meaning and value in the most common educational measure. *Review of Educational Research*, 86(4), 803-848.
- Bonnor, P. P., & Chen, S. M. (2016). Teachers' beliefs about grading practices and a constructivist approach to teaching. *Educational Assessment*, 22(1), 18-34. <http://dx.doi.org/10.1080/10627197.2016.1271703>
- Bourdieu, P. (1974). Cultural reproduction and social reproduction. In R. Brown, *Knowledge, education, and social change* (71-84). Taylor & Francis.
- Bourdieu, P., & Passeron, J. (1977). *Reproduction in education, society, and culture*. London: Sage.
- Chmielewski, A. K., & Reardon, S. F. (2016). Patterns of cross-national variation in the association between income and academic achievement. *AERA Open*, 2(3), 1-27.
- Condrón, D. J., Tope, D., Steidl, C. R., & Freeman, K. J. (2013). Racial segregation and the Black/White achievement gap: 1992-2009. *The Sociological Quarterly*, 54(1), 130-157.

- Cooper, H., Civey Robinson, J., & Patall, E. A. (2006). Does homework improve academic achievement? A synthesis of research, 1987-2003. *Review of Educational Research*, 76(1), 1-62.
- Cross, C. T. (1997). Hard questions, standard answers. *Basic Education*, 42(3), 1-3.
- Denessen, E., Hornstra, L., van den Berg, L., & Bijlstra, G. (2020). Implicit measures of teachers' attitudes and stereotypes, and their effects on teacher practice and student outcomes: A review. *Learning and Instruction*. Online first retrieved from <https://www.sciencedirect.com/science/article/pii/S0959475220307325>
- De Graaf, N. D., De Graaf, P. M., & Kraaykamp, G. (2000). Parental cultural capital and educational attainment in the Netherlands: A refinement of the cultural capital perspective. *Sociology of Education*, 92-111.
- Downey, D. B., & Pribesh, S. (2004). When race matters: Teachers' evaluations of students' classroom behavior. *Sociology of Education*, 77(4), 267-282.
- Fan, H., Xu, J., Cai, Z., He, J., & Fan, X. (2017). Homework and students' achievement in math and science: A 30-year meta-analysis, 1986-2015. *Educational Research Review*, 20, 35-54.
- Feldman, J. (2018). *Grading for equity: What it is, why it matters, and how it can transform schools and classrooms*. Corwin Press.
- Feldman, J. (2019). Beyond standards-based grading: Why equity must be part of grading reform. *Phi Delta Kappan*, 100(8), 52-55.
- Feldman, J. (2020). Taking the stress out of grading. *Educational Leadership*, 78(1), 14-20.
- Griffin, R., & Townsley, M. (2021). Points, points, and more points: High school grade inflation and deflation when homework and employability scores are included. *Journal of School Administration Research & Development*, 6(1). <https://doi.org/10.32674/jsard.v6i1.3460>
- Guskey, T. R. (2020). *Get set, go! Creating successful grading and reporting systems*. Solution Tree.
- Guskey, T. R., & Link, L. J. (2019). Exploring the factors teachers consider in determining students' grades. *Assessment in Education: Principles, Policy & Practice*, 26(3), 303-320.
- Hung, M., Smith, W. A., Voss, M. V., Franklin, J. D., Gu, Y., & Bounsanga, J. (2020). Exploring student achievement gaps in schools across the United States. *Education and Urban Society*, 52(2), 175-193.
- Iowa Department of Education (2021, December 1). *The Annual Condition of Education Report: 2021*. <https://educateiowa.gov/documents/condition-education-report-pk-12/2021/12/annual-condition-education-report-2021>
- Jaeger, M. M. (2011). Does cultural capital really affect academic achievement? New evidence from combined sibling and panel data. *Sociology of Education*, 84(4), 281-298. <https://doi.org/10.1177/0038040711417010>
- Knight, M. & Cooper, R. (2019). Taking on a new grading system: The interconnected effects of standards-based grading on teaching, learning, assessment, and student behavior. *NASSP Bulletin*, 103(1), 65-92.
- Kunnath, J. (2017). Teacher grading decisions: Influences, rationale, and practice. *American Secondary Education*, 45(3), 68-88.
- Li, W., & Xie, Y. (2020). The influence of family background on educational expectations: A comparative study. *Chinese Sociological Review*, 52(3), 269-294.
- Lleras, C. (2008). Race, racial concentration, and the dynamics of educational inequality across urban and suburban schools. *American Educational Research Journal*, 45(4), 886-912.
- Malouff, J. M., & Thorsteinsson, E. B. (2016). Bias in grading: A meta-analysis of experimental research findings. *Australian Journal of Education*, 60(3), 245-256.
- McMillan, J. H (2001). Secondary teachers' classroom assessment and grading practices. *Educational Measurement: Issues and Practice*, 20(1), 20-32.
- Merolla, D. M., & Jackson, O. (2019). Structural racism as the fundamental cause of the academic achievement gap. *Sociology Compass*, 13(6), 1-13.
- Morris, E. W. (2005). From 'Middle Class' to 'Trailer Trash': Teachers' perceptions of White students

- in a predominantly minority school. *Sociology of Education*, 78, 99–121.
- Muñoz, M. A. & Guskey T.R. (2015). Standards-based grading and reporting will improve education. *Phi Delta Kappan*, 96(7), 64-68.
- Notten, N., & Becker, B. (2017). Early home literacy and adolescents' online reading behavior in comparative perspective. *International Journal of Comparative Sociology*, 58(6), 475-493.
- Patall, E. A., Cooper, H. & Civey Robinson, J. (2008). Parent involvement in homework. *Review of Educational Research*, 78(4), 1039-1101.
- Plucker, J. A., & Peters, S, J. (2018). Closing poverty-based excellence gaps: Conceptual, measurement, and educational issues. *Gifted Child Quarterly*, 62(1), 56-67.
- Prince, Z. (2016). Census bureau: Higher percentage of black children live with single mothers. *The Black Media Authority*. Accessed 27 November, 2019, <http://www.afro.com/census-bureau-higher-percentage-black-children-live-single-mothers/#>
- Project Tomorrow. (2017). *How America's schools are addressing the homework gap: Speak up 2016 findings*. Irvine, CA.
- Quinn, D. (2020). Experimental evidence on teachers' racial bias in student evaluation: The role of grading scales. *Educational Evaluation and Policy Analysis*, 42(3), 375-392.
- Quinn, D., & Cooc, M. (2015). Science achievement gaps by gender and race/ethnicity in elementary and middle school: Trends and predictors. *Educational Researcher*, 44(6), 336-346.
- Randall, J., & Engelhard, G. (2010). Examining the grading practices of teachers. *Teaching and Teacher Education*, 26(7), 1372-1380.
- Roscigno, V. J., & Ainsworth-Darnell, J. W. (1999). Race, cultural capital, and educational resources: Persistent inequalities and achievement returns. *Sociology of Education*, 158-178.
- Reeves, D. B (2008). Leading to change/effective grading practices. *Educational Leadership*, 65(5), 85.
- Smith, D., Frey, N., Pumpian, I., & Fisher, D. (2017). *Building equity: Policies and practices to empower all learners*. ASCD.
- Stebbins, S., & Comen, E. (2018). These are the 15 worst cities for black Americans. *USA Today*. Accessed 21 April 2018, <https://www.usatoday.com/story/money/2018/11/16/racial-disparity-cities-worst-metro-areas-black-americans/38460961/>
- Sun, Y., & Cheng, L. (2013). Teachers' grading practices: Meaning and values assigned. *Assessment in Education: Principles, Policy & Practice*, 21(3), 326–343.
- Tierney, R. D., Simon, M., & Charland, J. (2011). Being fair: Teachers' interpretations of principles for standards-based grading. *The Educational Forum*, 75(3), 210–227.
- Townsley, M. (2018). Mastery-minded grading in secondary schools. *School Administrator*, 75(2), 16-21.
- Townsley, M. (2021). Grading in the midst of a pandemic. *School Administrator*, 78(5), 28-31.
- Townsley, M., & Wear, N. (2020). *Making grades matter: Standards-based grading in a secondary professional learning community at work*. Solution Tree.
- U.S Department of Education, Office of Educational Research and Improvement (1994). *What do student grades mean? Differences across schools*. (Research Report 94-3401). Washington, DC: Office of Educational Research and Improvement.
- Vartanian, T. P., Karen, D., Buck, P. W., & Cadge, W. (2007). Early factors leading to college graduation for Asians and non-Asians in the United States. *The Sociological Quarterly*, 48, 165-197.
- Wilson, A., & Urick, A., (2021). Cultural reproduction theory and schooling: The relationship between student capital and opportunity to learn. *American Journal of Education*, 127, 193-232.
- Zhou, S., Zhou, W., & Traynor, A. (2020). Parent and teacher homework involvement and their association with students' homework disaffection and mathematics achievement. *Learning and Individual Differences*, 77, 101780.

Citation:

Griffin, R., & Townsley, M. (2022). Including homework and employability skills in class grades: An investigation of equitable grading outcomes in an urban high school. *Practical Assessment, Research, & Evaluation*, 27(27). Available online: <https://scholarworks.umass.edu/pare/vol27/iss1/27/>

Corresponding Author:

Robert Griffin
University of Northern Iowa

Email: robgrif32 [at] gmail.com